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Analysis on Effects of Perceived Health Status, Social Activities and Wisdom of Elderly Women Residing in Rural Environment on Health Conservation

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Abstracts

Purpose: The purpose of this study is to identify the degree of the health status, social activities, wisdom and the health conservation perceived by the elderly women and find out the impact on the health conservation of the elderly women from the elderly women in the rural environment.

Methods: The data were collected from 112 elderly women of more than 65 years old using the questionnaire and analyzed with descriptive statistics, t-test, ANOVA, Pearson's correlation coefficient and stepwise multiple regression using SPSS/WIN 23.0 program.

Results: The mean score of the health conservation was 2.66 and the health conservation represented to have statistically significant positive correlation with the wisdom (r=.477, p<.001), leisure activity (r=.469, p<.001), perceived health status(r=.428, p<.001), volunteer activity (r=.343, p<.001) and religious activity (r=.222,p=.018). In the multiple regression analysis results, the explanatory power of the factors having influence on the health conservation was shown as 40.6% and out of them, the explanatory power of the wisdom, perceived health status and leisure activity was 22.7% (β=.332, p<.001), 13.9% (β=.329, p<.001) and 5.6% (β=.262, p=.002), respectively.

Conclusion: Based on the results of this study, the nursing intervention program for the elderly women in the rural area would be developed and supported by policy and institutionally. In addition, in our country setting, the nursing intervention program for elderly citizens' health conservation should be accelerated using the public welfare environment around the community hall.

Keywords: Elderly women, perceived health status, social activity, wisdom, health conservation

INTRODUCTION

In 2015, the proportion of elderly citizens of older than 65 years old in our country was 13.1% of entire population increased by 2 million than 10 years ago and it tends to be increased to about 32.3% in 2040 and about 40% in 2060.Among them, the proportion of elderly population older than 65 years old is estimated to 71.7 males per 100 females and is expected to be increase to 87.0 males in 2060 [1], but still the proportion of elderly women is estimated to be increased continuously. In addition, since the life expectancy of the female was 85.2 years in 2015 representing that the female lives 6.2 years longer than the male whose life expectancy was 79.0 years it is expected that the population of elderly women would be increased constantly as the life expectancy is increased [2].

In the senile stage, which lasts longer than other age groups, the elderly should adapt to the changing environment due to deteriorated physical and mental functions and the loss of social role [3]. As the population ageing is growing rapidly by the rapid improvement in the standards of living, development of science, knowledge and medical technology and low birthrate [4,5], the problems related to the health of olds can be considered as a major problem. As the population ageing is growing and recently the interests in the healthy life of elders are increased, the aspect that integrates the physical, mental, social and spiritual welfare is emphasized rather that the perspective that emphasizes one aspect such as physical health or cognitive health [6].Sung[6] explained the health of elderly using the concept of health conservation, which combines the concepts of health and conservation based on the conservation principle of Levin [7][8].The health conservation is defined as maintaining the physical, mental and social welfare condition or maintaining the balance as physical, mental, social and psychological body. The conservation in the human health is the state, which the structural, personal, social energies are integrated and the integrated conservation is important for the healthy life of elderly [6, 9]. Considering that the results of research by Oh and Kim [10]showed that the health conservation in the elderly women was lower than that of elderly men and the considerable proportion of elders are elderly women, it is necessary to address the problem of health conservation with the elderly women.

The health conservation represented to receive the influence by diverse factors such as meaning of life, education level, gender, religion, spouse, pain, positive thinking, perceived health status, decrepitude, wisdom, etc. [8, 10, 11].

In the meantime, the elders have high prevalence rate of chronic diseases together with the ageing and the preceding research [12] found out that 95.3% of the elders of 65 years old or older has 1 or more chronic disease , out of them, 60.5% have more than 3 and 47.7% of the aged population of 65 years old or older in 2014 perceived that the subjective health status is bad, out of who the women of 54.4% perceived that their health status is very bad than the men of 38.5% [1]. The perceived health status, which refers to subjective health status that represents how one perceives his/her own overall health status is the comprehensive evaluation of elder's overall health [13].

The elderly women suffered from diverse difficulties such as education, economic condition, physical and mental problems, social support system, etc. compared with the male in the past patriarchal society [14, 15]. Accordingly, since the elderly women have insufficient knowledge to cope with lots of changes and problems, the measures to reinforce the competence in order to maintain their health continuously by themselves. It is the wisdom that helps to solve the problems faced in the senile stage and active coping and positive adaptation and makes the challenge and problems in life in general [11, 16]. Therefore, as an important element in the senile stage, which is in the later half of the life, the wisdom has influence on the satisfaction with life and gives the positive influence on the physical health, family relationship, etc. [17, 18].

In the meantime, the elders can increase the morale and satisfaction with life with social activity improving the physical health and obtaining the opportunity to contact with society [19, 20] and it is important to improve the quality of life [19, 21]. The social activity is all kinds of act and thinking occurred in the process that an individual performs the role in the family, neighbor and the group of local community and makes the social relationship [21].

Therefore, considering the characteristics of the senile stage, it is deemed to be necessary for them to have the sense of stability psychologically and emotionally and to reinforce their positive participation in one's values through the interaction in the community. In the preceding research [8,10,11], the health conservation researches were conducted with diverse factors with the elders but the research having elderly women as the subject is hardly found. Therefore, this study was intended to find the factors having influence of the health conservation of elderly women through the variables of perceived health status, social activity and wisdom from the elderly women.

PURPOSE

This study intended to identify the degree of perceived health status, social activity, wisdom and health conservation from the elderly women in the rural environment, find out the influence on the health conservation of elderly women and specific objectives are as follows.

Identify the degree of perceived health status, social activity, wisdom and health conservation of the subjects.

Identify the difference in the health conservation according to the general characteristics of subject.

Identify the relations among the perceived health status, social activity, wisdom and health conservation of the subjects

Identify the factors having influence on the health conservation of subject

METHODS

Research design

This study is the descriptive survey research to identify the factors having influence on the perceived health status, social activity, wisdom and health conservation in the elderly women in the rural environment.

Subjects

The subjects of this study were selected 112 elderly women who can understand the questions in the questionnaire, communicate and consented with the participation in the study out of the elderly women residing in the rural area of G City and S City. Researcher asked the cooperation by visiting the senior citizens' center, social welfare center, branch office of community health center and explained the purpose and intent of research, the right as the participant in the research and that anonymity of the questionnaire survey results and right are guaranteed and the participants may deny the participation if they do not want to participate during the questionnaire survey. The subjects who consented to participate in the research were instructed to write the consent form and to write the questionnaire in the self-administrative manner and if it is hard to write by herself, the researcher wrote down instead. The time taken to answer the questionnaire were around 20 ~ 30 minutes. The minimum number of subjects required were 102 when the power of test, significant level and the effect size were set to .80, .05 and .3 by the estimation of required number of samples according to G* Power 3.1.9 program and considering 10% of wastage rate, the data were collected from 120 persons but collected from 112 persons excluding 8 uncompleted questionnaires.

INSTRUMENTS

Perceived health status

For the perceived health status, which is a tool to measure the health status perceived subjectively, which Hwang [23]. adapted the perceived health status (PHS) developed by Speake et., al. [22], total 3 questions were used; 1 question for current health status perceived by oneself, 1 question to compared the health status of 1 year ago and 1 question comparing one's health status with other of same age. This tool uses 5-point Likertscale ranged from 1 point for very bad to 5 points for very good and the score is given from lowest 3 points to 15 points meaning that the higher the score the higher the perceived health status. At the time that the tool was developed, the reliability was Cronbach's α=.85 and in the research by Hwang [23], it was .85. The reliability of this study was Cronbach's α=.85.

Social activity

For the social activity, the measuring tool reconstructed by Seo [21] was used. This tool is composed of total 19 questions; 6 questions for volunteer service, 4 questions for religious activity and 9 questions for leisure activity. This tool uses 5-point Likert scale from 1 point for not at all to 5 points for 'very actively' meaning that the higher the point the higher the social activity. In the research of Seo [21], the reliability of volunteer service was Cronbach's α=.64, the reliability of religious activity was Cronbach's α=.90, and the reliability of leisure activity was Cronbach's α=.77. The reliability of this study was .83, .97 and .77, respectively and the reliability of entire questions was .88.

Wisdom

The wisdom was measured with "Korean Elder's Wisdom Scale' developed by researchers [18] and was composed of total 27 questions; 3 sublevel of emphatic emotion (11 questions), introspection (9 questions) and overcoming life experience (7 questions). This tool used 4-point Likert scale and 2 reverse questions was processed with reverse conversion. The score was ranged from 1 point for not at all to 4 point for very much and the score was given from minimum 27 points to 108 points meaning that the higher the score the higher the wisdom. The reliability of the 3 sublevel domains of this tool was Cronbach's α=.82, α=.85 and α=.74, respectively and the reliability of entire questions was Cronbach's α=.80, The reliability of entire questions in the research by Sung [11] was Cronbach's α=.98. In this study, the reliability of 3 sublevel domains was .77, .69 and .56, respectively and the reliability of entire questions was .83.

Health conservation

For the health conservation, 'Health Conservation Scale' developed by Sung [6] was used. This tool is composed of total 37 questions of 4 sublevel domains; personal integrity (14 questions), energy conservation (8 questions), structural integrity (8 questions) and social integrity (7 questions). This tool was used 4-point Likert scale and 6 reverse questions were processed with reverse conversion rating 1 point for not at all and 4 points for very much and total score was ranged from 37 points to 148 points meaning that the higher the score, the higher the degree of health conservation. The reliability of 4 sublevel domains was Cronbach's α=.88, .82, .81 and .79, respectively and the reliability of entire questions was Cronbach's α=.94. In the research by Sung [11], the reliability of entire questions was Cronbach's α=.96 and in this study, the reliability of 3 sublevel domains was .75, .42, .77 and .52 and the reliability of entire question was .84.

DATA COLLECTION

The data were collected from April to July, 2017 and 120 questionnaires were distributed and collected from the elderly women residing in G City and S City. The researcher explained the research objectives, guarantee of anonymity and the rights as the research participant personally, received the written consent from the subjects who consented to participate in the research and collected the data. The time taken to write the questionnaire was about 20 ~ 30 minutes and the research expressed the gratitude for the answering the questionnaire. Out of the collected questionnaires, 112 questionnaires were analyzed excluding 8 incomplete questionnaires.

ETHICAL CONSIDERATION

In this study, to protect the subjects, this study received the exemption of review (KNU IRB 2017-02) by K University Bioethics Committee (IRB)and the data were collected in accordance with the contents approved. Considering the ethic aspect of subjects, the intent of the questionnaire was explained to the subjects, the questionnaire survey was conducted only for the subject agreed with the research participation consent, and in the research participation consent, the contents that the survey contents shall not be used other than the purpose of research and the anonymity and confidentiality were contained.

Data analysis

The collected data were analyzed using SPSS/WIN 23.0 program as follows. The general characteristics of the subject were analyzed with frequency and percentage. The perceived health status, social activity, wisdom, heath conservation of the subjects were analyzed with descriptive statistics. To

analyze the difference in the health conservation by the general characteristics of subjects, t-test and ANOVA and for the post hoc test, Schaffer were used. The correlation among the perceived health status, social activity, wisdom and health conservation of the subjects was analyzed with Pearson's correlation coefficient. To identify the factor having influence on the health conservation of the subject, the stepwise multiple regression analysis was used.

RESULTS

General Characteristics of Subject and Difference in Health Conservation by General Characteristics

The general characteristics of the subjects are shown in Table 1. The subjects participated in this study were 112 and for the age, the person of 74 years old or under were 55 persons (49.1%), the persons of 75 years old or older were 57(50.9%) and the average age was 75.52 years (7.50). The subj

ects answered 'I have religion' were 83 persons(74.1%), the education level below the primary school was 78 persons (69.6%) the highest and 58 subjects (51.8%) did not have spouse. The subjects who answered 'I have family living together' was 75 persons (67%), the subjects answered subjective health status moderate were 67 persons (59.8%), the highest and in the economic level, the subjects having health insurance were 94 persons (83.9%) and the subject answered 'I am under good economic condition' was 88 persons (78.6%). In addition, 50 persons (44.6%) of the subjects represented to have 2 or more chronic diseases.

In the difference between the general characteristics and the health conservation of the subjects, the statistically significant difference was found in the spouse (t=3.509, p=.001), family living together (t=2.377, p=.019), health status (F=14.723, p<.001), economic condition (t=3.599, p<.001) and number of diseases (F=9.535, p<.001).

That is, the degree of health conservation was high in the group having spouse than the group not having spouse and in the group having family than the group not having family living together. The degree of health conservation was high in the group answered good health status that the group answered as normal or bad. In the economic condition, the group answered "good" was higher than the group answered "bad". In the number of diseases, it was high in the group not having diseases than the group having 2 or more diseases.

Table 1. General Characteristics and Difference in Health Conservation according to General Characteristics (N=112)

General Characteristics		N (%)	Health Conservation	
			M±SD	t/F(p)
Age	Under 74 years	55(49.1)	2.71±.24	1.771 (.079)
	75 years old or older	57(50.9)	2.61±.30	
Religion	Yes	83(74.1)	2.65±.30	-.552 (.58)
	No	29(58.8)	2.68±.21	
Education level	Below primary school graduate	78(69.6)	2.63±.29	1.227 (.297)
	Middle-High School graduate	29(25.9)	2.70±.24	
	College graduate or higher	5(4.5)	2.80±.27	
Spouse	Yes	54(48.2)	2.75±.27	3.509 (.001)
	No	58(51.8)	2.58±.25	
Family living together	Yes	75(67)	2.70±.26	2.377 (.019)
	No	37(33)	2.57±.29	
Health status	Good [a]	16(14.3)	2.80±.22	14.723 (<.001) c<b<a
	Normal [b]	67(59.8)	2.71±.25	
	Bad [c]	29(25.9)	2.45±.25	
Economic level	Health Insurance	94(83.9)	2.68±.26	1.834 (.069)
	Medical Care Assistance	18(16.1)	2.55±.33	
Economic condition	Good	88(78.6)	2.71±.25	3.599 (<.001)
	Bad	24(21.4)	2.49±.30	
Number of disease	No [a]	18(16.1)	2.85±.24	9.535 (<.001) c<a
	1[b]	44(39.3)	2.70±.28	
	2 or more [c]	50(44.6)	2.56±.23	

Perceived Health Status, Social Activity, Wisdom and Degree of Health Conservation of Subjects

The perceived health status, social activity (volunteer service, religious activity, leisure activity), wisdom and degree of health conservation are as shown in Table 2.

The average score of perceived health status of the subjects was 2.74 points, the average score of entire social activity was 2.24 points, the score of volunteer service was 1.40 points, the score of religious activity was 3.38 and points the score of leisure activity was 2.30 points. The average score of wisdom was 2.90 points and by the sublevel domain, the emphatic emotion was 3.17 points the highest, introspection was 2.78 points, and overcoming life experience was 2.65 points. Total average score of health conservation was 2.66 points and by sublevel domain, the structural integrity was 2.70 points the highest, energy conservation was 2.68 points, social integrity was 2.64 and the personal integrity was 2.63 points in order.

Table 2: Perceived Health Status, Social Activity, Wisdom and Degree of Health Conservation of Subjects (N=112)

Variables	Possible range	M(SD)	Items score
Perceived health status	1-5	2.74(0.81)	1.00-4.67
Social activity	1-5	2.24(0.66)	1.00-4.05
Volunteer service	1-5	1.40(0.61)	1.00-3.50
Religious activity	1-5	3.38(1.53)	1.00-5.00
Leisure activity	1-5	2.30(0.68)	1.00-4.00
Wisdom	1-4	2.90(0.25)	2.26-3.63
Emphatic emotion	1-4	3.17(0.33)	2.00-4.00
Introspection	1-4	2.78(0.29)	2.11-3.78
Overcoming life experience	1-4	2.65(0.33)	1.71-3.71
Health conservation	1-4	2.66(0.27)	1.86-3.32
Personal integrity	1-4	2.63(0.32)	1.86-3.57
Energy conservation	1-4	2.68(0.32)	1.25-3.63
Structural integrity	1-4	2.70(0.48)	1.25-3.63
Social integrity	1-4	2.64(0.35)	1.71-3.57

Correlation of Perceived Health Status, Social Activity, Wisdom with Health Conservation of Subjects

The correlation among the perceived health status, volunteer service, religious activity, leisure activity, wisdom and health conservation is as shown in Table 3.

The health conservation represented to have statistically significant positive correlation with the wisdom (r=.477, p<.001), leisure activity (r=.469, p<.001), perceived health status (r=.428, p<.001), volunteer service (r=.343, p<.001) andreligious activity (r=.222, p=.018). That is, the higher the wisdom of elderly women, the social activity of leisure activity, volunteer service, the religious activity and perceived health status, the higher the health conservation.

Table 3. Correlation of Perceived Health Status, Volunteer Service, Religious Activity, Leisure Activity and Wisdom with Health Conservation (N=112)

Variables	Perceived Health Status r(p)	Volunteer Service r(p)	Religious Activity r(p)	Leisure Activity r(p)	Wisdom r(p)	Health Conservation r(p)
Perceived Health Status	1					
Volunteer Service	.234 (.013)	1				
Religious Activity	.202 (.032)	.267 (.004)	1			
Leisure Activity	.224 (.017)	560 (<.001)	.420 (<.001)	1		
Wisdom	.122 (.200)	.242 (.010)	.359 (<.001)	.400 (<.001)	1	
Health Conservation	.428 (<.001)	.343 (<.001)	.222 (.018)	.469 (<.001)	.477 (<.001)	1

Factor Having Influence on Health Conservation of Subjects

The results of performing the multiple regression analysis to verify the factors having influence on the health conservation of the subject are shown in Table 4.

The spouse, family living together, subjective health status and economic condition and the number of diseases, which were shown statistically significant difference with the health conservation in the perceived health status, volunteer service, religion activity, leisure activity and wisdom, which were shown to have statistically significant correlation with the health conservation in the regression analysis were process by including in the independent variable. In addition, before performing the regression analysis, the multicollinearity was verified. The variance inflation factor of the research variables was 1.054-1.237 not greater than 10 and since in the results of testing the autocorrelation using Durbin-Watson, it was 1.665 and the tolerance limit was.808-.948 showing that there is not value of 0.1 or less, all the variables represented not to have problem of multicollinearity.

In the results of examining the factor having influence on the health conservation, the corrected R^2 of the regression model was .406 and the explanatory power of the independent variable was 40.6%, the goodness of fit (F=26.253, p<.001) of the regression model was shown statistically significant and the significant factor having influence was 3, among which the wisdom had explanatory power of 22.7% (β=.332, t=4.152, p<.001), the perceived health status was 13.9% (β=.329, t=4.375, p<.001) and the leisure activity showed the 5.6% (β=.262, t=3.220, p=.002) of explanatory power.

Table 4. Factor Having Influence on Health Conservation of Subjects

Variables	B	SE	β	t(p)	*Adj. R^2*	*F(p)*
Constant	1.059	.239		4.430(<.001)	.406	26.253(<.001)
Wisdom	.363	.087	.332	4.152(<.001)		
Perceived health	.111	.025	.329	4.375(<.001)		
Leisure activity	.105	.033	.262	3.220(.002)		

DISCUSSION

This study was conducted to identify the degree of perceived health status, social activity, wisdom and health conservation of the elderly women in the local community and the impact on the health conservation of the elderly women.

In the results of this study, the health conservation of the elderly women was rated 2.66 points out of full score of 4 points showing intermediate degree, which did not show big difference compared to the preceding research conducted with elderly having chronic disease by Sung [11] 93.60 points (average score of 2.53 points), that conducted with the elderly at home by Oh and Kim[10] 2.73 points, that conducted by Chang [8] 98.85 points (average score of 2.67) and that conducted by Kim [24] 2.65 points. In addition, as in the research by Lee, Shin and Kim [25] , which was conducted with middle aged women, it represented as 2.60 points, no difference was found in the health conservation of elderly women in this study.

In the sublevel domains of the health conservation, the structural integrity was 2.70 points the highest followed by energy conservation with 2.68 points, social integrity with 2.64 points and personal integrity with 2.63 points in order. In the research by Sung [11], the sublevel domain showing the highest score was the structural integrity with 2.76 points and in the research by Kim [24], it showed the highest score of 2.70 points. However, in the research by Oh and Kim [10], the energy conservation showed the highest score with 3.15 points and in the research by Chang [8], it represented the highest score with 2.97 points. The structural integrity is the domain referring to the recovery or maintaining the body structure such as organs, etc. damaged by the disease or surgery, prevention of damage to the body and the improvement of healing and the energy conservation is the activity within the range of safety such as rest, nutrition, etc. referring to the domain adjusting the energy input and output [6,8]. Since entering into the senile stage, it is difficult for elders to maintain the physiological adaptation by the high prevalence rate and low immunity together with the deterioration of physical and functional abilities, they are deemed to have great interests in maintaining the physical abilities. In addition, as regarding the number of diseases in the subject elderly women, 83.9% of them answered that they had one or more chronic diseases and those who can react and feel sensitively the physical change are themselves, the elderly women are deemed to have interests in these domains for the health conservation. In the meantime, the personal integrity, which showed the lowest score in this study, is the domain referring to the recovery or maintaining the sense of subject and value of the elderly and the social integrity is the domain referring to the perception to interact and to the actual interaction with the subject in the cultural, ethic and family organizations [6,11]. The elderly women in this study are deemed to have low cognition in placing the importance on themselves and in making decision in the problems of adapting to their later years such as the opportunity of education, economic condition, etc. in the patriarchal society in the past and deemed to have difficulties in the interaction related to the interaction with others. Therefore, considering that in case of our country, most of senior citizens who live alone are elderly women, the assessment of health conservation and the development of intervention for elderly women are needed more.

The score of perceived health status was 2.74 points out of full score of 5 points, which is lower than the researches by Bak [26] and Kim [24], where the score was 8.92 points (2.97 points) and 2.83 points, respectively, but considering that the this study was conducted only with the elderly women, it is observed that the degree that the elderly women perceived their own health status subjectively was not high. Considering that in the research by Bak [26], the elderly women scored high in the perceived health status by gender than the elderly men, it required to seek the intervention measures for elderly women so that they can perceive the health status positively for the continuous health conservation. In addition, to improve the perceived health status, it is important to find out the health problem precisely by identifying the information on their health status and the self-management through the dietary habit and the exercise is deemed to be necessary.

As the social activity was scored with 2.24 points out of full score of 5 points, the volunteer service was 1.40 points, religious activity was 3.38 point and the leisure activity was 2.30 points, the participation in the religious activity was the highest. In the research by Seo [21], as the volunteer service scored 2.92 points out of full score of 5 points, the religious activity was 4.22 points and the leisure activity was 3.31 points, the participation in the religious activity was highest as same as this study. In the elders, the physical health and the satisfaction with life is increased by obtaining the opportunity to contact with the society through social activity [19] and that the participation in the religious activity is high out of diverse social activities is deemed to recover the metal stability and to maintain the healthiness with positive attitude.

The wisdom scored 2.90 points out of full score of 4 points showing higher than intermediate, which does not represent big difference compared to 75.68 points (average 2.80 points) in the research conducted with elderly having chronic diseases by Sung [11] and 2.84 point in the research by Kim [24]. In the meantime, since in the research conducted with the elderly living at home by Sung [16], it was scored with 100.78 points (average 3.73 points) and in the research conducted with the middle aged women by Lee, Shin and Kim [25], it was scored with 81.33 points (average 3.01 points), it showed higher than that of elderly women in this study. However, in the research by Sung [16], it was scored higher in the female than the male and the higher the age, the higher the score of wisdom, which is the similar results compared to the results of research

conducted with the elderly women and middle aged women, in which the wisdom was shown higher than average score but is different result that the middle aged women were scored higher than the elderly women of this study, the repetitive research is deemed to be necessary later.

In the sublevel domains of wisdom, the emphatic emotion was scored with 3.17 points followed by introspection with 2.78 points and overcoming life experience with 2.65 points. In the research conducted with the elderly having chronic diseases by Sung [11], the emphatic emotion was scored with 2.84 point the highest followed by introspection and overcoming life experience with 2.77 points. In the research by Kim [24], the emphatic emotion was scored with 2.97 the highest followed by introspection with 2.82 points and overcoming life experience with 2.67 points in order showing same results with this study. The emphatic emotion represents the emotion and attitude such as compassion, consideration, satisfaction and forgiveness related to the emotion, the introspection is the domain referring to cognitive thinking such as insight, intuition, reflection, etc.and the overcoming life experience is the domain referring to the overcoming life, courage, sincerity, etc. [18]. Therefore, considering these three domains, the development of nursing intervention for the strategy for the elderly to adapt to the reality by enhancing the wisdom in the extended life of elderly is deemed to be necessary.

Examining the difference in the health conservation according to the general characteristics of elderly women, the degree of health conservation of the elderly women having spouse, family living together, good health status, good economic condition without disease was represented high, which is coincided with the results of research by Oh and Kim [10] that the subject having spouse showed the high health conservation and statistically significant difference. In addition, in the researches by Sung [11] and Chang [8], the subject having spouse showed high health conservation and statistically significant difference. It was reported that the elders not having spouse shows higher feeling of loneliness and the sense of alienation than those who have spouse and get adverse influence of the metal health [8] and in case of elderly not having spouse, it is necessary to conserve the health through the promotion of social relation network through the friends and peer group [10]. Therefore, viewing the spouse as supporting system, as in case of having spouse, they can conserve the health well, the formation of supporting body is important.

In the relations among the perceived health status, social activity, wisdom and health conservation, the wisdom, volunteer service, religious activity, leisure activity and the perceived health status has statistically significant positive correlation with the health conservation. That is, the higher the wisdom of elderly woman, the more the woman is engaged in the social activity such as leisure activity, volunteer service and religious activity and the more the women perceives that her health status is good, the higher the health conservation. While in the researches by Sung [11] and Kim [24], the statistically significant positive correlation was found between the health conservation and the wisdom showing same results, since in the research by Lee, Shin & Kim [25], no correlation was found between the health conservation the wisdom showing different results comparing to the high score of wisdom in the middle aged women, it is necessary to verify it through the repetitive research later and the measure to maintain the wisdom in the elderly for the health conservation should be sought

In the results of analyzing the factors having influence on the health conservation of elderly women with the multiple regression analysis, the wisdom, perceived health status and the leisure activity were identified as the factor having significant influence. The explanatory power of these three factors was 40.6% showing that the wisdom has greater influence compared to the other factors. In the research conducted with the elders having chronic diseases by Sung [11], the wisdom represented to account for 36% of the health conservation and in the research conducted with elders by Kim [24], it represented to account for 55.7% of the health conservation. As such, it was observed that the wisdom is the important factor having influence on the health conservation. The wisdom includes the positive quality on the ego integration and maturation, judgment and interpersonal relationship and the life and as the wise elders deal with the changes in life better, they seem to be able to support them in order to grant the positive meaning in their life so that they can satisfy with the life [17, 18] and can exert the coping ability to overcome the difficult situation. The perceived health status and the leisure activity out of the social activity represented as significant variable having influence on the health conservation of elderly women. As the concept of health perceived by elderly is different by individual, since the people feel that they are not healthy while not having disease and they feel healthy while having several diseases [27, 28, 29, 30], it is deemed to be related to the factor having influence on the health conservation as a meaning that connotes the subjective health status with the positive thinking according to the personal perspective. In addition, leisure for the elderly seems to be related to the preservation of health because it can be perceived as a social activity that regards daily life itself as meaning of leisure rather than the meaning of rest. The results of this study confirm that wisdom is a variable affecting health preservation. The purpose of this study is to provide basic data for health preservation for elderly women in rural environment.

CONCLUSION

The health conservation of the elderly women in the rural environment has significant correlation with the wisdom, leisure activity, perceived health status, volunteer service and

religious activity and the wisdom, perception of health status and the leisure activity represented as the factor having influence on the health conversation of elderly women.

Considering that the elderly women can perceive that their health status is good when they live wisely living daily life, perform health improvement behavior such as exercise, nutrition, etc. and have sound health habit, the health care administrator such as nurse, etc. needs to encourage and support the health care of the elderly women in the local community actively. In addition, since the social activity, that is, the interpersonal activity with others such as volunteer service, religious activity and leisure activity is important factor involved in the health conservation, it is necessary to arrange and support such meetings.

It is our hope that based on the results of this study, the nursing intervention program for health conservation of elderly women in the rural area would be developed and supported with policy and institutionally. In addition, the development of nursing intervention program using the volunteer and expert needs to be accelerated utilizing the public welfare environment around the community hall in the setting of our country.

REFERENCES

[1] Statstics Korea. 2015,Elderly statistics. Available from: http://kostat.go.kr

[2] Statstics Korea. 2016, Womens Life in Statstics. Available from: http://kostat.go.kr

[3] Moon, M.J., 2012, "Factors Influencing Successful Aging in Elderly Living in Rural Areas," J Korean Gerontol Nurs, 15(2), pp. 165-174.

[4] Bae, S.H., 2007,"Study of the Female Elderly Persons who Live Alone in the Farm and Fishing village on the Relationship between their Exchange degree of Social and Depression," M.S. thesis, Hanseo University, Chungnam.

[5] Jo, A.J., 2009, "The effect of Subjective Health-status of Support of the Older Generation and Health Promotion Behavior," M.S. thesis, Ewha Womans University, Seoul.

[6] Sung, K.W., 2005, "Scale Development on Health Conservation of the Institutionalized Elderly," Journal of Korean Academic Nursing 35(1), pp. 113-124.

[7] Levine, M.E., 1966, "Adaptation and assessment: A rationale for nursing intervention," The American Journal of Nursing, 66(11), pp. 2450-2453.

[8] Chang, H.K., 2015, "Influence of Frailty, Nutritional Status, Positive Thinking and Family Function on Health Conservation of the Elderly at Home," Korean J Adult Nurs, 27(1), pp. 52-62.

[9] Nam, J.R., Sung, K.W.,2014, "Uncertainty in Elder Women with Osteoarthritis: Relationship to Pain, Self-care Agency and Health Conservation," J Korean Gerontol Nurs, 16(3), pp. 85-93.

[10] Oh, W.O., and Kim, E.J., 2009, "Factors Influencing Health Conservation among Elders," J Korean Acad Fundam Nurs, 16(2), pp. 201-209.

[11] Sung, K.W., 2014, "Pain, Wisdom and Health Conservation in Older Adults with Chronic Diseases," J Korean Gerontol Nurs, 16(1), pp. 85-93.

[12] Korea Institute for Health and Social Affairs "A study on the Effective Chronic Diseases Management,"2013-31-19

[13] Song, Y.C., 2014, "The Relationship among of Subjective Memory Impairment, Depression and Perceived Health status of the Elderly," M.S. thesis, Catholic University, Pusan.

[14] Park, S.H., Suh, S.R., and Kim, H.S., 2015, "Factors of Affecting Activities of Daily Living, Depression and Life Satisfaction among Aged Women," Journal of East-West Nursing Research, 21(2), pp. 119-125.

[15] Chung, H.J., Kim, T.H., and Lee, D.S., 2000, "Related Variables of Life Satisfaction of Living Alone in Chonbuk-do province,"J Korean Gerontol Nurs, 20(2), pp. 49-70.

[16] Sung, K.W., 2011, "Relation of SuccessfulAging and Wisdom inKorean Older Adults," J Korean Gerontol Nurs, 13(1), pp. 48-57.

[17] Ardelt, M., 2000, "Antecedents and Effects of Wisdom in Old Age: A longitudinal perspective on aging well," Research on Aging, 22(4), pp. 360-394.

[18] Sung, K.W., Lee, S.Y., and Park, J.H., 2010, "Scale Development of Wisdom among Korean Elderly," J Korean Gerontol Nurs, 30(1), pp. 65-80.

[19] Oh, J.H., Yi, M.S., 2012, "Factors That Affect Health-Related Quality of Life in Community-Dwelling Older Adults," The Research Institute of Nursing Science Seoul National University, 9(2), pp. 102-110.

[20] Kim, D.B., Kim, S.B., and Shin, S.M., 2012, "The Effect of Social Participation on the Depression of the Spouseless Elderly: The Mediating Effect of Social Support and Self Efficacy,"J Korean Gerontol Nurs, 32(1), pp. 289-303.

[21] Seo,Y.S., 2011, "The Effect of Participation in Social Activity of Elderly on Ego Integrity and Life Satisfaction," M.S. thesis, Daegu Haany University, Kyungpook.

[22] Speake, D.L., Cowart, M.E., and Pellet. K., 1989, "Health Perceptions and lifestyles of the elderly," Res Nurs Health, 12, pp.93-100.

[23] Hwang,M.H., 2000, "A model of self-care well being of elderly," Ph.D. thesis, Kyungpook National University, Kyungpook.

[24] Kim, H.K., 2015, "Health Conservation in Community-dwelling Older Korean Adults: Association of Pain, Perceived Health Status, Social Networks,Self-efficacy, and Wisdom," Advances in Information Sciences and Service Sciences, 7(1), pp.26-38.

[25] Lee,H.K., Shin,E.H., andKim,Y.K., 2016, "Converged Influencing Factors of Health Promotion Behaviors, Menopausal Symptoms and Wisdom in the Middle-Aged Women on Health Conservation," Journal of Digital Convergence, 14(11), pp. 597-605.

[26] Bak, H.K., 2009, "A Study on Leisure Activities, Leisure Life Satisfaction, Perceived Health Status and Depression in the Elderly," Korean J Rehabil Nurs, 12(2), pp. 112-119.

[27] Kang, Y.H., Kim, M.Y., and Lee, E., 2008, "The Relationship of Perceived Health status, Activities of daily living and Nutrition status in the Community-dwelling Korean elderly,"Journal of Korean Academic Nursing, 38(1), pp. 122-130.

[28] Ha, J.Y., Choi, E.Y., 2011, "Health Perception, Health Concern, and Health Promotion Behavior of the Elders," J Korean Gerontol Nurs, 15(3), pp. 277-285.

[29] Nam, Y.H., Nam, J.R., 2011, "A Study of the Factors Affecting the Subjective Health Status of Elderly People in Korea," Korean Journal of Family Welfare, 16(4), pp. 145-162.

[30] Ware, J.E, 1986, "The assessment of health status: Applications of social science to clinical medicine and health policy," New Brunswick RutgersUniversity Press , pp. 204-228.