

Coping Strategy and Caregiver Burden Among Caregivers of Patients With Dementia

American Journal of Alzheimer's Disease & Other Dementias[®]
2015, Vol. 30(7) 694-698
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DOI: 10.1177/1533317513494446
aja.sagepub.com



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Abstract

Background: This study aims to examine whether coping strategies employed by caregivers are related to distinct symptoms of patients with dementia and to investigate the associations between burden and coping among caregivers of patients with dementia. **Methods:** A cross-sectional study design was used. A total of 57 caregivers of patients with dementia were enrolled. Coping strategies were assessed using the Ways of Coping Checklist, and burden was assessed using the Chinese version of Caregiver Burden Inventory. Correlations between coping and patients' behavior or memory problems were examined. Severities of behavior and memory problems were adjusted to examine the correlations between caregiver burden and coping strategies. **Results:** The patients' disruptive behavior problems were associated with avoidance, and depression problems were associated with avoidance and wishful thinking. After adjusting for severity of behavior problems, coping strategies using avoidance were positively correlated with caregiver burden. **Conclusions:** Emotion-focused coping strategies are a marker of caregiver burden.

Keywords

dementia, caregiver burden, coping strategy, behavior problems.

Introduction

Dementia is a disorder that involves global and persistent impairment of cognitive function and deterioration in personality and behavior, which correspondingly leads to impairment in independent daily function. The majority of patients with dementia need others' assistance to complete the activities of daily living. Caring for patients with dementia is stressful, even more so than caring for physically dependent patients.^{1,2} Caregivers with burden reported higher frequencies of physical disease or mood disturbances.^{3,4} In Taiwan, the prevalence of dementia has been reported to be similar to that in developed countries⁵; however, owing to the high influence of Confucianism and underdevelopment of the long-term health care insurance system, caregiving heavily relies on patients' families. Conflict between traditional obligations and the capacity to provide care may emerge among caregivers in Taiwan.⁶ Previous study has suggested that differences in cultural beliefs may interfere with the caregiving process, including caregivers' appraisal of stress, coping strategies, and social support.⁷ It is worth examining the experience of caregiving in an Asian country like Taiwan.

Caregivers experience great stress, and coping is one of the points, which determine the extent of stress.⁸ The model of Lazarus and Folkman⁹ proposes that adaptation to stress is mediated by coping strategies employed by the individual. Positively appraising the caregiving experience in response to

chronic caring stressors may affect individuals' responsiveness to interventions.¹⁰ Dysfunctional coping strategies have been reported to be associated with mood problems among caregivers.¹¹ Caregivers, in response to caring stress from patients with dementia, may adopt various coping strategies. Coping strategies employed by the caregiver may play a role in enhancing or reducing the caregiver burden.¹²⁻¹⁶ Among all symptoms of patients with dementia, behavioral and psychological

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symptoms exceeding cognitive impairment are the major stressors leading to caregiver burden.^{17,18} They are possible moderators between symptoms of dementia, including behavioral and psychological symptoms or cognitive impairment, and caregiver burden.⁸ Furthermore, people may use different coping strategies in different situations and sometimes may combine more than one coping strategy.

We examined whether different coping strategies are associated with specific symptoms of dementia and different levels of caregiver burden in Taiwan. The findings of this study may be beneficial for the development of further interventions to reduce the caregiver burden. Hence, the purposes of this study were to examine whether certain coping strategies employed are special in response to distinct behavior or memory problems and to investigate the associations between burden and various coping strategies among caregivers of those with dementia.

Methods

The study population consisted of 57 caregivers in a 1-year study period. All were enrolled in the Dementia Caregiver Project at the Department of Psychiatry, Kaohsiung Medical University Hospital. The project was designed to study the psychobiological consequences in caregivers. To be eligible for the study, participants must have spent at least one-third of their time in home caring for a patient during the past month and must be at least 18 years of age. Participants were excluded if they had a serious physical or mental health condition (eg, cancer, stroke, dementia, or schizophrenia). A trained research assistant conducted an interview to determine whether the participants met the inclusion and exclusion criteria. The research psychiatrist assessed the clinical characteristics of the patients with dementia, including subtype and stage of dementia. All participants gave informed consent prior to the study. A series of self-reported questionnaires examining memory and behavior problems, caregiver burden, and coping strategies were administered, which took about 40 to 50 minutes. The protocol was approved by the Institutional Review Board of Kaohsiung Medical University.

The instruments used were the Revised Memory and Behavior Problems Checklist (RMBPC),¹⁹ the Chinese version of the Caregiver Burden Inventory,^{20,21} and the Revised Ways of Coping Checklist (WCCL-R).²² The RMBPC is a 24-item, caregiver-reported measure of the severity of behavior problems in patients with dementia. It examines 3 domains of problems, including memory, depression, and disruptive behaviors related to dementia. A 5-point Likert-type scale from "0" to "4" is used to assess the frequency and severity of memory and behavior problems. The internal consistency of the RMBPC was 0.75 to 0.87.¹⁹ The product of severity and reaction was calculated for each item.

The WCCL-R is a 42-item self-reported scale that is composed of a problem-focused coping scale (15 items), 3 emotion-focused coping scales, including "self-blame" (3 items), "wishful thinking" (8 items) and "avoidance" (10 items), and another scale labeled "seeks social support" (6 items). Each item is scored on a 5-point Likert-type scale ranging from "0" (never) to "4" (all the time). A higher score indicates greater

Table 1. Sociodemographic Data of 57 Caregivers of Patients With Dementia.

Caregivers	Mean (SD) or N (%)
Age, years	52.46 (13.27)
Education, years	10.05 (4.67)
Gender	
Female	37 (64.9%)
Male	20 (35.1%)
Marital status	
Married	42 (73.7%)
Widow	1 (1.8)
Divorced	5 (8.8)
Single	9 (26.3%)
Relationship of caregiver to patient with dementia	
Spouse	15 (26.3%)
Offspring and other	42 (73.7%)
Chronic disease of caregivers	
Yes	32 (56.1%)
No	25 (43.9%)

Abbreviation: SD, standard deviation.

use of that coping strategy. The internal consistency of each subscale ranged from 0.73 to 0.85.²²

The Chinese version of the Caregiver Burden Inventory is a 24-item, caregiver-reported measure of burden. Each item is scored on a 5-point Likert-type scale ranging from 0 (not at all descriptive) to 4 (very descriptive). It has 5 subscales, including time-dependence burden, developmental burden, physical burden, social burden and emotional burden. The total score ranges from 0 to 96, with higher scores indicating a greater burden. The internal consistency of each subscale ranged from 0.79 to 0.93.²¹

All measurements were explored to examine whether their distribution fits the assumption of a normal distribution. If not, the variables were transformed using log transformation before further analyses. The *t* test was used to assess the significance of differences in scores of coping for categorical variables in two groups. Pearson's correlations between different coping strategies and distinct behavior or memory problems represented by the RMBPC subscale were examined. Correlations between coping strategies and burden were assessed after controlling for the severity of behavior problems. A *P* value of <.05 was considered statistically significant. Significant variables from the univariate analysis were included in a stepwise multiple regression model to examine their interactions with burden.

Results

The sociodemographic and clinical data of the study participants are presented in Table 1. The average age of the caregivers was 52.46 (standard deviation [SD] = 13.27) years, the average education level was 10.05 (SD = 4.67) years, 35.1% were male, and 73.7% were married. In all, 26.3% of the caregivers and patients with dementia were spouses. In all, 56.1% of caregivers had a chronic disease. Nearly, two-thirds

Table 2. Correlations Between Specific Stressors and Coping Strategies.

	Memory subscale	P value	Behavior subscale	P value	Depression subscale	P value
Problem-focused coping	0.04	.80	0.04	.76	−0.02	.91
Seeks social support	−0.17	.20	−0.06	.65	−0.05	.71
Self-blame	−0.04	.76	0.24	.08	0.08	.58
Wishful thinking	−0.07	.63	0.22	.10	0.31	.02
Avoidance	0.10	.49	0.30	.02	0.31	.02

Table 3. Correlations Between Burden and Behavior and Memory Problems and Coping Strategies of Caregivers.

	Burden	P value
Behavior/memory problems of patients		
Memory	0.36	.01
Behavior	0.57	.001
Depression	0.32	.02
Coping strategies of caregivers		
Problem-focused coping	−0.31	.03
Seeks social support	−0.18	.22
Self-blame	0.28	.05
Wishful thinking	−0.08	.59
Avoidance	0.34	.02

of the patients were Alzheimer's type. Based on the clinical dementia rating, 57.9% of the patients were mild, 36.8% were moderate, and 3.5% were severe. The average age of the patients with dementia was 76.40 (SD = 9.10) years, the average education level was 5.05 (SD = 4.90) years, 52.6% were male, and 56.1% were married. The Cronbach's α values in our study were 0.87 for RMBPC, 0.89 for WCCL-R, and 0.92 for the Chinese version of the Caregiver Burden Inventory. The severity of behavior problems of the care recipients as measured by the RMBPC was 103.35 (SD = 68.40) for the total score, 50.63 (SD = 29.59) for the memory subscale, 29.20 (SD = 26.32) for the behavior subscale and 24.05 (SD = 26.68) for the depression subscale. As the distribution of the RMBPC was skewed, we transformed the variables into log scores for further statistical analysis.

The intercorrelation coefficients between the subscales of the RMBPC in our sample ranged from 0.30 for the memory and depression subscales, 0.47 for the depression and behavior subscales, and 0.49 for the memory and behavior subscales. The intercorrelation coefficients between the subscales of coping strategies were 0.68 for problem focused and seeking social support, −0.29 for problem focused and avoidance, −0.37 for seeking social support and avoidance, 0.38 for self-blame and wishful thinking, 0.55 for self-blame and avoidance, and 0.42 for wishful thinking and avoidance.

Table 2 demonstrates the correlations between memory, disruptive behavior problems, and coping strategies employed. We found that memory problems were not associated with any coping strategies, while disruptive behavior was associated with avoidance ($r = .30$; $P < .02$), and depression problems were associated with both avoidance ($r = .31$; $P < .02$) and wishful thinking ($r = .31$; $P < .02$).

Table 4. Multiple Regression Analysis of Indicators of Caregiver Burden Among 57 Caregivers of Patients with Dementia.^a

	Unstandardized coefficients		Standardized coefficients β	t value	P value
	B	Std Error			
Constant	14.06	4.84		2.90	.005
Avoidance coping strategy	0.60	0.23	.28	2.56	.013
Behavior problems of patients	18.09	3.55	.55	5.09	<.001

Abbreviation: Std Error, standard error.

^aAdjusted $R^2 = 44.9\%$; with controlling for problem-focused coping strategies, coping strategies using self-blame, the memory subscale, and the depression subscale of the RMBPC.

Table 3 shows the correlations between burden and disruptive behavior, memory problems, and coping strategies of caregivers. Coping strategies using avoidance or self-blame were positively correlated with caregiver burden ($r = .34$, $P < .02$; $r = .28$, $P < .05$), while problem-focused coping was negatively correlated with caregiver burden ($r = -.31$, $P < .03$). The other coping strategies, including seeking social support and wishful thinking, were not correlated with caregiver burden. We adopted multiple regression models to adjust for the confounding effect of each variable. We also examined whether the condition index was more than 30 or the variance inflation factor was more than 10 to rule out multicollinearity. The results revealed that caring burden was associated with the avoidance coping strategy ($\beta = .28$, $P < .02$) and the behavior subscale of the RMBPC ($\beta = .55$, $P < .001$), with adjusted $R^2 = 44.9\%$. Problem-focused coping, coping strategies using self-blame, the memory subscale, and the depression subscale of the RMBPC were not correlated with burden in this controlled analysis (Table 4).

Discussion

This cross-sectional study showed that caregivers tended to use avoidance or wishful thinking to cope with disruptive behaviors or depression problems of patients with dementia. Those caregivers facing patients' behavior problems and employing avoidance coping strategies experienced a more severe burden.

We found that coping is not equally applicable to all stressful behavior or memory problems of patients with dementia. In our study, the avoidance coping strategy was specific to depression

and disruptive behavior of care recipients, while the wishful coping strategy was specific to depression. It is possible that caregivers are more likely utilize these two coping strategies in response to the stressful situations they encounter. Avoidance and wishful thinking have been classified as emotion-focused strategies that relieve the emotional impact using thoughts and indirect actions.⁹ Caregivers faced with depression and disruptive behavior problems may take certain steps to eliminate their distress. Avoidance coping distracts attention and helps to avoid thinking about what is being encountered. Disruptive behaviors, such as aggression and other aberrant behaviors, are hard to deal with in general, and caregivers tend to avoid them to preclude distress. Wishful thinking is the cognitive act to imagine that the situation is not real or is just temporary. Caregivers employed cognitive wishfulness to overcome the situation of patients with dementia when they had depression.

In terms of caregiver burden, in our study, the avoidance coping strategy was correlated with greater burden even after controlling for the severity of behavior problems. That is, caregivers experienced a greater burden in response to disruptive behaviors or depression of care recipients and may use these emotion-focused coping strategies more frequently. Both deal with stressful feelings but are not helpful in the event, leading to poorer emotional adjustment and finally not decreasing the burden. Our results were compatible with those of a previous study reporting that avoidance coping was associated with burden,²³ increased depression, and lower life satisfaction.²⁴ Escape avoidance can be a specific target for psychosocial interventions for caregivers.²⁵

Although we did not find an association of problem-focused coping strategies with any kind of problems of patients with dementia and caregiver burden, this should be a potential target for intervention. Problem-focused coping strategies intend to confront the reality of a major difficulty by managing unacceptable consequences and by making efforts to construct a more endurable situation²⁶ and are positively related to resilience.²⁷ As a previous study reported, problem-focused strategies are correlated with a lower severity of caregiver burden.²⁸ One of the possible explanations for the discrepancy is type II errors due to the small sample size in this study. Further studies with a more sophisticated design and a larger sample size may provide more information regarding this issue.

Some caveats regarding the methods of this study need to be mentioned. First, as the study participants were invited to participate in the study, the process might lead to the recruitment of caregivers who were more stressed or wanted to be heard. The possible bias caused needed to be addressed. Second, the care recipients of this study tended to be in the mild stage of dementia. As the dementia progresses, memory impairment may increase gradually, but behavioral symptoms may peak at various stages of dementia and decrease in later stage.²⁹ Caregiver burden are related to both behavior and memory problems of patients with dementia, so the results of this study were difficult to completely generalize to all caregivers of patients with dementia, especially those in the moderate and

severe stages. Third, the small sample size of this study hindered the possibility of multivariate testing to control for all potential confounding effects from demographic or clinical variables and examining the interaction effects between memory or behavior problems and coping strategies employed and the correlation with burden. An extreme value might easily influence the analyses in a small-size study. Fourth, the cross-sectional design also limited the ability to make causal inferences in this study. Finally, more sophisticated behavior and memory problems measurement by trained researchers are needed.

Conclusion

In conclusion, this study revealed that caregivers use different coping strategies when facing different problems of patients with dementia. Emotion-focused coping strategies are a marker of caregiver burden. The findings provide the clinical implication that we should provide some supportive interventions targeted at those using emotion-focused coping strategies or to the disruptive behaviors or depression of care recipients for the reduction in caregiver burden.

Acknowledgments

The authors would like to thank Miss Mei-Jung Huang, Ling-Ling Lee, Chia-Yin Tsai, Hsiu-Hui Huang, and Ching-Li Chang for their participation.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The study was funded by a grant from the Kaohsiung Medical University, Taiwan (94-KMUH-ND-028).

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