

The Effect of Communication Ability of Care Workers in Charge of Visiting Care in Elderly at-Home Welfare Centers on Quality of Service: with Empathy as Mediator

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Abstract

Background/Objectives: The purpose of this study is to provide data for nursing intervention development that increases the quality of service of care workers by identifying the mediating effect of empathy in the effect of communication ability on quality of service.

Methods/Statistical analysis: Data were collected for 93 visiting care workers. Data were analyzed by descriptive statistics, Pearson's correlational coefficients, multiple regression and Sobel's test.

Findings: Subjects' quality of service and communication ability ($r=.62$, $p<.001$), and empathy ($r=.56$, $p<.001$) showed high positive correlation. As a result of the mediating effect of empathy, communication ability had a significant effect on empathy in step 1 ($\beta=.64$), in step 2, communication ability affected the quality of service ($\beta=.62$), in step 3, communication ability had a positive effect on the quality of service ($\beta=.45$), and empathy also had a positive effect on quality of service ($\beta=.28$) and showed 42.2% explanatory power. It was found that empathy had a partial mediating effect.

Improvements/Applications: Care workers should make efforts to provide services by understanding and listening to and empathizing with the expressions of the elderly. The directors of the visiting care center should develop and train programs that can improve effective communication, empathy and quality of service.

Keywords: *Care workers, Mediating effect, Communication Ability, Empathy, Quality of Service*

Introduction

In Korea, with the start of Long-Term Care Insurance for the Elderly in 2008, the health and welfare of the elderly are improving as the elderly care policy is expanded and the working field is revitalized in taking care of the elderly through the expansion of care personnel such as care workers as well as medical personnel. In addition, the rapid increase of the elderly population along with the prolongation of life expectancy, coupled

with the active social advancement of women, is raising the need for more elderly care workers.

Care workers for the elderly care for the elderly in elderly nursing hospitals or belong to a visiting care center and are active in the form of caring for the elderly in elderly families in the form of visiting care. In particular, care workers who are in charge of visiting care directly and proactively provide elderly care, so their role is considered to play a very important and decisive role in the elderly's daily activities and health.

On the other hand, looking at the proportion of the population by age in 2017 and 2067, the proportion of the aged 65 or older will increase (13.8% → 46.5%), and

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as it will reach 7.07 million in 2017, 10 million in 2025, and 19.01 million in 2050 [1], care for the elderly will become more and more important. Among the elderly in Korea, 89.5% of the total elderly responded that they have been continuously suffering from the disease for more than 3 months and have chronic diseases, and elderly people in general have more than two chronic diseases on average, and 83.5% of all elderly people have taken prescription drugs for more than 3 months. In addition, the physical and cognitive functions of the elderly are also limited as they age, and 71.4% of the subjects with reduced physical function are being cared for. In addition, because more than half of them rate their health as bad [2], it is thought that more care for the elderly, that is, nursing services, will be needed.

Quality of elderly care service refers to the excellence of services provided to pursue user satisfaction[3]. Quality of service is measured by considering reliability, responsiveness, assurance, empathy, and tangible dimensions. Therefore, the quality of service of care workers can be an index for evaluating the visiting care of the elderly, and the excellent quality of service of care workers will have a great effect in maintaining health while increasing the satisfaction of the elderly.

In order to improve the quality of service of care workers, it is necessary to identify the factors that affect it. Previous studies have shown that humans have the ability to live socially through communication. Humans with such communication ability can communicate their opinions efficiently and convincingly and maintain a smooth relationship with others, which is an important factor in determining the quality of human life[4]. Jung[5] reported that communication ability is a factor affecting the quality of care. For communication ability, the better you empathize, the better you can demonstrate social competence in various situations [6] and it can be said that the quality of service of care workers can be improved. In addition, empathy, which can understand and feel the inner experiences of others, such as emotions and psychological states, is closely related to communication ability [7] and it is said that by predicting the other's behavior through the ability to accept and understand the other's role, it can respond appropriately to social situations, thereby promoting interaction and communication ability [8].

Therefore, it was to provide basic data for the development of programs that can improve the quality of service of care workers by testing the mediating effect of empathy in the relationship between communication ability and quality of service.

Methods

1. Subjects

The subjects were 93 care workers belonging to an elderly at-home welfare center in D City, and care workers receiving refresher education in education centers in S and G City. They were adult who understand the purpose of the study and voluntarily expressed their willingness to participate and gave written consent, with working period of more than 6 months. Using the G-power 3.1.9.4 program, 88 people were calculated as a result of calculating the number of samples required to maintain 2 predictors, .15 effect size, .05 significance level, and .90 power, and in consideration of the 10% dropout rate, 96 people were surveyed, and the data of 93 people were finally analyzed.

2. Instruments

2.1. Communication ability

The comprehensive measure of interpersonal communication ability developed by Hue[9] modified and supplemented by Bae[10] was used. With a total of 14 questions, 2 items were coded in reverse. The questions were in a Likert 5-point scale, and higher the score, the higher the communication ability. At the time of development, the reliability Cronbach's α was .72, and in this study, it was .83.

2.2. Empathy

The tool for empathy was a self-report test developed by Davis used by Lee[11]. This tool consists of a total of 26 questions, consisting of 14 questions of cognitive empathy and 12 questions of emotional empathy. The questions were on a Likert 5-point scale, and 8 inverse questions were coded in reverse. The higher the score, the higher the empathy. The reliability Cronbach's α in the study by Lee[11] was .72 and in this study was .85.

2.3. Quality of service

The 'SERVQUAL' scale developed by Parasuraman,

Zeithmal, Berry^[12] used for care workers by Jung^[5] was used. It has a total of 20 questions on the Likert 5-point scale, and higher the score, the higher the quality of service. In the study of Jung^[5], the reliability of the tool Cronbach's α was .97 and in this study was .92.

3. Data collection

Data collection was from August to October 2020. Researchers and research assistants visited one elderly at-home welfare center located in the east area of D City, each one care worker maintenance training institution in G and S City, and after obtaining permission to the center director and the director, with the help of a research assistant who was educated on the research objectives and methods, he directly explained the research objectives to the care workers and received written consent. Data was collected through completing the questionnaires. The time required to complete the questionnaire was 10~15 minutes.

4. Ethical consideration

This study was approved by K University's Institutional Review Board (KNU_IRB_2020-62).

5. Data Analysis

Using the SPSS/WIN 23.0 program, the descriptive statistics of the general characteristics and variable were calculated, the correlation between each variable was calculated using Pearson's correlation coefficients,

and the mediating effect of empathy in the relationship between communication ability and service quality utilized multiple regression. The significance test for mediating effect size was analyzed by Sobel's test.

Result and Discussion

1. General characteristics of subjects

In the general characteristics of the subjects, the subjects of this study were care workers (100%) who are in charge of visiting care, ranging in age from 39 to 82 years old, with an average of 58.34 ± 7.59 years old and 58.1% (54 persons) under 59 years old. Most (92, 98.9%) were women, and as for the educational background, 68.6% (64 people) had a high school diploma or higher, and the average working experience as a care worker was 40.48 ± 34.85 months, ranging from 6 months to 12 years. It was found that more than half (64.5%, 60 people) had no other certifications than the care worker certification. 39 (41.9%) care workers had received maintenance training or job training once in the past year. For monthly income as care workers, about 0.51 million to 1 million won accounted for 47.3% (44 people).

2. Degree of communication ability, empathy and quality of service in subjects

The care workers' communication ability scored 3.80 points out of 5 points, empathy scored 3.68 points out of 5 points, and quality of service scored 4.20 points out of 5 points [Table 1]

Table 1. Degree of communication ability, Empathy and Quality of service in Subjects (N=93)

Variables	M \pm SD	Range
Communication ability	3.80 \pm 0.41	1~5
Empathy	3.68 \pm 0.40	1~5
Quality of service	4.20 \pm 0.40	1~5

3. Correlation between communication ability, empathy, and quality of service in subjects

Quality of service and communication ability ($r=.62$, $p<.001$), quality of service and empathy ($r=.56$, $p<.001$), and empathy and communication ability ($r=.64$, $p<.001$) all showed high positive correlation [Table 2].

Table 2. Correlation between Communication Ability, Empathy, and Quality of Service in Subjects

Variables	Communication ability r(p)	Empathy r(p)	Quality of service r(p)
Communication ability	1		
Empathy	.64 (<.001)	1	
Quality of service	.62 (<.001)	.56 (<.001)	1

4. Mediating effects of empathy in the relation between communication ability 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 1.59-1.77, which was close to 2, which was independent. The multicollinearity between the independent variables was less than 10 with the VIF (Variation Inflation Factor) index 1.00~1.71, and tolerance was 0.59~1.0, 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 of applying the mediating effect, in step 1 regression analysis, communication ability, an independent variable, had a statistically significant effect on empathy, a mediating variable ($\beta=.64$), and the explanatory power for empathy was 40.8%. In

the second-stage regression analysis, communication ability, an independent variable, had a significant effect on the quality of service, a dependent variable ($\beta=.62$), and the explanatory power for quality of service was 38.3%. In step 3, in order to test the effect of empathy, a mediating variable, on quality of service, which is a dependent variable, as a result of regression analysis with communication ability and empathy as predictive factors and quality of service as dependent variable, communication ability was found to have a positive effect on quality of service ($\beta=.45$), and empathy also had a positive effect on quality of service ($\beta=.28$), and it showed 42.2% of explanatory power.

As a result of comparing the β values, it was confirmed that empathy showed a partial mediating effect as much as 0.17 since the $\beta=.62$ value in step 2 was larger than the $\beta=.45$ value in step 3. As a result of confirming the significance of the mediating effect coefficient, it was statistically significant ($Z=2.53$, $p=.011$) [Table 3].

Table 3. Mediating effects of empathy in the relation between communication ability and quality of service

Variables	B	β	t	p	Adj. R2	F	p
Step1: Communication ability→ Empathy	.63	.64	8.03	<.001	.408	64.45	<.001
Step2: Communication ability →Quality of service	.61	.62	7.62	<.001	.383	58.02	<.001
Step3: Communication ability, Empathy → Quality of service					.422	34.53	<.001
1. Communication ability → Quality of service	.44	.45	4.30	<.001			
2. Empathy → Quality of service	.28	.28	2.67	.009			
$Z= 2.53, p=.011$							

Discussion

The purpose was to analyze the relationship between communication ability, empathy and quality of service of care workers in charge of visiting care, and to understand the mediating effect of empathy in the effect of their relationship and communication ability on quality of service.

The communication ability of this study was 3.80 out of 5 points, higher than 3.48 points of hospital nurses^[10] and higher than 3.29 points of nursing hospital care workers and home visit care workers^[5]. This is because the care workers in this study are care workers who are in charge of home visits, and because they provide elderly care services by themselves, it is difficult to perform their duties well without proactive and active communication, and it is thought that communication ability scored higher than that of health care workers working in other fields or in other occupations. The level of empathy was 3.68 points, similar to the empathy of nursing students 3.39^[13] and the emotional intelligence of care workers 3.53, and it can be said that care workers understand the psychology and attitude of others, feel compassion, care for them, and feel the pain of others' difficulties as well as have an attitude to empathize.

The service quality of care workers was 4.20 out of 5, which was higher than that of 3.80 of Jung^[5]. It is expected to provide training to continue to provide quality service.

The relationship between the subjects' communication ability, empathy and quality of service showed a high positive correlation. This was consistent with the results^[5] showing positive correlations with communication ability, emotional intelligence, and quality of care services of 258 care workers. The higher the communication ability and empathy, the better the quality of service. It is desirable to provide a training program for care workers to effectively learn verbal and non-verbal communication skills and have the emotional ability to empathize.

Empathy showed partial mediating effect in the relationship between communication ability and quality of service of care workers. These results were similar to the results that sympathy had a mediating effect in the communication ability and interpersonal relationship of

nursing students^[13] and that the communication ability and emotional intelligence of care workers had an effect on service quality^[5]. In hospital nurses, communication ability was found to be a factor affecting nursing work performance, and hotel bakery employees' emotional intelligence and empathy showed a high correlation with service quality, and it was similar to the report that empathy had a moderating function in the relationship between emotional intelligence and job satisfaction^[14]. By applying the result that empathy and emotional abilities affect service quality in hotel employees, like nursing care workers as a service occupation, and applying it to the service quality of care workers, practice should be pursued in order to improve communication skills and empathy of them.

Conclusion

Based on the results of this study, it is necessary to increase self-leadership in order to increase the job competency of care workers in charge of visiting care. To do so, self-control and self-motivating autonomy need to be increased, the role and abilities should be realized through thinking and action strategies to set goals and to take responsibility for the results. Ultimately, such efforts can increase the influence of care workers, and it is thought that they can improve their job competency and increase the satisfaction of the care target. Therefore, it is suggested that a leadership improvement program be developed and actively used as a refresher education for care workers.

Ethical Clearance: Not required

Source of Funding: Self

Conflict of Interest: Nil

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