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Coping and Depression in Alzheimer's Caregivers: Longitudinal Evidence of Stability

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The present study examined the longitudinal relationship between depressive symptoms and coping strategies in older adult primary caregivers of noninstitutionalized Alzheimer's patients. Coping and depression were measured in 51 healthy, nondepressed caregivers (37 women, 14 men) at 4 times of testing approximately 6 months apart. The caregivers' coping strategies and depressive symptoms were found to be largely stable over all times of testing—with a recently developed method for evaluating construct stability—despite significant decline in the patients' cognitive functioning over the same interval. Avoidance coping was also found to be positively associated with depressive symptoms. Results suggest that a strong stable component is present in caregiver coping style and that caregiver intervention researchers may want to examine the extent to which commonly used outcome measures are assessing stable caregiver traits rather than state-dependent distress.

CARING for a family member with Alzheimer's disease is associated with increased depressive symptomatology in caregivers (Gallagher, Rose, Rivera, Lovett, & Thompson, 1989; Russo, Vitaliano, Brewer, Katon, & Becker, 1995; Schulz & Williamson, 1991). Researchers have become increasingly interested in examining factors that help caregivers successfully manage the caregiving role, while minimizing the effect of that role on their mood and general well-being (Quayhagen & Quayhagen, 1988). Much of this research has been done within the general framework of stress and coping theory (Lazarus & Folkman, 1984), examining coping styles of caregivers and the relationship between types of coping styles and reported symptoms of depression (Fingerman, Gallagher-Thompson, Lovett, & Rose, 1996; Pruchno & Resch, 1989; Williamson & Schulz, 1993).

Methods of coping have typically been understood as being associated with particular situations, rather than as more stable characteristics of individuals. Billings, Cronkite, and Moos (1983) defined coping as "cognitions and behaviors that serve to appraise the meaning of stressors, to control or reduce stressful circumstances, and to moderate the affective arousal that often accompanies stress" (p. 120). Lazarus and Folkman (1984) assert that coping is situation specific rather than traitlike, and that an individual's coping strategies may differ across situations or across different instances of similar situations. Thus, they believe that examination of coping strategies should be contextual, focusing on specific instances and specific coping activities rather than on an individual's global style. Likewise, the effectiveness of a particular coping strategy may vary as a function of the situation in which it is used (Lazarus & Folkman, 1984).

There is some disagreement about how coping strategies may be categorized. Several classification systems have been used to categorize different methods of coping. Lazarus and Folkman (1984) categorized coping strategies as being either problem focused or emotion focused. Carver, Scheier, and Weintraub (1989) later expanded on this approach, incorporating a model of behavioral self-regulation, and developed a model of coping that included 13 different aspects of coping.

Moos, Cronkite, and Finney (1984), on the other hand, proposed three methods of coping: active cognitive coping, active behavioral coping, and avoidance coping. Active cognitive coping involves thinking about and analyzing the stressful situation, whereas active behavioral coping involves some sort of activity on behalf of the individual. Avoidance coping methods, on the other hand, are directed at ignoring or avoiding the emotional consequences of the stressor cognitively (refusing to believe a situation exists), or behaviorally (keeping feelings to oneself).

The relationship between different methods of coping and psychological distress has been examined in caregivers of dementia patients. Several studies have found a relationship between particular coping strategies and depressive symptoms in caregivers. Some studies show a relationship between problem-focused, instrumental coping strategies and lower levels of depressive symptoms (Haley, Levine, Brown, & Bartolucci, 1987; Vitaliano, Russo, Carr, Maiuro, & Becker, 1985), though other studies have found no such relationship (Fingerman et al., 1996; Pruchno & Resch, 1989; Williamson & Schulz, 1993). Research findings in regard to the relationship between emotion-focused coping strategies and depression have been somewhat more consistent. Several studies have found that the use of different emotion-focused coping strategies such as avoidance (Fingerman et al., 1996; Vitaliano et al., 1985), wishfulness (Pruchno & Resch, 1989; Williamson & Schulz, 1993), and emotional discharge (Haley et al., 1987) are associated with an increase in depression for caregivers. However, one emotion-focused strategy, acceptance, has been found to be associated with decreases in negative affect in caregivers (Pruchno & Resch, 1989).

Given that coping strategies are theorized to be adaptable rather than traitlike (Lazarus & Folkman, 1984), the possibility arises that caregivers change poor coping strategies to improve the way in which they manage the stress of caregiving. Haley and Pardo (1989) proposed such a model of adaptation, and Schulz and Williamson (1991) elaborated on this model. It is possible that caregivers may change the coping strategies they use in dealing with caregiving stress over time, replacing ineffective coping strategies with more effective strategies, thereby reducing caregiving-related stress. Such adaptation was in fact predicted by Folkman and Lazarus (1985), who have proposed that coping should be understood as a dynamic process that changes as a function of the experiences of the individual. There is indirect evidence that such adaptation may not always occur, however. Schulz and Williamson (1991) found that depression was stable over a 2-year period for female caregivers, but it increased over the same period for male caregivers.

There is also evidence that changes in stressors that require adaptation may not occur in general. Data from a 3-year longitudinal study of over 500 caregiver–demented-care-recipient dyads (Aneshensel, Pearlin, Mullan, Zarit, & Whitlach, 1995) also support relative stability in measures of stressors and well-being. Aneshensel and colleagues hypothesized that stressors would increase over time for caregivers and that depressive symptoms would likewise increase. They found that both stressors and depressive symptoms were relatively stable over time among caregivers while their care recipient remained noninstitutionalized, although cognitive functioning consistently declined. They concluded that depression and the stressors associated with caregiving are largely stable over time during that phase of the caregiving career prior to institutionalization, although there may be fluctuations for particular caregivers.

Caregivers may not need to change coping strategies if the stressors they are dealing with do not change, and coping strategies may be inherently stable within a particular caregiver. Hooker, Frazier, and Monahan (1994) found that methods of coping used by female caregivers were significantly associated with certain personality traits in caregivers, implying some degree of stability in the coping mechanisms caregivers use. One study has examined caregiver coping strategies longitudinally, over a 5-month period. Fingerman and colleagues (1996) found that avoidant coping strategies and reduced internal resources to deal with negative internal experiences predicted increased levels of depression at two times of measurement in elderly male and female caregivers, and that participation in a psychoeducational class was not predictive of change in caregiver depression. Correlations between Time 1 and Time 2 coping strategies were not examined, however, providing no indication of whether caregivers altered their coping strategies over time.

Examination of the degree to which coping strategies either change or remain stable is difficult. Although the difference between unstable, state-dependent characteristics and stable, traitlike characteristics is conceptually clear, methodologies designed to assess directly the stability of any given characteristic have only recently been developed (Kenny & Zautra, 1995; Kraemer, Gullion, Rush, Frank, & Kupfer, 1994).

Kraemer and colleagues (1994) have proposed a statistical procedure for analyzing longitudinal data to determine the degree to which the value of a measured characteristic remains constant over time, thus indicating the characteristic to be more stable and traitlike rather than fluctuating and state dependent. To summarize the Kraemer and colleagues (1994) procedure, the variance due to stable between-subjects differences for a given measure is examined as a proportion of the total variance in the measure, with total variance including that due to participants, time of testing, and a combination of Participant × Time interaction and error of measurement. The between-subjects variance is the variance that is a function of consistent differences between individuals over time, representing stability in individual scores over time. Hence, if a large proportion of the variance in the scores is associated with consistent between-subjects differences, the measure can be said to be tapping a more stable characteristic (Kraemer et al., 1994). For example, a large proportion of variance in personality traits measured at different times should theoretically be due to consistent differences among individuals. On the other hand, measures of mood states at different times or under different conditions should show a smaller proportion of variance because of consistent differences among individuals, and relatively greater within-subjects variance would be expected.

The primary advantage of this procedure over a more standard test–retest correlation is that the calculations can be based on more than two times of measurement, providing a more representative, more comprehensive longitudinal sampling of data within participants. Kraemer and colleagues (1994) cautioned, however, that generalizability of conclusions about findings is limited to the population and situations from which the sample is drawn. Thus, a given characteristic may be very stable in one population and considerably less so in another population. Coping strategies may be quite stable in a population of experienced caregivers, for example, but significantly less stable in a population of novice caregivers.

The purpose of the present study was to examine coping styles, levels of depression, and the relationship between these two variables over time in caregivers of noninstitutionalized dementia patients. It was hypothesized that (a) coping style and level of depression would remain relatively stable across time, (b) both measures would exhibit trait characteristics, and (c) avoidant coping strategies would be associated with increases in depressive symptomatology for caregivers, and active cognitive and active behavioral strategies would be associated with decreases in depressive symptomatology.

METHODS

Sample

The caregivers included in this study were part of an ongoing research project examining factors associated with caregiver stress. Data were collected from self-identified primary caregivers and their dementia patient care recipients (CRs), both of whom were voluntary participants in the Alzheimer's Clinical Research Center of the Veterans Affairs Palo Alto Health Care System and Stanford University School of Medicine. Caregivers and Alzheimer's disease patients were primarily recruited through newspaper advertising or referred by community physicians for a diagnostic work-up of the patients, typically to rule out treatable conditions. Only those caregivers of patients who were diagnosed as having probable Alzheimer's disease at time of entry into the study using National Institute of Neurological and Communicative Disorders and Stroke-Alzheimer's Disease and Related Disorders Association criteria (Blacker et al., 1994; McKhann et al., 1984) were included in the present investigation. The measures described in the present study were included as part of a larger set of measures given to caregivers and Alzheimer's disease patients who are followed longitudinally and interviewed every 6 months whenever possible. Data from the initial interview and the following three interviews of each caregiver were included in the present analysis.

Data from 51 caregivers were available for four consecutive times of measurement approximately 6 months apart, from a total sample of 89 caregivers. The remaining caregivers missed one or more times of measurement because of caregiver illness, placement of CR, CR illness, or death of CR.

A baseline comparison between those caregivers who were included and those who were not included revealed no significant differences between the two groups in regard to age, $t(87) = -.28$, $p > .05$, mental status of care recipient, $t(87) = .921$, $p > .05$, years of education of caregiver, $t(87) = -.225$, $p > .05$, or proportion of male and female caregivers, $\chi^2(1, N = 89) = 1.39$, $p > .05$. There was a significant difference in level of depressive symptoms in caregivers, $t(87) = 2.19$, $p < .05$. Caregivers who did not have four contiguous times of measurement showed significantly more depressive symptomatology ($M = 8.81$, $SD = 6.69$) than did those who had four contiguous times of measurement ($M = 6.02$, $SD = 5.32$).

Demographic information for the sample is provided in Table 1. Briefly, the sample consisted of 14 men (27%) and 37 women (73%), with an average age of 63 years ($SD = 9.07$ years) and average education of 14 years ($SD = 2.29$ years). Forty-five of the caregivers were married to their CR (88%). Caregivers had been providing care to their CRs for an average of 56 months ($SD = 36$ months) at their time of entry into the study. Most of the caregivers were Caucasian (49 or 96%), one was African American, and one was of Hispanic origin. Thus, the sample can be considered to be primarily an upper middle-class Anglo volunteer sample, and can not be considered representative of the more heterogeneous U.S. population of family caregivers.

The CRs were 34 men and 17 women with a mean age of 68.5 years ($SD = 7.27$ years) at entry into the study and an average of 13.3 years of education ($SD = 2.29$ years). Along with diagnostic information, the rate of cognitive decline was assessed by examining the slope of decline in scores on the Mini-Mental Status Examination (MMSE; Folstein, Folstein, & McHugh, 1975). Forty-six of the 51 CRs were measured twice with the MMSE during the study, from which annual rates of decline in score were calculated. The mean rate of decline in MMSE scores was 3.10 points per year ($SD = 3.00$), or 4.66 points ($SD = 4.51$) during the 18 months examined. A single-sample t test showed this rate of decline to be significantly different from a slope of zero, $t(45) = 7.01$, $p < .001$, indicating cognitive decline among CRs during the period of measurement. The mean initial MMSE score was 14.96 ($SD = 8.52$).

Table 1. Demographic Information for Caregivers and Dementia Patients

Variable	*M*	*SD*	*n*	%
Caregiver age (in years)	63.39	9.07		
Patient age (in years)	68.51	7.27		
Months caregiving	56.45	36.81		
Caregiver education (years)	14.02	2.29		
Caregiver gender				
Male			14	27
Female			37	73
Caregiver relationship to patient				
Spouse			45	88
Other			6	12
Caregiver health self-report				
Poor			0	0
Fair			6	12
Good			25	49
Excellent			19	37
Did not report			1	2
Annual household income				
Below $10,000			2	4
$10,000–$20,000			9	18
$20,001–$30,000			18	35
Over $30,000			20	39
Not reported			2	4

The caregivers' cognitive competence was assessed through the use of the consent form for the study. Caregivers were asked to explain the consent form after it was presented to them and were asked questions to evaluate their understanding of the consent form. Those caregivers who were unable to explain and correctly answer questions about the consent form were excluded from the present study.

Measures

The following measures were included as part of a broader caregiver interview: (a) a demographic questionnaire, (b) the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and (c) the Indices of Coping Responses from the Health and Daily Living Form (ICR; Moos et al., 1984). The BDI is a 22-item measure of depression that has been widely used with older adults in general (Thompson, Futterman, & Gallagher, 1988) and with caregivers in particular (Gallagher-Thompson & DeVries, 1994; Morrissey, Becker, & Rubert, 1990). Coefficient alpha for the BDI in the present sample was found to be .80. The ICR asks caregivers to rate how often each of 32 coping responses were used in dealing with the most difficult problem they experienced as a caregiver within the past month. The rating scale for each coping response ranges from 0 to 3 (0 = did not use, 1 = used once, 2 = used sometimes, 3 = used fairly often). Summary scores were derived for the frequency of use of three different methods of coping: active cognitive coping (COG; 11 items, e.g., “tried to see the positive side,” “told myself things that made me feel better”), active behavioral coping (BEH; 13 items, e.g., “tried to find out more about the situation,” “talked with a friend about the problem”), and avoidance coping (AVOID; 8 items, e.g., “kept my feelings to myself,” “avoided being with people in general”). Coefficient alphas in the present study were found to be .77, .86, and .48 at the first time of measurement for the COG, BEH, and AVOID scales, respectively, comparable to those found by Moos and colleagues (1984) of .62, .74, and .60, respectively, on these scales in a much larger and more heterogeneous sample of 424 adults of varying ages. The reasons for lower internal consistency in the AVOID subscale in the present sample were not clear. However, the AVOID coping measure used in the present study has been shown to be reliable and valid since its introduction in the mid-1980s in adult populations (Billings & Moos, 1984) and has been used specifically in older adult populations (DeVries, Hamilton, Lovett, & Gallagher-Thompson, 1997; Haley, Levine, Brown, & Bartolucci, 1987).

The demographic information was obtained during a face-to-face interview that was conducted in the caregiver’s home, whereas the BDI and ICR were completed as self-report questionnaires and mailed in within 2 weeks of the interview.

RESULTS

Hypothesis 1

Table 2 shows the means for the BDI and for the cognitive, behavioral, and avoidance coping measures for the entire sample at each time of testing. A repeated measures general linear model (GLM) was used to test for differences across time for each measure (see Table 3). Only cognitive coping and behavioral coping showed a significant main effect for time of testing (see Table 3). The increase in use of active cognitive and active behavioral coping over time is evident in the total sample means (see Table 2). Depressive symptoms did not show a significant increase over time (see Table 3).

Thus, the results for level of depression and avoidant coping were in support of Hypothesis 1. The use of cognitive coping and behavioral strategies showed some increase during the first 6 months and then remained relatively stable over the course of the study.

Table 2. Descriptive Statistics for Depression and Methods of Coping for Caregivers at Each Time of Measurement

Variable	Time 1	Time 2	Time 3	Time 4
COG	1.38 (0.61)	1.63 (0.51)	1.53 (0.58)	1.54 (0.53)
BEH	1.35 (0.69)	1.55 (0.56)	1.52 (0.63)	1.49 (0.56)
AVOID	0.39 (0.31)	0.37 (0.31)	0.40 (0.32)	0.36 (0.27)
BDI	6.02 (5.32)	6.04 (4.99)	6.33 (4.72)	6.14 (5.26)

Notes: $N = 51$. Numbers outside parentheses are means, numbers inside parentheses are standard deviations. The rating scale for each coping response ranges from 0 to 3 (0 = did not use; 1 = used once; 2 = used sometimes; 3 = used fairly often). COG = active cognitive coping; BEH = active behavioral coping; AVOID = avoidance coping; BDI = Beck Depression Inventory.

Table 3. Longitudinal Evaluation of Methods of Coping and Beck Depression Inventory (BDI) With the Repeated Measures General Linear Model

	Repeated Measures Variable			
Variable	Variance Source	Mean Squares	*F*	ICC
BDI	P	80.674	10.94**	.67
	T	1.051	0.14	
	P × T/error	7.497		
COG	P	0.886	6.75**	.53
	T	0.526	4.26**	
	P × T/error	0.123		
BEH	P	1.049	6.94**	.54
	T	0.393	2.69*	
	P × T/error	0.146		
AVOID	P	0.248	6.02**	.50
	T	0.026	0.61	
	P × T/error	0.042		

Notes: $N = 51$. Degrees of freedom = 50 for participants (P) and 3 for time (T) for each variable. ICC = intraclass correlation coefficient; COG = active cognitive coping; BEH = active behavioral coping; AVOID = avoidance coping.

$^{*}p < .05$; $^{**}p < .01$.

Hypothesis 2

The procedure described by Kraemer and colleagues (1994) for examining state–trait characteristics in measures was used to examine depression and coping as measured in the present study. A repeated measures GLM was conducted for each coping measure and the BDI to estimate the proportion of the total variance in each measure that was due to stable between-subject differences. This is equivalent to an intraclass correlation coefficient (ICC; Kraemer et al., 1994). The larger the ICC, the more variance in a measure is due to stable between-subject differences, rather than to changes within subjects over time due to state changes, to natural variance, or to error of measurement. A value of .50, for instance, indicates that 50% of the total variance of the measure is due to stable between-subject differences, rather than to any changes in an individual’s score over time, or to error of measurement. This value of .50 has been used as evidence that a measure is substantially (although still not necessarily exclusively) stable and trait-like rather than state dependent. If the characteristic were state dependent, a higher proportion of variance would be expected to be associated with fluctuations in scores within individuals. Table 3 reports the ICC or percent variance that is due to stable between-subject differences for the BDI and all three coping measures. Each of the coping measures and the BDI appear to be substantially stable over time in caregivers. This suggests that they reflect relatively stable characteristics.

As noted above, the stability in the caregiver depression and coping measures occurred during a period of significant decline in patient cognitive status. There was no significant correlation between the slope of cognitive decline and the slope of change in caregiver depression ($r = -.236$, $p > .05$). Slope of cognitive decline was likewise not significantly correlated with change in caregiver use of cognitive ($r = -.033$, $p > .05$), behavioral ($r = -.160$, $p > .05$), or avoidant ($r = .182$, $p > .05$) coping strategies.

Hypothesis 3

Correlations between methods of coping and depressive symptomatology were examined for the total group. Correlations from one time of testing to another within measures are presented in Table 4. As would be expected with a stable characteristic, the correlations are high. When a measure of a stable characteristic is assessed across several different situations or points in time, these multiple measurements can be averaged for each individual to reduce the effect of time-of-measurement error (Epstein, 1983; Kraemer, 1991). This increases power by reducing error of measurement. The "error" variance in each particular time of measurement is assumed to be random; thus, averaging across time will have the effect of canceling out measurement errors from several points of measurement.

Given the stability of the coping and depression measures, the four times of testing were averaged for each caregiver, resulting in overall mean scores for the methods of coping and BDI. The relationship between these mean scores of coping and depressive symptoms were then examined. Avoidance coping methods were significantly correlated with BDI scores (see Table 5). Cognitive and behavioral methods of coping were not significantly correlated with BDI scores, though the cognitive and behavioral strategies were significantly correlated with each other (see Table 5). Thus, the hypothesized relationship between avoidance coping and depressive symptoms was supported, but the hypothesized relationship between active coping measures and depressive symptoms was not supported.

DISCUSSION

Frequency of cognitive, behavioral and avoidant coping strategies remained relatively stable across four times of testing 6 months apart for caregivers in this study, even though CRs were evidencing substantial declines in mental status during this time period. The stability in coping measures in the face of continuous deterioration of function in the CR suggests that these particular domains of coping have highly stable characteristics with little evidence that caregivers modify them when adapting to changes in the cognitive status of Alzheimer's disease patients. Such an interpretation would be consistent with the trait model proposed as an alternative by Haley and Pardo (1989) and with previous studies (Aneshensel et al., 1995; Schulz & Williamson, 1991). The coping measure used in this study allowed the caregiver to rate coping strategies used across a variety of caregiving situations. Caregivers may have had different caregiving situations in mind at different times of measurement, yet the coping strategies they reported remained consistent. This finding therefore lends stronger support to the hypothesis that coping strategies are highly stable within individual, nondepressed caregivers.

Table 4. Stability Across Times of Measurement for Coping Measures and for BDI, as Reflected by Pearson *r*

Measure and Time of Testing	2	3	4
COG			
1	.62***	.62***	.53***
2		.72***	.54***
3			.64***
BEH			
1	.52***	.71***	.56***
2		.59***	.61***
3			.69***
AVOID			
1	.48***	.49***	.58***
2		.57***	.63***
3			.64***
BDI			
1	.65***	.81***	.67***
2		.76***	.70***
3			.69***

Notes: $N = 14$ men, 37 women. COG = active cognitive coping; BEH = active behavioral coping; AVOID = avoidance coping; BDI = Beck Depression Inventory.

***$p < .001$, one-tailed.

Table 5. Intercorrelations Between Methods of Coping and BDI Scores

Measures	BEH	AVOID	BDI
COG	.81***	.39**	.26
BEH	—	.24	.20
AVOID		—	.52***

Notes: $N = 51$. COG = active cognitive coping; BEH = active behavioral coping; AVOID = avoidance coping; BDI = Beck Depression Inventory.

**$p < .01$; ***$p < .001$, two-tailed.

There is the possibility, however, that adaptations to caregiver stresses may have occurred in the early stages of caregiving, or across much longer time frames than the 2 years covered in this study, and therefore were not discernible at these times of measurement. The minimum time of caregiving in this sample was 1 year, with an average of more than 4 years. Caregiving is an activity that can last for several years, and it may be that an overall adaptation to change and variability in CR functioning occurs early on in caregiving. Perhaps the coping styles exhibited by caregivers in the present study, for example, were adopted early in the caregiving career as those strategies that are most flexible in dealing with a variety of changes in Alzheimer's disease patient functioning. General adaptation may determine a caregiver's success in adapting to particular instances or stages of decline in the Alzheimer's disease patient they care for, such that once a caregiver has psychologically adapted to the phenomenon of decline, major changes in adaptive style to new problems are less likely. It may also be the case that changes in coping are only likely to occur in response to major changes in caregiver status, such as in the case of institutionalization of the care recipient.

Depressive symptomatology also exhibited significant stability in the nondepressed caregivers in the present study. At the construct level, the present study provides further evidence that depressive symptoms may be relatively stable among caregivers who are not clinically depressed. Furthermore, the high intraclass correlations (between participants) emphasize that self-report of depressive symptomatology, as reflected in the BDI, may also have traitlike properties in this population. Aneshensel and colleagues (1995) discussed caregiving as a "career," and it would appear that within the home-care stage of the caregiving career, caregivers are likely to experience a relatively stable set of stressors and find a particular combination of coping styles that are associated with a consistent level of depressive symptoms.

This observation may have important methodological implications for future research with caregivers, particularly for studies designed to evaluate therapeutic interventions. Depressive symptoms may not be the appropriate measure for assessing change in well-being in nondepressed caregivers, because of the traitlike characteristics of those symptoms in this population.

In terms of the particular measure used in the present study, the BDI was designed as a screening measure for depression, but it has often been used as a measure of depressive symptoms in nondepressed samples as well as a measure of change in caregiver intervention studies (Fingerman et al., 1996). The present findings would argue against using measures of depressive symptoms such as the BDI to show change in intervention studies in which the sample consists primarily of nondepressed caregivers. As an example, on the basis of the ICC (see Table 4), only 33% of the total variance in the BDI is available to be divided among within-subject differences (such as improvement over time) and error of measurement among caregivers in the present study. The implications of this finding in regard to intervention studies is of particular note. Caregiver intervention studies may have difficulty measuring change in caregiver distress with measures such as the BDI that tap into constructs that are relatively stable within the population of caregivers.

In regard to the relationship between coping strategies and depressive symptoms, the results of the present study are consistent with previous findings that use of avoidant strategies is positively associated with depressive symptoms (Fingerman et al., 1996; Vitaliano et al., 1985), and the relationship between instrumental coping strategies is unclear (Fingerman et al., 1996; Haley et al., 1987; Vitaliano et al., 1985). It is noteworthy that this association is present even though the caregivers in the present study were not exhibiting clinical levels of depression. The further implications of the present study are that caregivers appear to continue to use coping strategies that do not help to further reduce any depressive symptoms they may have. Caregivers appear to continue to use the same coping strategies even as the cognitive status of their CRs declines. It may be the case that coping strategies vary in their effectiveness as a function of the decline of the CR, such that changing strategies, particularly reducing avoidant strategies, may help improve caregiver well-being.

Although the data suggest that coping strategies and depressive symptomatology exhibit substantial stability in the present sample, state related sources of variance cannot be ruled out completely, because all of the variance in depressive symptoms was not explained. Therefore, future research examining changes in caregiver mood and well-being in both observational and intervention studies should perhaps include other measures more sensitive to changes in caregiver mood, a point mentioned previously by Knight, Lutzky, and Macofsky-Urban (1993). The new methods described by Kraemer and colleagues (1994) and Kenny and Zautra (1995) provide the opportunity to empirically examine whether measures used in caregiver research are able to show evidence of changes over time. Additionally, the finding of stability cannot be generalized beyond the population from which the sample was taken. These findings are within the context of a sample of well-educated, healthy, predominantly Caucasian caregivers, who had been caregivers for an average of close to 5 years. Other populations of caregivers may show higher rates of initial depression or more changes in depressive symptoms over time.

Furthermore, caregivers who dropped out of the present study may show different longitudinal patterns than those who continued. No data are available from the present study or any other study examining longitudinal differences between caregivers who have continued to participate in longitudinal studies and those who have dropped out. The cross-sectional baseline comparison in this study provides evidence that caregivers who drop out have more depressive symptomatology, limiting generalizability to less depressed samples.

The issue of stability of measurement instruments has implications for aging research beyond the issue of caregiver well-being. Any longitudinal studies examining age-related changes should examine or at least consider the stability of the particular construct of interest, as well as the stability of the particular measure of the construct of interest. Kraemer and colleagues (1994) and Kenny and Zautra (1995) have recently brought this important issue to the attention of researchers, and their proposed methods allow researchers to address state–trait issues empirically. Constructs may vary in their degree of stability over the life course, and different measures of the same construct may vary in their stability as well, such that some measures of the same construct may be better than others for measuring change over time. These methods provide a means of evaluating the longitudinal performance of measurement instruments, potentially helping researchers in making decisions about measures to be used in studies involving repeated measurement.

In conclusion, despite the sample limitations, the present study provides new information in the field of state–trait differentiation and highlights the stability of constructs and measures in longitudinal research with caregivers. This finding may warrant serious consideration in planning future longitudinal studies with caregivers, as well as in other populations in which the stability of the measures is not known. The relationship between coping and depression was examined longitudinally and found to be highly stable. If measures that have traitlike properties are used in intervention studies, they may underestimate the potency of the interventions.

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