

# The Effect of Caregiving Stress on Depression among Korean Married Adult Children of Korea

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## 한국 기혼 성인자녀의 노부모 부양 스트레스가 우울감에 미치는 영향

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**Abstract** The purpose of this study is to examine the relationship between caregiving stress and depression of the caregiver. The data was collected through by a survey on to married adults who are responsible for the care of old parents. The survey(by purposive sampling) was conducted over the course of for the three months duration from Jan. to Feb. 2014. A total of Finally, 307 copies of the questionnaire retrieved were used for analysis. First, in the case of women, those in their 50s or over, and in the all both gender cases, those who live in rural area, and those who perceive their economic levels as 'low' tend to have higher caregiving stress than other kinds of groups. Second, those who do not have spouses, and those who perceive their economic levels as 'low' tend to have higher depression than other kinds of groups, and those who hold the whole responsibility of caring old parents had a severe high depression. Third, it was found that the greaterhigher the caregiving stress of caregivers get, the more serious higher their stresses become get.

**Keywords:** Caregiving stress, Depression, Married adult children, Caregiving, Elderly

**요약** 본 연구의 목적은 노부모를 부양하는 성인자녀의 부양스트레스가 우울감에 미치는 영향을 파악하는데 있다. 이를 위해 2014년 1월 2월 충남의 H 대학의 대학원생을 조사원으로 활용하여 노부모부양에 책임이 있는 기혼의 성인자녀를 대상으로 편의표집을 하였으며, 350부를 배포하여 최종적으로 307명의 자료를 분석에 사용하였다. 성인자녀의 부양스트레스의 신뢰도는 .94, 우울감의 신뢰도는 .92로 높은 것으로 나타났다. 연구결과, 첫째, 노부모 부양 성인의 우울감은 평균 2.56점, 부양스트레스는 평균 2.53점으로 보통수준이하로 낮았다. 둘째, 기혼 성인자녀의 부양스트레스는 여성인 경우, 50대 이상, 농촌에 거주, 경제수준이 낮은 경우 더 높았다. 우울감은 배우자가 없는 경우, 경제수준이 낮은 경우 더 높았다. 셋째, 기혼 성인자녀의 경제수준이 낮을수록, 부양 스트레스가 높을수록 우울감이 높은 것으로 나타났다.

**주제어 :** 부양 스트레스, 우울감, 기혼 성인자녀, 부양, 노인

Received 23 July 2014, Revised 26 September 2014  
Accepted 20 October 2014  
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ISSN: 1738-1916

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## 1. Introduction

As of 2013, the number of the elderly in Korea is 6,137,702, comprising 12.2% of the total population. With the increase of the number of the elderly, the number of the elderly who need care has also increased. But, because of cultural reason in Korea, and government policies, the care of the elderly is likely to be performed by the in family rather than by specialized institutions in facilities. Since the average life expectancy increases span gets longer, the care period for them also increase gets longer, which makes the caregiving stress of adult sons and daughters greater also gets heavier.

Depression is the most common response to stress [1]. Caregiving stress of adult children attending to caring their elderly parents affects the depression among them [2, 3, 4, 5]. That is, stress from caring the elderly affects mental health, causing depression and anxiety, even mental diseases [3]. In addition, [4] classified 15.4% of daughters-in-law who care for their parents-in-law make up as the group which has the most problems in mental health. Furthermore, depression caused by stress from caring for the elderly can even lead to cause even suicide [3].

Such caregiving stress or depression of caregivers varies depending on the characteristics of caregivers. [4] found that mental health levels of daughters-in-law who care for their parents-in-law differ by on educational level of the daughter-in-law, the hierarchy in which she is placed within the family, order of her among daughter-in-law of the family, and the length of caring per day. [2] found that the stresses daughters-in-law suffer differed depending on the hierarchical status they had within the family, on the order of them among daughters-in-law of the families, and whether they lived with the elderly parents-in-law. According to [6], the higher the caregiver's age is, the more unstable the family economic situation is, the higher the caregiving stress gets, the lower caregiving stress is. [7]

proved that when the caregivers are in their 40s, the poorer they are, the more they tend to feel stress, and that, when caregivers are son-in-laws rather than daughters-in-law, when the care-takers are only mothers-in-law, and when fathers-in-law are in their 60s, caregivers' stress was higher than other cases. Such a trend is not uniquely found only in Korea. [5] found that when the caregiver is female, low in educational level, and when the care-taker is spouse, the caregiver's stress gets higher. Moreover, [8] predicted that when much time is spent supporting and caring for the elderly, the care giver has a higher likelihood of developing depression and that depression is greater when the individual bears the major burden of care giving.

Likewise, stress related to care giving can be a cause of depression in the care giver and the depression or stress experienced by the care giver can vary depending on the care giver's socio-demographic characteristics or situational characteristics (such as the relative responsibility of care giving for one's own parents versus the spouse's parents and the level of responsibility borne). But there has been no clear indication as to whether the depression of care givers is due to the characteristics of the care giver herself, the situation or stress from care giving. Identifying major factors of care giver's depression will be a meaningful study for the study of depression in middle age or related studies as well.

The purpose of this study is to examine the relationship between caregiving stress and depression of caregiver. More concretely, first, this study will measure the levels of caregiving stress and depression. Second, it will check whether there are differences in caregiving stress and depression depending on socio-demographic characteristics will be investigated. Third, the study will look at it will check the effect of caregiving stress on depression. The findings of this study will serve as basic material in searching for practical methods to reduce caregiving stress factors

elements and depression to and improve life satisfaction of caregivers.

## 2. Materials and Method

### 2.1 Procedures

The subjects in this study were married adult children who had the responsibility to care for their elderly parents. Graduate students at H University, located in Chungnam Province of Korea were used as survey assistants to conduct a survey on adult children, regardless of whether they were currently living with their elderly parents or not. The survey (by purposive sampling) was conducted in January and February of 2014. A total of 350 copies of the questionnaire was distributed, of which 320 copies were collected. Excluded were 13 copies with incomplete answers or cases where they had no surviving elderly parent.

A total of finally, 307 copies of the questionnaire were retrieved and used for analysis.

### 2.2 Measure

‘Caregiving stress’ was measured by using Zarit’s Burden Interview [9], using a 22-item, 5-point Likert-type scale. Items were scored from 1 to 5, with higher score indicative of greater caregiving stress. Cronbach’s alpha for this study was .94.

‘Depression’ was measured using the SCL-90(Derogatis, 1977) 10-item scale that was translated by [10]. Original depression instrument was based on the 4-point Likert-type scale which was revised into a 5-point Likert-type scale, and A higher score indicated greater depression. Cronbach’s alpha of the depression scale was .92 in the present study.

### 2.3 Socio-demographic Characteristics

Among those who answered the questionnaire the respondents, the proportion of females was 66.7%, larger than the proportion of males, 33.4%. The

proportion of respondents in the 40s was 45.3%, larger than any other age group, and those in their 30s or less took up 34.0%, while and those in their 50s and over comprised 20.7%. A 90.9% of respondents had spouses, and, in terms of educational levels, 55.3% of respondents had a university degree or higher were college graduates or above. 54.9% of respondents had a religions, a little larger group than those who had no religions, 45.1%. 76.4% of them lived in urban area, while only 23.6% lived in rural area. The former is 3 times as many as the latter. In the job category, professional jobs, no-job, and full-time housewife accounted for were 24.9%, respectively. Jobs related with sales, service, farming or fishery accounted for added to 24.9%, and office workers and managers comprised 22.2%. In terms of family income level, 67.0% of respondents described their levels as ‘middle class’, while 18.8% classified them as belonging to ‘lower class’, and 14.2% ‘higher class’ <Table 1>.

**<Table 1> Socio-demographic characteristics**

Classification		N	%	M(SD)
Gender (n=327)	Male	109	33.3	1.67(.472)
	Female	218	66.7	
Age (n=329)	30s or below	112	34.0	1.87(.729)
	40s	149	45.3	
	50s or over	68	20.7	
Marital status (n=330)	Having spouse	300	90.9	.90(.289)
	No spouse	30	9.1	
Educationa l level (n=329)	Middle S or below	25	7.6	2.48(.634)
	High school	122	37.1	
	College or over	182	55.3	
Religion (n=328)	Yes	180	54.9	.55(.498)
	No	148	45.1	
Residential area (n=330)	Urban	252	76.4	1.24(.425)
	Rural	78	23.6	
Job (n=329)	Profession	87	26.4	2.46(1.131)
	Office	73	22.2	
	Sales/service/farming or fishery	82	24.9	
	No job or house-keeper	87	26.4	
Economic level (n=330)	Low	62	18.8	1.95(.674)
	Middle	221	67.0	
	High	47	14.2	

## 2.4 Statistical Analysis

Collected data were analyzed with the SPSS PASW21.0 program. Socio-demographic characteristics and care characteristics of caregiver who take care of their parents or parents-in law were analyzed with descriptives analysis such as through percentage, mean, standard deviation, etc. To see whether there are any differences in caregiving stress and depression levels depending on socio-demographic characteristics, t-test and one-way ANOVA were conducted. Finally, to examine the effects of caregiving stress adult children caring their parents or parents-in-law on their depression, correlation, hierarchical regression analysis were performed.

## 3. Results

### 3.1 Caregiving stress and depression levels of adult children caring for old parents

The mean caregiving stress level of adult children caring for old parents was 2.53, and mean depression level of them was 2.56. 3 as the median value in the 5-point scale, the stress and depression level of adult children caring old parents in Korea can be viewed as comparatively low(No tabe).

### 3.2 The differences in caregiving stress and depression among caregivers depending on the characteristics of the those caregivers

Examination of differences in caregiving stress among caregivers depending on their characteristics revealed that those who are in their 50s or over feel the highest caregiving stress among all age groups, that caregivers in rural area feel higher stress than their urban counterparts, and that those who perceive their own economic level as 'low' feel more stress from care than those who perceive their own economic levels as 'high' or 'middle' <Table 2>.

Differences in depression levels among caregivers depending on their characteristics. Those who do not have spouses and those who perceive their own economic levels as 'low' feel more depression than those who have spouses and those who perceive their own economic levels as 'high' or 'middle'.

### 3.3 The effect of caregiving stress on the depression of among caregivers

Before conducting a hierarchical regression analysis, a correlation analysis was carried out for major variables. The correlation analysis shows that the higher the care giving stress, the greater the depression and the higher the income level and the higher the care giving responsibility, the lower the care giving stress. In addition, the higher the perception of income level, the lower the depression. The correlation coefficient between income level and depression was the highest at .414, while for depression and care giving stress it was .289 and for income level and care giving stress it was -.225. There seems to be no issue of multicollinearity(No table).

To examine the effect of caregiving stress among caregivers, adult children caring their old parents, on their depression, we did the conducted a hierarchical regression analysis <Table 3>. The variables in the first stage were those which showed significant differences in Table 2, the means above, and we used them as control variables. In the final model, independent variables are as follows: gender, age, married or not, residential area, economic level, care responsibility level, my parents or not, and caregiving stress. Dependent variable is the depression of the caregiver. Model I, Model II, and Model III were all significant, and Durbin-Watson value was 2.027, demonstrating that there is a low risk of multicollinearity problem. In the first stage, control variables — gender, age, having spouse or not, and economic level — explained 20.3% of depression. In the

second stage, care responsibility level, and my parents or not increased depression by 1.6%. caregiving stress added in the third stage increased depression by 6.5%. All the 8 variables explained 28.4% of depression of caregivers, adult children caring their old parents.

Excluding controlled variables used in the first stage, caregiving stress had a greater effect on depression of caregivers than care characteristics. And, in the context of Model III, those who hold all the duty of caring old parents, that is, those who have a bigger responsibility, and those who feel great caregiving stress feel greater depression.

#### 4. Discussion

This study aimed to examine the relationship between caregiving stress and depression among caregivers, adult children who care for their old parents. The survey was conducted on to such adults in January and February, 2014. Finally, A total of 307 copies of questionnaire were used for analysis. The findings of the analysis are as follows.

First, this study examined whether there is any differences in caregiving stress among caregivers, depending on their characteristics. It was found that, in the case of women, those in their 50s or over, and in the all gender cases, those who live in rural area, and who perceive their economic levels as 'low' tend to

<Table 2> Differences in caregiving stress and depression levels among adult children caring old parents depending on their characteristics

		caregiving stress			Depression					
Classification		M(SD)	t/F	Duncan	Classification	M(SD)	t/F	Duncan		
Gender	Male (n=104)	2.39(.642)	-2.690**	-	Gender	Male (n=109)	2.49(.655)	-1.086	-	
	Female (n=199)	2.60(.590)				Female (n=217)	2.58(.798)			
Age	30s or below (n=105)	2.36(.664)	6.349**	A	Age	30s or below (n=112)	2.59(.846)	.144	n.s	
	40s (n=139)	2.61(.552)				40s (n=149)	2.54(.677)			
	50s or over (n=60)	2.64(.598)				50s or over (n=67)	2.57(.746)			
Marital status	Having spouse (n=279)	2.52(.608)	-.883	-	Marital status	Having spouse (n=299)	2.52(.738)	-3.473**	-	
	No spouse (n=26)	2.63(.688)				No spouse (n=30)	3.01(.781)			
Educational level	Middle S or below (n=24)	2.61(.675)	2.125	n.s	Educational level	Middle S or below (n=25)	2.58(.847)	1.783	n.s	
	High school (n=106)	2.62(.620)				High school (n=121)	2.66(.731)			
	College or over (n=174)	2.47(.600)				College or over (n=174)	2.49(.755)			
Religion	Yes (n=177)	2.58(.595)	1.291	-	Religion	Yes (n=191)	2.59(.741)	.557	-	
	No (n=126)	2.48(.633)				No (n=136)	2.54(.775)			
Residential area	Urban (n=239)	2.49(.613)	-2.276*	-	Residential area	Urban (n=251)	2.52(.743)	-1.874	-	
	Rural (n=66)	2.68(.604)				Rural (n=78)	2.70(.779)			
Job	Profession (n=82)	2.56(.616)	1.836	n.s	Job	Profession (n=87)	2.46(.729)	2.338	n.s	
	Office (n=65)	2.65(.685)				Office (n=73)	2.71(.799)			
	Sales/service/farming or fishery (n=74)	2.52(.580)				Sales/service/farming or fishery (n=82)	2.65(.797)			
	No job or house-keeper (n=84)	2.42(.577)				No job or house-keeper (n=86)	2.47(.672)			
Economic level	Low (n=55)	2.78(.608)	6.973**	B	Economic level	Low (n=62)	3.04(.855)	30.131****	A	
	Middle (n=206)	2.50(.625)				Middle (n=220)	2.54(.677)			B
	High (n=44)	2.35(.478)				High (n=47)	2.00(.754)			C

\*p<.05, \*\*p<.01, \*\*\*\*p<.001

< Table 3 > Variables affecting depression of adult children caring old parents (n=303)

Variables	Depression						
	Model I		Model II		Model III		
	$\beta$	t	$\beta$	t	$\beta$	t	
(Constant)		12.801***		12.506***		8.536***	
Socio-demographic characteristics	Gender	-.116	-1.972	-.122	-1.914	-.076	-1.231
	Age <sup>a</sup>	-.004	-.063	-.005	-.080	-.051	-.888
	Marital status <sup>a</sup>	-.125	-2.119*	-.125	-2.115*	-.114	-2.007*
	Resid. area <sup>a</sup>	-.112	-1.896	-.087	-1.452	-.067	-1.165
	Eco. level	-.112	-6.681***	-.402	-6.806***	-.332	-5.661***
Care characteristics	Responsibility <sup>a</sup>			.130	2.185*	.071	-2.007
	My parents or not <sup>a</sup>			.029	.445	.031	1.203
caregiving stress						.282	4.635***
F		12.099***		9.427***		11.650***	
R <sup>2</sup>		.203		.219		.284	
R <sup>2</sup> change				.006		.65	

\*p<.05, \*\*\*p<.001

<sup>a</sup>Dummy coding: Age(1=male), Married(1=having spouse), Residential area(1=Urban), Responsibility level(1=whole duty), My parents or not(1=my parents)

have higher caregiving stress than other kinds of groups. This finding is consistent with that of [6, 7] who demonstrated that age of caregivers and economic levels of caregivers made differences in caregiving stress.

Second, this study also confirmed whether personal characteristics of caregivers cause differences in depression. The analysis showed that those who do not have spouses, and those who perceive their economic levels as 'low' tend to have higher depression than other kinds of groups. It is consistent to [11] who found out that income level of family is an important element affecting care burden and depression. And, those who hold the whole responsibility of caring for old parents had high depression. Consequently, it is necessary to lighten their responsibility of caring for their parents. For example, there should be ways to improve family relationship to make by having siblings share responsibility of caring for old parents, to cut tax for those who hold the whole responsibility of caring parents, and the system in which caregivers can inherit property of parents.

Third, it was found that the higher the caregiving stress of caregivers get, the higher their stresses get.

Looking at the results of hierarchical regression analysis, when the socio-demographic characteristics of the care giver were controlled for, care giving stress rather than care giving characteristics had a higher effect on the depression of the care giver. That is, regardless of the responsibility that the care giver felt and regardless of whether it was the individual's own parent or the parent of one's spouse, care giving stress had a significant effect on the depression of the care giver. It is consistent to [4] who proved that high caregiving stress leads to high depression. Thus, care of old parents has negative effects on mental health of caregivers.

Therefore, the depression of adult children in Korea who have the major responsibility to care for their elderly parents was 2.56 points which is lower than the median value. But the result of this study indicating that care giving stress has a significant impact on depression suggests that in order to improve quality of life, policy measures need to be put in place to reduce care giving stress. In particular, depression is a well known cause for suicides in Korea, which have become a major social issue. Given this, more importance should be given to the issue to improve the health of

the overall society. So, it is necessary to find ways to alleviate such negative results. For example, [12] argued that support of spouse buffered caregiving stress of caregivers. [13, 14] and others found out that familism, filial piety, and close feeling were elements which reduce caregiving stress and depression. Thus, in future researches, it seems necessary to search for variables which can reduce caregiving stress and depression of caregivers.

Apart from the social support, literature on care giving stress also mentions intimacy between the care giver and the elderly parent as an important variable [13]. That is, the closer the elderly parent and the care giver are, the care giving stress is lower. Therefore, a measure to reduce care giving stress and thus the risk of depression by improving the closeness between the care giver and the elderly parent would also be needed. For example, programs offered by organizations that promote healthy family life or local community centers that cater to the elderly can be one way in achieving this. Art therapy programs or consultations have also proven to be effective in reducing the stress and depression of care givers in preceding studies [15]. Based on this finding, art therapy programs or consultations where both the elderly parent and the care giver can take part would be most effective.

Lastly, this study focused on the relation between the care giving stress of the care giver and his depression but did not take into account other variables such as the period of care giving or the reason for care giving. Moreover, the age of the elderly parent, their health status and their relationship with the adult children can be important factors that affect the depression of the care giver but have not been included in the study model. Despite the constraints of not being able to include all variables in one study, the authors anticipate that follow-up studies will include such variables to more clearly identify the relation between care giving stress and depression.

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