Positive and Negative Effects of Social Support on Depressive Symptoms among the Elderly

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INTRODUCTION

Buffering hypothesis

Clarifying the relationship between stresstul life events and psychological well-being has been crucial to social gerontology because the higher the age is, the probability of facing stressful life event such as getting sickness or being bereaved of their spouses and friends increases.

Although a number of studies have examined this relationship, the findings generally have been disappointing because the statistical association between stress and well-being has been weak (House & Robins, 1983). These results have prompted researchers to hypothesize that factors such as social support may buffer the impact of stress on well-being among elderly people (Ward, 1985). Essentially, proponents of this buffering hypothesis maintain that in time of significant life stress individual with strong social support will be protected from developing symptoms of psychological distress (Caplan, 1981).

Problem of conceptualization and measurement

Despite the intuitive appeal of the buffering hypothesis, it lacks adequate empirical confirmation. According to Krause's review, contradictory findings were revealed. Some study showed that support modified the effects of stress, whereas other failed to find that older person with low level of social support was especially vulnerable to effect of stressful life events (Krause, 1986). Krause has pointed out that the reason for these inconsistent findings may be attributed in part to problems in the conceptualization of both stressful life events and social support.

Although a group of individual is likely to experience a broad range of stressful life events during a given period of time, the frequency of occurrence for any specific stressful life event is likely to be quite low, making it difficult in most situation to analyze the effect of single life event. As a result, researchers intended in the impact of life stress have analyzed summary scores derived from life events' checklist that assess exposure to a large number of different stressful events. Krause says, however, that aggregating stressful life event indices in this manner creates problem because we are unable to determine whether the deleterious effects of stress involve a wide range of events or whether it is confined to a few types of events. It is recommended that stressful life events' indices must be desegregated into homogeneous clusters of specific life events.

On the other hand, regarding to the measurement of social support, aggregated indices that are designed to assess the benefits of diverse type of supportive behaviors may also create interpretation problem. Aggregate support indices make it impossible to evaluate whether all forms of social support buffer the impact of life stress or whether the benefits of support are restricted to a few specific types of helping behaviors.

Positive and negative social support

Supportive behaviors are not necessarily always resulted by positive outcome (Antonucci, T. C., 1985). Rook made significant contribution to the investigation of the negative side of social interaction (Rook, 1984). In the ideal case, a supportive transaction involves the intent of an actor to be supportive to another, a behavior that express that intent, and a supportive effect. A complication develops when one or more of these components are inconsistent with others. For example, a person A intends to act supportively but effect on a person B is negative. There may be unfavorable forms of support, for example, overprotection, reinforcement of health-damaging behavior, or assistance given on demanding and debilitation terms. For these reasons it is important that a distinction between intention and outcome is made. It is very possible that the intent of the supporter is positive, but the outcome for the recipient of that support is negative.

The negative side of social support has long been neglected in the literature of family sociology or social gerontology in Japan. Rather, it tends to be regarded that larger social networks such as three generation's family would be associated with more availability of support. However, Sugisawa pointed out that the suicide rate of old people living in three generation's family was higher than that of old people living in any other family types (Sugisawa, 1989). At any time a social network is comprise of non voluntary ties such as those with family member, any of which may or may not be functioning in a supportive role. Rather, there might be possible that the larger size of network is, the probability of having with negative social relationship increase (Seeman, T. E. & Berkman, L. F., 1988).

The purpose of this study is to develop a more general understanding of how the positive and negative sides of social support buffer and raise the impact of stressful life events on the psychological well-being simultaneousl-

y.

METHOD

The sample

The data for this study came from a national random sample representing the non institutionalized population of adult who were 60 years of age and older living in Japan. Completed interviews were obtained from 2200 elderly. Respondents ranged in age from 60 to 93, with a mean age of 69.2. Of these respondents, 55% was women, 63% was currently married, and 95% had children.

Stressful life events

A 44-item check list was used to measure stressful life events that occurred on respondents themselves, respondent's children, spouse, other relatives and friends. Throughout the questionnaire, we asked for information on only those events that had occurred within the last year. For the purpose of this study, we organize the stressful life events into the three categories: health problem(e.g., sickness or injuries of respondent or his/her relatives); bereavement(e.g., death of family members); and financial problem(e.g., reduced income). Other item of events such as crime and regal matters(e.g., robberies, assault), and network crises(e.g., family members got separated or divorced) were excluded from the analysis because of their small occurrence rates.

Social supports

Social support was measured with a series of question used in a survey that the Institute for Social Research of the University of Michigan conducted in 1986. Positive aspects of social support were measured with the question that asked respondents the extent to which they received consultative, emotional, and tangible support in terms of sick care and financial assistance from the other people who were close to the respondents. Negative aspects of social supports were measured with questions that asked respondents the extent to which other people were critical, gave too much care, and were financial burdens to the respondents. Each question asked about activities of their spouses, children, and other relatives. The responses to the questions about those people were sum up to make scores.

Depressive symptoms

The dependent variable in this study, depressive symptoms, was assessed with the Center for Epidemiological Studies Depression Scale(CES-D). This scale was originally developed by Radloff. According to his initial analysis, CES-D consists of four dimensions: (a) somatic and retarded activity; (b) depressed affect; (c) positive affect; (d) interpersonal.

We employed 17 items out of original 20 items to be administered in the survey according to previous study of the validity and reliability of the scale. However, the items representing the positive affect and interpersonal dimensions were excluded from this analysis according to Liang's proposal(Liang, J. 1989). The interpersonal dimension seems to confound the lack of social support resources with depression symptoms. One may argue that lack of social support resources is a predictor rather than an indicator of depressive symptoms.

After all, only 10 items representing dimensions of somatic and retarded activity and depressed affect were used to asses respondent's depressive symptoms. Although a factor analysis to the 10 items of CES-D scale revealed two factors, it was difficult to make meaningful interpretation of the factors. Therefore, the scale was regarded as single-dimension scale. The reliability coefficient of the scale was .821. A high score on this scale indicates greater psychological distress. Sixty percent of respondents did not feel depressive symptoms in the past year.

Control variables

In order to more accurately specify the relationships among supports, stress, and depressive symptoms, we controlled the effect of the following variables: gender, age, marital status, existence of children, occupation, health status, ADL, and financial status in a regression analysis.

Statistical analysis

The goal of this study is to examine whether the four dimensions of positive social support can buffer the impact of the various types of stressful life events on the psychological well-being of old people. What kind of method of analysis do we have to employ in order to test this buffering hypothesis?

The buffering effect of social support means that the amount of change in the level of depression due to a unit of change in the level of stress, in short, the result of stress depends upon the value of social support. Therefore, a comparison of the percentages of change of the level of depression to the change of stress at a higher support level and a lower support level is the most recommended way to test the hypothesis. This method was proposed by Stolzenberg, R. in 1980 and adopted by Krause,

N. in his analysis to a community representative sample of older people in Texas in 1986. However, It becomes difficult to use this method when the number of predictor variables is plural, because huge number of interaction terms are to be considered. Therefore, we employed a more easy way of analysis.

It is possible to consider that social support buffers the impact of stress when social support is negatively associated with depression. It is also possible, however, that social support impact depression directly regardless a level of stress. Therefore, It can be considered that social support buffers the impact of stress on depression when a first order correlation between stress and depression after controlling for social support is stronger than a zero order correlation between stress and depression.

According to the above mentioned considerations, we will compare standardized regression coefficients of the three categories of stressful life events in the four regression models for depression in order to test stress buffering hypothesis. The model 1 represents an equation for the depression that includes only the control variables and the three types of stressful life events as predictors. The model is treated as a base line.

The model 2 represents an equation for the depression that includes only the control variables, the three types of stressful life events, and the four types of positive aspect of social support as predictors. The model 2 is for examination of buffering effects.

The model 3 represents an equation for the depression that includes only the control variables, the three types of stressful life events, and the three types of negative aspect of social support as predictors. The model 3 is for determination whether the negative side of social support raises the impact of stressful life events on the depression.

The final model represents an equation that includes above mentioned all

of the variables as predictors. This is for the examination of total effect of social support.

RESULT

Depression and social support

The mean scores of depression(CES-D) are significantly different by respondent's demographic attributes except for their age as shown in Table 1. The higher mean scores are observed in those who are female, not currently married, not having children, and not working.

Table 1. CES-D score by demographic characteristics

Variables	Categories	n	Mean score	t value
Gander	Male	928	.8	5.51***
	Female	1115	1.2	
Marital status	Married	1306	.9	4.85***
	Unmarried	737	1.3	
Existence of children	Have children	1943	1.0	2.80**
	Not have children	100	1.6	
Work	Working	585	.8	4.69***
	Not working	1459	1.2	

(** p<.01, *** p<.001)

The all types of social support are significantly associated with the depression in terms of Pearson's correlation coefficients except for the financial assistance as shown in Table 2. As might be expected, the positive sides of social support are negatively correlated with the depression, whereas the negative sides of social support are positively

correlated. These results suggest that the positive aspects of social support buffer the impact of stress, whereas negative sides of social support raise the impact.

Table 2. Correlation of Social Support
with CED-D Score

Types of Social Support	Pearson's R
Positive support:	
Consultation	$-.125$***
Emotional	$-.148$***
Sick care	$-.166$***
Financial	.036
Negative support:	
Critical	.088***
Over care	.073**
Financial burden	.127***

(** $p<.01$, *** $p<.001$)

The examination of hypothesis

Table 3 indicates the result of a regression analysis as the model 4 that was already mentioned. The multiple R of the equation is .422 and F value is 23.4, the magnitudes of both values are large enough to consider that the equation is meaningful. Any of the R square changes due to the group of variables is also statistically significant. The largest R square change is resulted by the health status and ADL followed by the negative sides of social support and stressful life events. Standardized regression coefficients of health status, financial status, and negative social support are significant.

Table 3. Result of regression analysis for the depression (CES-D)

(n=2200)

Variable groups	Rsqr. change due to group of variables	Variable in the equation	Standardized regression coefficients
Demographic characteristics	.010***	Age	−.017
		Gender	−.078**
		Marital status	−.014
		Existence of children	−.037
		Work	−.038
Health status and ADL	.054****	Self−rated health	−.200****
		Difficulty of ADL	.083***
Financial status	.007****	Satisfaction with financial status	−.090****
Stressful life events	.018***	Health problems	.114****
		Bereavements	.053*
		Financial problems	.018
Positive social support	.008***	Consultation	−.069*
		Emotional	−.002
		Sick care	−.046
		Financial	−.013
Negative social support	.020***	Critical	.049*
		Over care	.067**
		Financial burden	.094****
	Multiple R	.422	F=23.422
	Rsqr.	.178	p. of F=.000

(* p<.05, ** p<.01, *** p<.001, **** p<.0001)

Although, Krause's study of American older people revealed that the bereavement had the greatest impact on the depressive symptoms than that of any other types of stressful life events, the health problem was the

most significant events in Japanese elderly. It is consistent with our expectation that all coefficients of the positive aspects of social support are negative, whereas those of the negative social support are positive.

As shown in Table 4, the regression coefficients of the financial problem as one of the categories of stressful life events is stable in all of the models. This is the evidence that any type of social support does not buffer the impact of financial problem on the depression. Buffering effect of the positive social support is evident because regression coefficient of bereavement in the model 2 is greater than that of model 1.

Table 4. Comparison of standardized regression coefficient of stressful life events in the four equation models for depression(CES-D)

Stress	Model 1	Model 2	Model 3	Model 4
Health problem	.118****	.122****	.109****	.114****
Bereavements	.051*	.053*	.052*	.053
Financial problem	.022	.020	.020	.020
Multiple R	.388	.400	.412	.422
Rsqr.	.151	.160	.170	.178

Note: All solutions were obtained after controlling for gender, age, marital status, existence of children, occupational status, self—rated health, difficulty of ADL, and satisfaction with financial status. Model 1 represents an equation for the depression that includes only the control variables and the stressful life events. Model 2 represents an equation for the depression that includes only the control variables, the stressful life events, and the positive social support. Model 3 represents an equation for the depression that includes only the control variables, the stressful life events, and the negative social support. Model 4 represents an equation for the depression that includes only the control variables, the stressful life events, and the positive and negative social support.(* p<.05, **** p<.001)

DISCUSSION

The examination of the three specific types of stressful life events reveals that health problem is the major type of stress that impact the depression followed by the bereavement. These findings are different from those of Krause's study of American elderly. The bereavement was the only type of stress that signaled a major life transaction in his study of 1986 (Krause, N. 1986). Because life transaction events can generate new stresses, they frequently demand adaptive efforts for longer period of time than are required by transitory type of stress.

This interpretation may be true about American elderly, because most of them are living alone, or living only with spouse. However, Japanese older people are able to reconstruct their social network with their children after a bereavement of their souse or friends.

Another interesting finding is that the greatest direct effect on the depression has been found in the consultative support among the four types of positive social support. Although people are receiving other types of positive supports when they receive consultation, emotional or tangible support is not enough to reduce their problem. They need a consultative or informational support additionally to the other types of support. This finding is very important for doing social work with the elderly.

The data used in the study came from the 1987 National Survey of the Eldery conducted by the joint research team of the Institute of Gerontology at the University of Michigan and Tokyo Metropolitan Institute of Gerontology of which the author was a member.

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