# Contextual or General Stress Outcomes: Making Choices Through Caregiving Appraisals

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This study contributes to the debate on general versus contextual measures of caregiver well-being through examining the differential relationships of caregiving appraisals to outcomes. Six dimensions of caregiving appraisal were examined as predictors of minor psychiatric symptoms, affect balance, and burden. Burden was high, symptoms were high, and affect was poor when caregivers held appraisals that reflected (a) low personal resiliency and (b) a conflict-ridden and dysfunctional relationship with the care receiver. When caregivers reported expending (c) considerable energy in maintaining their social networks, burden was also high, with some risk of symptoms, but affect was positive. The fourth appraisal, (d) a close loving caregiver-care receiver relationship, was positively correlated with general well-being, but was not related to burden. The fifth appraisal, (e) dealing with a heavy workload in providing care, was linked with poor affect, but neither symptoms nor burden. Finally, (f) caring at a distance was related to burden, but not to the general outcome measures. These findings suggest that the foci of research questions might be usefully located within an appraisal framework, and that this framework might then provide guidance for the choice of appropriate outcome variables. In many cases, however, a deeper understanding ensues from assessing both contextual and general well-being.

Key Words: Burden, Resiliency, Well-being

Considerable debate has surrounded the choice of outcome measures in caregiving stress research. Some have argued that general well-being is preferable as an outcome measure to context-sensitive measures such as caregiving burden (George, 1994; George & Gwyther, 1986). Proponents of this view point out that measures that are specific to caregiving experience do not allow comparisons across populations experiencing different types of stress. Furthermore, they argue, use of general outcome measures allows for clearer conceptual and empirical separation from the specific caregiving factors that explain stress.

Others have rejected the claim that caregiving burden is of secondary importance as an outcome variable. Stull, Kosloski, and Kercher (1994) conclude that there is room for both specific and general out-

come measures because caregiving burden makes a unique contribution to understanding caregiver behavior. Burden inventories commonly incorporate attributions of how caregiving has affected the lives of caregivers. Understanding how caregivers interpret events and link them to certain outcomes is critical in introducing interventions that effectively reduce stress. Caregivers are unlikely to use services unless they see them answering a need that they have in their caregiving role.

The general versus specific outcome debate has clarified thinking about the options available to researchers, but uncertainty remains as to what will be most suitable in a particular context. Reviews of caregiving interventions are replete with examples of nonsignificant findings being attributed to the use of insensitive outcome measures (Knight, Lutzky, & Macofsky-Urban, 1993; Zarit, Anthony, & Boutselis, 1987). Ideally, researchers should be able to identify the features of the caregiving experience that are most likely to be changed by an intervention and, in advance, have an appreciation of when these changes are likely to be restricted to the caregiving context or spill over into general well-being.

The present study extends the work of George (1994) and Stull and colleagues (1994) by examining caregiving appraisals and their relationship to general well-being and caregiving burden. If an intervention can be identified, a priori, as having an impact that will shift caregiver appraisals of a particular kind, then the findings from this study might better inform researchers in their choice of a general or contextual measure. Some interventions might be expected to have most effect on appraisals that are linked with caregiving burden, but not general subjective well-being. In other cases, the appraisals targeted by an intervention may be correlates of general well-being, not caregiving burden. Possibly, some appraisals will be linked with both the contextual and general outcomes.

# Caregiving Appraisals

Caregivers have a complex set of beliefs and affects associated with their caregiving efforts. Lawton, Kleban, Moss, Rovine, and Glicksman (1989) use the term "caregiving appraisal" to describe "all cognitive and affective appraisals and reappraisals of the potential stressor and the efficacy of one's coping ef-

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forts" (p. P61). This definition of appraisal incorporates relatively objective and empirically verifiable beliefs (e.g., about what the care receiver is capable of doing and the social support available), as well as subjective feelings (e.g., concerns about the care receiver's condition and the quality of available support). The stress and coping research tradition (Lazarus & Folkman, 1984) rests on the assumption that appraisals of the caregiving situation are critical factors in shaping adaptation. Thus, appraisals are postulated as providing a valuable starting point for assessing the appropriateness of general or contextual stress outcomes in a particular research context.

Lawton and colleagues (1989) and Braithwaite (1996b) have undertaken the task of reducing a vast array of caregiving appraisals to a limited set of usable dimensions. The six dimensions identified by Braithwaite represent the independent variables in this article. Five dimensions have counterparts in Lawton and colleagues' (1989) work on dimensions of appraisal and in Guest's (1986) profile of caregiving burden: (1) task load caregiving, (2) a dysfunctional caregiver—care receiver relationship, (3) threat of social captivity, (4) intimacy and love, and (5) caregiver resiliency. The sixth, social distance caregiving, is more likely to be found in populations where levels of dependency are not uniformly high across types of functioning.

The procedure used to identify the dimensions of caregiving appraisal involved the use of principal components analysis and varimax rotation to simplify a set of variables associated with the appraisal construct (see Braithwaite, 1996b). Appraisals were defined in a manner similar to Lawton and colleagues (1989), but also included the related constructs of beliefs about the care receiver's needs and beliefs about caregiver resources. The 27 variables described in the Appendix mainly comprise multi-item scales that had emerged as important predictors of burden and distress in previous work (Braithwaite, 1990). Caregivers' perceptions of their workload and its demands on their time and energy were measured through three "task-oriented" and three "social-emotional work" scales (Braithwaite, 1990). Measures of the resources available to the caregiver were of two kinds, social and personal. Social resources were measured through an "availability of social support" scale and an "availability of a confidant" scale (Henderson, Byrne, & Duncan-Jones, 1981). Personal resources were assessed through scales measuring mastery (Pearlin & Schooler, 1978), self-esteem (Rosenberg, 1965), sociability and emotionality (Braithwaite, 1987; Braithwaite, Duncan-Jones, Bosly-Craft, & Goodchild, 1984), and physical health (Braithwaite, 1990). As well as workload and resource variables, three types of appraisals relating to the caregiving context were included. Active and passive coping styles were assessed through the "seeking solutions" and "reinterpretation and acceptance" scales (Braithwaite, 1990), and a further four measures represented caregivers' perceptions of how their family and friends reacted to their caregiving role (Braithwaite, 1990). The positive aspects of caregiving were also assessed through the "reciprocity" scale and the "things I'd miss" index (Braithwaite, 1990). Finally, six measures were included to represent the crises of decline, a set of variables that define a model that attributes caregiving burden to the loss associated with caring for someone whose capacities are degenerating, to the accompanying conflict that emerges in intimate relationships, to the dominance and exclusiveness of caregiving, and to feelings of being unprepared for the caregiving role (Braithwaite, 1992, 1996a).

Although 27 variables is a large number of variables to reduce through a factor analysis based on just over 100 respondents, the problem was offset by the fact that the measures were more reliable than usual, being based primarily on multi-item scales (Tabachnick & Fidell, 1983). Furthermore, the factor structure that emerged was very stable. As the number of variables was reduced, a set of principal components analyses with rotation produced factors with the same critical defining variables. Comrey and Newmeyer (1965) have noted that stable factor structures are more likely to be obtained when the variables are multi-item scales. The factor structure that was derived from a principal components analysis and varimax rotation of the 27 appraisal variables are the appraisal dimensions used in this article (see Table 1). The six caregiving appraisal dimensions are hypothesized as key factors differentiating types of caregiver adaptation, that is, whether adaptation is discernible at the general or the specific level.

The six appraisal dimensions are as follows:

Task load caregiving is defined by the provision of personal care, supervision, taking responsibility for many of the decisions surrounding care, and having little informal backup support.

Dysfunctional caregiving is defined by caregivers feeling unprepared for the role, having a continuing history of conflict with the care receiver, and perceiving the care receiver as disruptive and as degenerating emotionally, socially, and cognitively. Caregivers in dysfunctional relationships use both active and passive coping strategies as they struggle with care provision.

Threat of social captivity describes caregiving situations where the caregiver enjoys an extensive and supportive social network, but where caregiving poses the threat of captivity. High scorers on social captivity receive high levels of support from friends. Their reliance on a range of coping styles suggests that they are actively protecting their previous levels of social engagement outside the caregiving context.

Intimacy and love in the caregiving relationship is defined by reciprocity and appreciation in the relationship, by having things to lose should the caregiving relationship end, by being the care receiver's confidant, and by feeling supported in the role of caregiver.

Caregiver resiliency reflects inner strength and efficacy defined by personal resources such as high selfesteem, high mastery, good physical health, and emotional stability.

Table 1. Variables With Loadings >0.35<sup>a</sup> on Six Dimensions of Caregiving Appraisal

Appraisal Variables	1 Task Load Caregiving	2 Dysfunctional Caregiving	3 Caregiver Resiliency	4 Social Captivity	5 Intimacy and Love	6 Social Distance
Personal care	.80					
Supervision	.69					
Decision making	.67					
Physical degeneration	.38					
Informal backup	56					
Reinterpretation and acceptance		.44	36	.54		
Seeking solutions		.56		.43		
Sociability				.72		
Mastery			.78			
Self-esteem			.62	.37		
Emotionality			71			
Physical health			.56			
Reciprocity					.76	
Carer as confidant					.60	
Missing nothing					60	
Instrumental support					.53	
Conflict		.57				
Emotional, social, and cognitive degeneration		.71				
Time constraints		.57				
History of conflict <sup>b</sup>		41				
Unpreparedness		.42				
Care receiver's confidants						.74
Care receiver's social support						.64
Confidants (carer)				.52		
Social support (carer)				.63		
Family's moral support						.50
Friend's moral support				.43		
Eigenvalue	3.37	2.73	2.50	1.84	1.61	1.52

The cut-off for loadings was set at the higher than usual level of 0.35 because the size of the sample was not large.

Social distance caregiving reflects a caregiving situation where care receivers maintain social independence, even though they need the instrumental support of their caregiver. Caregivers perceive their care receivers as having high social support and a number of confidants (not necessarily including the caregiver). Caregivers report high moral support from family for their efforts.

These six appraisal dimensions have relevance across types of caregiving situations, be they defined in terms of social-demographic variables or illness types. Previous work has examined whether the appraisal dimensions are more pertinent to some caregiving contexts than others (Braithwaite, 1996b, 1998). The variables examined were (a) caregiver's age and sex, (b) care receiver's age and sex, (c) whether or not a spouse was being cared for, (d) whether or not the household spanned three generations, (e) whether the care receiver had a medical condition involving the heart or circulatory system, (f) whether the care receiver had had a stroke, and (g) whether the care receiver had dementia. The appraisals that were most highly associated with the caregiving context were task load caregiving and threat of social captivity. High task load caregiving was more likely among spouses (r = .28, p < .01), and in cases of stroke (r = .23, p < .01) or dementia (r = .23, p < .01).01). Threat of social captivity was more pronounced among women (r = .27, p < .01) and in three-generation households (r = .22, p < .01), and less so when care was given to a spouse (r = .20, p < .01). These correlations, although significant, are not sufficiently high as to cast doubt on the usefulness of appraisals in a heterogeneous caregiving sample.

Appraisals predict reliance on formal services. Task load caregiving and dysfunctional caregiving predict respite use, but intimacy and love lessens the likelihood of future use (Braithwaite, 1998). Dysfunctional caregiving predicts subsequent institutionalization (Braithwaite, 1996b).

These appraisals show signs of being useful targets for assessing the effectiveness of interventions. For instance, psychological interventions with caregivers may be oriented to building resiliency in the caregiver, social interventions may aim to ease the tensions in the caregiver—care receiver relationship, whereas services that help provide care may change appraisals of the task load involved in caregiving. Through changing particular appraisals, practitioners might expect to find accompanying changes in well-being.

Bivariate correlations reported in previous research support this expectation (Braithwaite, 1996b). Increases in mental health and psychological well-being accompany caregiver resiliency in the caregiver–care receiver relationship. Decreases in mental health and well-being are associated with dysfunc-

<sup>&</sup>lt;sup>b</sup>A high score indicates low conflict on this measure.

tional caregiving and with the loss of intimacy and love.

On this basis, one is tempted to consider dysfunctional caregiving, intimacy and love, and caregiver resiliency as the appraisals that should cause most concern. Because threat of social captivity, social distance caregiving, and task load caregiving do not correlate significantly with symptoms, it is tempting to conclude that they are less problematic from the perspective of well-being.

But would this be the case if well-being were defined contextually as caregivers' perceptions of the frustration of basic needs? Frustration of basic needs in caregiving has been linked with poor mental health (Braithwaite, 1990, 1996a). Maslow (1962) regarded persistent basic need frustration as a cause of illness: "empty holes, so to speak, which must be filled up for health's sake" (p. 21). The contextual measure of well-being used in this study, burden, is defined in the Maslovian tradition as the degree to which caregivers perceived caregiving as a threat to basic physiological (safety and order), social (love), and psychological (self-esteem) needs (Braithwaite, 1992). The Threat to Basic Needs Scale was developed and validated in Australia (Braithwaite, 1990, 1996a; Braithwaite, Pollitt, & Roach, 1998; Gillies, 1995). Caregivers are asked whether or not caregiving prevents them from resting when they are ill, establishing routine and order in their lives, spending time with loved ones, getting things finished to their satisfaction, being able to plan ahead, and having control over their lives.

The Threat to Basic Needs Scale operationalizes a much narrower definition of burden than is usual. Its advantages, however, are twofold. While this instrument, like others, relies on caregivers' perceptions of the impact of caregiving, the perceptions are restricted to matters of serious concern from a policy perspective. Governments take the undermining of basic needs seriously. Furthermore, through adopting a narrow definition of burden, difficulties in separating independent and dependent variables are eased. Variables relating to caregiving workload, the caregiver-care receiver relationship, social support, material resources, and coping strategies that are often implicated in the term "burden" belong to the domain of caregiving appraisals. While all these factors may impinge on the caregiver's ability to meet his or her basic needs, they do not represent basic need frustration in themselves.

# Design and Hypotheses

This study explored the relevance of appraisals to the prediction of burden in one set of analyses and to general well-being in the other. The general well-being measures included both indicators of mental health and affect state. Mental health was measured using the anxiety and depression subscales from the Delusions-Symptoms-States Inventory/anxiety—depression (DSSI/sAD; Bedford, Foulds, & Sheffield, 1976). This instrument is used to measure clinical states and

does not include items that tap positive psychological functioning. Consequently, a second instrument, Bradburn's (1969) Affect Balance Scale, was added as a more general well-being measure that would capture both the negative and positive side of psychological well-being.

On the basis of Maslow's theory (1962), one might expect appraisals to be differentially related to burden and well-being depending on whether caregivers can act to escape the source of their frustration. Two caregiving appraisals offer little prospect of escape. Dysfunctional caregiving involves a relationship between caregiver and care-receiver that is hostile and engulfing. Caregivers' needs for self-esteem and affirmation from others are likely to be seriously and persistently frustrated. The second appraisal from which escape is not easy is caregiver resiliency. Those who do not have personal hardiness are less likely to have the skills and capacities to keep either burden or poor mental health at bay (Rutter, 1985).

Of the remaining appraisals, task load caregiving, threat of social captivity, and social distance caregiving might all be expected to have some impact on burden, but not necessarily well-being. In each case, options are available to individuals who wish to reduce or contain their burden experience. In contrast, intimacy and love is unlikely to give rise to feelings of burden because the appraisal is more likely to satisfy than threaten basic needs. Its effect on general well-being, however, is more ambiguous. Thus, the following hypotheses can be proposed:

Hypothesis 1: The appraisals of dysfunctional caregiving and caregiver resiliency are likely to be related to both burden and the general well-being measures

Hypothesis 2: The appraisals of task load caregiving, threat of social captivity, and social distance caregiving are likely to be related to burden, but not to general well-being.

Hypothesis 3: The appraisal of intimacy and love is not likely to be related to burden, although it may be related to general well-being.

These hypotheses specify a direct link between appraisals and outcomes. The stress literature, however, has drawn attention to the way in which similar appraisals may lead to different outcomes, depending on outside factors that buffer the impact in some cases, and accentuate it in others. Often these moderating factors or buffers are objective resources associated with social class, disposable income, density of social network, and so on. Included in this category are personal attributes that enable some people to handle life's trials and tribulations better than others. The appraisal of caregiver resiliency brings together the personal resource variables of self-esteem, mastery, emotional stability, and physical health. These personality and physical characteristics transcend caregiving and can be interpreted within the stress paradigm as the degree to which the individual brings hardiness and resiliency to the stressful situation (Costa & McCrae, 1980; Kobasa, 1979; Lazarus, De-Longis, Folkman, & Gruen, 1985; Pagel, Becker, &

Coppel, 1985; Wheaton, 1983). Resiliency has been differentiated from the outcome variables of burden, symptoms, and affect (Braithwaite, 1990; Costa & McCrae, 1980; Eysenck & Eysenck, 1969; Rutter, 1985). Resiliency is conceptualized more in terms of a basic temperament that is stable across time. In contrast, burden, symptoms, and affect are regarded as states that change with time and context. The separateness and the reputed stability of the resiliency variables raise a final question addressed in this research: Does resiliency buffer caregivers when their appraisals of the caregiving situation pose a threat to their wellbeing? Resiliency may be important in buffering the impact of task load caregiving, social distance caregiving, and the threat of social captivity. Caregiving resiliency may be the factor that enables some caregivers to find a solution to their problems, whereas others can not.

# Methods

# Sample

Data were collected through face-to-face interviews with 144 caregivers of clients of the day care centers and the community nurses serving the city of Canberra, Australia. Caregivers were defined as unpaid people who assumed major responsibility for providing or organizing services on a regular basis for someone incapable of providing for him or herself. Major responsibility for service provision had to be in at least one of three areas of daily activity (cleaning, shopping, meal preparation) or one of four areas of personal care (washing, dressing, toileting, mobility), or involve regular supervisory care (checks on well-being more than once a day).

The level of dependency of the care receivers was high: Assistance was required by 80% or more of care receivers with each of 11 activities of daily living. The clients suffered from cardiovascular disorders (48%), injury, arthritis, or some other muscular-skeletal disorder (36%), impaired mobility through stroke (28%), dementia, memory loss, or disorientation (27%), and gastrointestinal disorders (19%).

Most caregiving relationships involved spousal care (43%) or parent (parent-in-law) care (51%). The remaining caregivers were supporting grandparents, aunts, ex-husbands, and friends.

Of the spousal carers, 59% were women, 10% were employed, only one had a three-generation household, and all but one were cohabiting with the person receiving care. Spousal carers' mean age was 69 years. Nonspousal carers comprised 86% women; 43% were employed, 46% had three-generation households, and 77% cohabited with the care receiver. The mean age of nonspousal carers was 50 years.

The sample was disproportionately middle class across both caregiving groups: 38% of carers belonged to households where the main income earner was classified as professional or managerial, 46% trade, clerical, or sales, and 17% unskilled.

# **Procedure**

Caregivers were contacted by letter, and those who agreed to participate were telephoned by one of three interviewers. Meetings were arranged for a private discussion of their caregiving experiences either at their homes or at the university, depending on their preference. Structured interviewing, interspersed with unstructured discussions, took place over two and sometimes three sessions, each of about 1.5 to 2 hours duration. Carers completed a questionnaire that was left with them after the first interview.

# Measures

The appraisal variables were factor scores from 6 appraisal dimensions representing (1) task load caregiving, (2) dysfunctional caregiving, (3) threat of social captivity, (4) intimacy and love, (5) caregiver resiliency, and (6) social distance caregiving.

Factor scores were used as the predictor variables in this study, rather than composites of the measures that were found to have salient loadings on each dimension. The disadvantage of using factor scores is that the generalizability of the findings is constrained by the fact that individual variable weights are likely to be context specific, that is, dependent on the sample and the items in the data set (Gorsuch, 1974).

The advantage of factor scores is analytic and is particularly important in the present research, where the relative contributions of the predictor variables are of interest. In calculating factor scores, the variance shared by a large set of variables is partitioned into a smaller set of independent dimensions. Independence among the predictor variables makes interpretation and comparison of the regression weights much simpler. Factor scores are standardized with a mean of zero and standard deviation of 1.0. For each appraisal dimension, high scores reflect more of the characteristic that the dimension represents.

Mental health was assessed using the anxiety and depression subscales from the Delusions-Symptoms-States Inventory (DSSI/sAD), a self-completion instrument developed by Foulds and Bedford for detecting different clinical syndromes (Bedford & Foulds, 1977; Bedford et al., 1976; Foulds & Bedford, 1975, 1976). The seven depression items and seven anxiety items (sAD) have been validated within the population from which caregivers were drawn (Henderson et al., 1981). The alpha reliabilities for the anxiety and depression scales in this sample were 0.86 and 0.84, respectively. Their intercorrelation was 0.85 (p < .01) and supported the aggregation of scores into one measure of minor psychiatric symptoms (M = 7.05, SD = 6.94).

The second general measure was the Affect Balance Scale based on Bradburn's (1969) two-factor model of psychological well-being. The five-item positive affect scale had a mean of 7.84, a standard deviation of 1.56, and an alpha reliability coefficient of 0.71. The five-item negative affect scale had a mean of 6.48, a standard deviation of 1.41, and an alpha reliability coefficient of 0.62. The affect bal-

ance scale, representing overall psychological well-being, was calculated through subtracting the negative affect score from the positive affect score (M = 1.33, SD = 2.28). The scale has been validated for use in the population from which caregivers were drawn (Leahan, 1995).

The Threat to Basic Needs Scale comprises 17 items (see Appendix) covering the four domains of physiological, safety, belongingness, and self-esteem needs. Physiological and safety needs for caregivers involve order, stability, and self-protection; they were measured by asking caregivers whether or not they experienced inadequate sleep and rest, poor health, disrupted routine, task incompletion, and constant interruptions. Belongingness and love needs involve intimate others and were assessed through carers' feelings of divided family loyalties and resentments. Self-esteem needs were measured through perceptions of one's inadequacy or failure in performance as a caregiver. Data were scored in terms of need frustration being present (2) or absent (1). Scores ranged from 17 to 34 (M = 28.38, SD = 4.11), with an alpha reliability coefficient of 0.84.

# Results

The six appraisal dimensions were used to predict minor psychiatric symptoms, affect balance, and burden in a series of ordinary least squares (OLS) regression analyses. The results are presented in Table 2. Together the appraisal dimensions accounted for significant and comparable proportions of the variance in each dependent variable, ranging from 32% for affect balance, through 40% for symptoms, to 44% for burden. General and contextual measures appear to perform similarly in terms of the amount of variation shared with the appraisal dimensions. A comparison of the Beta coefficients showing the relative importance of the appraisals across outcomes, however, suggests that different aspects of the caregiving experience shape general and contextual measures.

Table 2. Beta Coefficients and R<sup>2</sup> for the Prediction of the General Outcomes (Minor Psychiatric Symptoms and Affect Balance) and the Contextual Outcome (Burden) From the Caregiving Appraisal Dimensions Using OLS Regression Analysis

	β Coefficients		
Appraisal	Minor Psychiatric Symptoms	Affect Balance	Burden (Threat to Basic Needs)
Task load caregiving Dysfunctional caregiving Threat of social captivity Intimacy and love Caregiver resiliency Social distance Adjusted R <sup>2</sup>	.06 .20** 05 20** 59*** 01 .40***	15* 16* .24** .28*** .41*** 04 .32***	.05 .58*** .16* 08 27*** .14* .44***

<sup>\*</sup>p < .05; \*\*p < .01; \*\*\*p < .001.

The appraisal that was most strongly predictive of minor psychiatric symptoms was caregiver resiliency. Those with low resiliency did not have the personal resources necessary for adapting to their stressful situation: mastery, self-esteem, emotional stability (low neuroticism), and physical health. Significant, but smaller Beta coefficients were found for dysfunctional caregiving and intimacy and love. Those high on symptoms were likely to have a more dysfunctional and less loving relationship with the care receiver.

The prediction of affect balance was similar to the above in three respects. Caregiver resiliency made the major contribution to explaining variation in general affect, with weaker significant contributions from intimacy and love and dysfunctional caregiving. In addition, the appraisals of threat of social captivity and task load caregiving played a role in explaining affect balance. Heavy task demands were associated with negative affect. In contrast, those who felt threatened by social captivity were more likely to have positive affect, possibly because they were active and outgoing with a lifestyle that they enjoyed and were assertively protecting.

The strongest predictor of the contextual outcome, burden, was the appraisal of dysfunctional caregiving. Caregiver resiliency was significantly associated with less burden, whereas social distance caregiving and threat of social captivity were associated with more burden.

As expected, the dependent variables of minor psychiatric symptoms, affect balance, and burden were related to each other. The contextual outcome of burden correlated significantly with the general outcomes of minor psychiatric symptoms (r = .36, p < .01) and affect balance (r = -.21, p < .05). These relationships raise the question of whether the appraisals associated with the general outcomes are independent of those associated with contextual outcomes and vice versa. Specifically, are the same appraisals predictive of general outcomes when the contextual outcome is controlled, and are the same appraisals predictive of the contextual outcome when general outcomes are controlled?

The question was examined through running four hierarchical regression models in which the control variable was entered first at step 1 and the appraisals were entered as a block at step 2. The first regression used burden as the control variable and appraisals as explanatory variables to predict symptoms. In the second regression, burden and the appraisal variables were entered into a regression model predicting affect balance. Third, burden was predicted from the appraisal variables, having controlled for symptoms. Fourth, burden was predicted from the appraisal variables, having controlled for affect balance.

The context-specific outcomes made a small contribution to explaining variation in general outcomes and vice versa, but the picture did not change substantively from that presented in Table 2. Across the four regression models, the Beta coefficients for the

appraisal variables changed little as a consequence of controlling for the alternative outcomes. Only one change in Beta coefficients was noteworthy. When symptoms were predicted from appraisals, after controlling for burden, the appraisal of being in a dysfunctional relationship became insignificant. This finding suggests that burden and being in a dysfunctional relationship overlap considerably as predictors of symptoms.

The final issue addressed through regression analysis was the role played by caregiver resiliency as a buffer or moderator of the relationship between appraisals and outcomes. In order to test the buffering hypothesis, caregiver resiliency factor scores were cross-multiplied with factor scores from each of the five remaining appraisal dimensions. These five terms were entered as a block after the main effects in the regression analyses reported in Table 2. The variance that the interaction block added to the explained variance for each dependent variable is presented in Table 3. Only in the case of minor psychiatric symptoms did the interaction block have a significant effect.

The interaction term that proved significant in the case of minor psychiatric symptoms involved caregiver resiliency and threat of social captivity (see Table 4). Plotting the mean symptom scores for those high and low on each appraisal dimension revealed the relationship represented in Figure 1. Those who were resilient with high self-esteem, a sense of mastery, emotional stability, and good health showed an increase in symptoms with the appraisal that caregiving threatened social captivity, from M = 17.33 (SD = 3.55) to M = 19.40 (SD = 6.16). For those who were low in resiliency, the effect was in the opposite direction. If caregivers were highly emotional, in poor health, with low mastery and self-esteem, perceiving the threat of social captivity was to their advantage, possibly because it reflected an active struggle to maintain social networks and preserve mental health (M = 22.95, SD = 5.80). The group that showed the poorest mental health (M = 25.59, SD = 8.83) were those who not only lacked resiliency, but also perceived no threat to their social integration in the

Table 3. The  $R^2$  Values Associated With Three Hierarchical Regression Analyses

	$R^2$			
	Minor Psychiatric Symptoms	Affect Balance	Burden	
Appraisals entered at step 1	.43***	.35***	.47***	
Appraisal $\times$ Resiliency interactions entered at step 2 Change in $R^2$ Adjusted $R^2$ for final model	.48*** .05* .44***	.37*** .02 .31***	.48*** .01 .44***	

Note: The Appraisal  $\times$  Resiliency interaction terms are entered as a block after the appraisal variables in the prediction of minor psychiatric symptoms, affect balance, and burden.

Table 4. Beta Coefficients and  $R^2$  for the Prediction of Minor Psychiatric Symptoms From the Caregiving Appraisals and Interaction Terms Using OLS Regression Analysis

Predictors	β Coefficients
Task load caregiving	.05
Dysfunctional caregiving	.18**
Threat of social captivity	02
Intimacy and love '	16*
Caregiver resiliency	52***
Social distance caregiving	02
Task Load × Resiliency	02
Dysfunctional × Resiliency	02
Threat of Social Captivity × Resiliency	.19**
Intimacy and Love × Resiliency	.12
Social Distance × Resiliency	.03
Adjusted $R^2$	.44***

<sup>\*</sup>p < .05; \*\*p < .01; \*\*\*p < .001.

community. It is most likely that such individuals had become so detached that the threat had long passed: The threat had already turned into reality.

# Discussion

The hypothesis that the appraisals of caregiver resiliency and dysfunctional caregiving would be predictive of both contextual and general measures of well-being was confirmed. As predicted, intimacy and love was not related to burden. This appraisal was associated, however, with improved psychological well-being at the general level, supporting the proposition that there are "uplifts" in the caring experience that may prevent the stress of caregiving from dominating all spheres of life (Kinney & Stephens, 1989). Of the three appraisals hypothesized as being context bound, only one, social distance caregiving, behaved according to expectations. The others proved to have unexpected links with general well-being. High task load caregiving was associated with negative affect, whereas threat of social captivity was linked to all outcome measures, sometimes positively, sometimes negatively. The specific buffering role hypothesized for caregiver resiliency did not unfold as expected. The findings, however, confirmed the

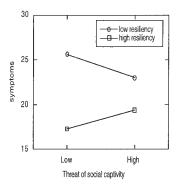


Figure 1. The relationship between threat of social captivity and minor psychiatric symptoms for caregivers with high and low resiliency.

p < .05; \*\*\*p < .001.

importance of considering resiliency as a moderating variable in this kind of work. Particular caregiving experiences may have different implications for well-being depending on whether or not caregivers report having a resilient orientation to life.

Overall, these findings show that appraisals of caregiving are linked with well-being at different levels, sometimes contextually, sometimes generally. Furthermore, these links are diverse, and it is likely to be misleading to assign greater importance to one kind of link than to another, particularly in planning and evaluating interventions. Indeed, the pattern of relationships across the three outcomes provides insights into why researchers have not always been able to demonstrate the effectiveness of interventions, except through the self-reports of caregivers.

In no case is this more striking than in relation to the appraisal of task load caregiving. Responding to high levels of dependency and providing close supervision are areas where the caregiver's capacities can be boosted through informal or formal assistance. Interestingly, caregivers who regard their task demands as high are not necessarily likely to complain of burden nor are they likely to manifest minor psychiatric symptoms. Possibly the practical problems associated with high task load caregiving are among the most easily resolved. Caregivers, with or without outside help, can change their priorities, modify their lifestyle, and reorganize their schedules to set up a household routine that gets the jobs done. It is important to note that adjustments of these kinds are well supported by government programs in Australia (services are available to support house cleaning, home maintenance, transport, meals, nursing care, and respite). The only evidence of stress at the outcome level is that high task load caregiving is associated with feeling less positive about life. In other words, caregivers appear to recognize reduced quality of life without experiencing levels of intrusiveness that trigger burden, depression, or anxiety.

On the basis of these data, evaluators of programs that provide instrumental support and respite to caregivers may be sadly disappointed with evidence of their program's effectiveness, if they rely solely on outcomes of burden and/or minor psychiatric symptoms. A measure of general affect, or a broader measure of life satisfaction, may provide more encouraging results. Furthermore, such a measure would ideally not just capture subjective aspects of life satisfaction, but also the objective changes to lifestyle that may result from caregiving. These changes may not adversely influence caregiver subjective well-being, but may represent less than optimal conditions of living. The qualitative findings associated with this study revealed evidence of less than satisfactory living arrangements, for example, an adolescent girl sharing a bedroom with an incontinent and dementing grandmother (Braithwaite, 1990). Objective indicators of well-being and minimal standards for home care have not been the subjects of inquiry in this study, but findings highlight both their distinctiveness and importance.

The above example illustrates how the detection of change in well-being is critically dependent on choosing the right outcome variable. In other cases, however, appraisals were more robustly connected with well-being measures. Being involved in a dysfunctional caregiving relationship, often a relationship with a history extending beyond caregiving, was associated with higher burden as well as negative affect and poorer mental health. These results confirm the salience of the caregiver–care receiver relationship as one of the major factors shaping caregiver burnout and care receiver institutionalization (Braithwaite, 1990, 1996a; Morris, Morris, & Britton, 1988; Pruchno, Michaels, & Potashnik, 1990).

Similarly consistent across outcomes was caregiver resiliency, an appraisal of personal capability that has emerged as a valuable resource for individuals facing life events or dealing with high levels of daily hassles across a variety of domains (Henderson et al., 1981; Holahan & Moos, 1985; Kobasa, 1979; Rutter, 1985; Wheaton, 1983). Researchers interested in questions involving appraisals of dysfunctional relationships or resiliency, both of which are at the core of so many stress and coping analyses, can approach the selection of an outcome variable with more confidence than those interested in detecting effects on well-being of more subtle facets of caregiving.

One such effect that emerged in this study involved perceptions of threat of social captivity among those with outgoing personalities and active lifestyles. These individuals reported higher burden, but also more positive affect than others. No relationship emerged with minor psychiatric symptoms until the interaction between caregiver resiliency and threat of social captivity was examined. For resilient caregivers, the appraisal of a threat of social captivity accompanied an increase in reports of anxiety and depression, as one would expect from the social support literature (Cohen & Wills, 1985). It was masked as a main effect, however, by the presence of highly vulnerable caregivers who saw no threat because they had capitulated already to the status of being socially disengaged. Their symptom levels were higher than any other group. In contrast, those who were vulnerable and saw caregiving as a threat fared better, because they were acting in ways to preserve their social life. Uncovering this link between mental health and threat of social captivity has important implications for intervention studies and suggests that threat of social captivity warrants recognition, along with dysfunctional caregiving and caregiver resiliency, as an appraisal that casts a wide net in its connections with well-being.

The final two appraisals of love and intimacy and social distance caregiving tap distinctly different aspects of the well-being domain. Love and intimacy is linked with the general well-being measures of symptoms and life satisfaction, whereas social distance caregiving is associated with contextual well-being, that is, burden. The finding that love and intimacy improves well-being and is not systematically related to reports of burden is consistent with expectations. At the

same time, the pattern of findings raises an interesting question for future research. George and Gwyther's (1986) critique of burden measures alerts us to the way in which individuals are not always astute in recognizing sources of stress. The advantages of a close and loving relationship, demonstrated in this study using general well-being measures, might blind some caregivers to ways in which they sacrifice their own needs for the well-being of others. Previous work has shown that the appraisal of love and intimacy discourages caregivers from taking advantage of respite services. In the absence of recognition of how caregiving can give rise to basic need frustration in caregivers, capacity to plan for and cope with the future demands of care may be seriously reduced. In the case of the appraisal of love and intimacy, positive relationships with general well-being and the absence of a relationship with burden may leave the caregiver vulnerable to stress in the future.

Social distance caregiving is a relatively poorly understood appraisal in the quantitative studies that have been carried out to date (Braithwaite, 1996b). The defining feature of social distance caregiving is care in situations where the receiver and giver have maintained their social independence, despite the physical dependency of one on the other. Social distance caregiving was related to expressions of burden among caregivers, although the stress did not extend into the domain of general well-being. The important question raised by this finding for future research is a developmental one. Is social distance caregiving sustainable in the long term? What happens in the caregiver-care receiver relationship as disability increases, the social networks of both shrink, and they are forced more and more into each other's company? While social distance caregiving does not seriously threaten overall well-being, this caregiving appraisal may represent a transitory stand-off, and future patterns of both appraisal and adjustment may be far more harmful than is suggested by these data.

This study provides little support for the unconditional superiority of general or contextual well-being measures. Furthermore, there was little support for the hypothesis that appraisals could be divided neatly into two categories: those where stress can be contained within the caregiving context and those where stress spills over to affect general well-being. One pattern in the data that should be noted, however, is that general independent variables (caregiver resiliency) are the strongest predictors of general dependent variables (symptoms and life satisfaction), and contextual independent variables (dysfunctional caregiving relationship) are the strongest predictors of contextual dependent measures (burden). This observation is consistent with attitude and behavior research in which poor relationships between attitudes and behaviors have been attributed to a mismatch in the levels of measurement of the independent and dependent variables (Ajzen, 1991). Specific attitudes are poor predictors of general behaviors, and general attitudes are poor predictors of specific behaviors. This principle does not have direct relevance to the selection of the outcome variable in caregiving research, but it provides a warning for researchers dealing with subtle effects and small samples. First, significant effects may be more likely when the levels of measurement of the independent and dependent variables are matched. Second, failure to find a link between a caregiving variable and general well-being may signal the operation of more complex and time-dependent paths, rather than no paths at all.

# Conclusion

Further research needs to be conducted before generalizations can be proposed for selecting the most appropriate outcome variable. Conclusions can change with the nature of the sample (this sample comprised service users) and with the culture of care in which caregiving and caregiving appraisals are located. The ways in which appraisals and well-being are connected for Australians conceivably may differ from the way they are woven together for Americans, depending on similarities in cultures of care and in the support that governments provide.

These caveats can only be answered through replication and cross-national validation studies. Nevertheless, the present findings can be used as a base for future research. Resiliency and dysfunctional caregiving affect contextual and general well-being, the former positively, the latter negatively. Threat of social captivity also impinges upon well-being at the contextual and general levels. Intimacy and love and task load caregiving are most likely to affect general outcomes, the former being linked with greater mental health and positive affect, the latter negative affect. Social distance caregiving is likely to be restricted in its adverse effects, at least initially, since it elicits claims of frustration of basic needs, but no discernible symptoms.

One of the most interesting questions for future work raised by these findings is: What does it mean for well-being when general measures are affected and contextual measures are not (love and intimacy), and when contextual measures are affected but general measures are not (social distance caregiving). In both cases, the pattern of findings raises questions about future care provision. In the case of intimacy and love, are caregivers at risk of running themselves into the ground if they do not recognize that they are not attending to their basic needs? For social distance caregiving, will a longer time frame produce evidence of stress of more serious proportions? Social distance caregiving may mark the emergence of the "holes" identified by Maslow (1962) as forerunners of poor health. For these reasons, researchers should aim, at this stage, to be as inclusive as possible of both general and contextual well-being measures in their monitoring of caregiver stress. At the same time, a consideration of caregiver appraisals may provide clues as to the breadth and depth of the impact of various caregiver interventions on well-being, so that outcomes can be chosen to match the expected change.

### References

- Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50, 179-211.
- Bedford, A., & Foulds, G. A. (1977). Validation of the Delusions-Symptoms-States Inventory. British Journal of Medical Psychology, 50, 163-
- Bedford, A., Foulds, G. A., & Sheffield, B. F. (1976). A new personal disturbance scale (DSSI/sAD). British Journal of Social and Clinical Psychology, 15, 387-394.
- Bradburn, N. M. (1969). The structure of psychological well-being. Chicago, IL: Aldine.
- Braithwaite, V. A. (1987). The scale of emotional arousability: Bridging the gap between the neuroticism construct and its measurement. Psycho-Jogical Medicine, 17, 217–225.
- Braithwaite, V. (1990). Bound to care. Sydney, Australia: Allen & Unwin. Braithwaite, V. (1992). Caregiving burden: Making the concept scientifically useful and policy relevant. Research on Aging, 14, 3-27
- Braithwaite, V. (1996a). Understanding stress in informal caregiving: Is burden a problem of the individual or of society? Research on Aging, 18, 139-174.
- Braithwaite, V. (1996b). Between stressors and outcomes: Can we simplify caregiving process variables? The Gerontologist, 36, 42-53.
- Braithwaite, V. (1998). Institutional respite care: Breaking chores or breaking social bonds? The Gerontologist, 38, 610-617.
- Braithwaite, V. A., Duncan-Jones, P., Bosly-Craft, R., & Goodchild, M. (1984). A psychometric investigation of the usefulness of the EASI-III Temperament Survey in the Australian general population. Australian Journal of Psychology, 36, 85–95
- Braithwaite, V., Pollitt, P., & Roach, G. (1998). A cameo of re-creation: The Caregiver Recreational Respite Program. Unpublished report to the Department of Community Services and Health, Commonwealth Government of Australia.
- Buss, A. H., & Plomin, R. (1975). A temperament theory of personality development. New York: Wiley. Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering
- hypothesis. Psychological Bulletin, 98, 310-357
- Comrey, A., & Newmeyer, J. (1965). Measurement of radicalism-conservatism. Journal of Social Psychology, 47, 357-369.
- Costa, P. T., Jr., & McCrae, R. R. (1980). Still stable after all these years: Personality as a key to some issues in adulthood and old age. In P. B. Baltes & O. G. Brim, Jr. (Eds.), Life-span development and behavior, Vol. 3 (pp. 65-102). New York: Academic Press.
- Eysenck, H. J., & Eysenck, S. B. G. (1969). Personality structure and measurement. San Diego, CA: R. R. Knapp.
- Foulds, G. A., & Bedford, A. (1975). Hierarchy of classes of personal illnesses. Psychological Medicine, 5, 181-192.
- Foulds, G. A., & Bedford, A. (1976). The relationship between anxietydepression and the neuroses. British Journal of Psychiatry, 128, 166–168.
- George, L. (1994). Caregiver burden and well-being: An elusive distinction. The Gerontologist, 34, 6-7.
- George, L., & Gwyther, L. P. (1986). Care-giver well-being: A multidimensional examination of family caregivers of demented adults. The Gerontologist, 26, 253-259.
- Gillies, C. K. (1995). Health and unhealthy caring: Towards a constructivist analysis of carers of the aged. Unpublished doctoral dissertation, Department of Psychology, University of Wollongong, Australia.
- Gorsuch, R. (1974). Factor analysis. Philadelphia, PA: Saunders.
- Guest, C. (1986) An investigation of the dimensions of burden in family caregivers of Alzheimer's disease patients. Unpublished master's thesis, University of Windsor, Ontario.
- Henderson, A. S., Byrne, D. G., & Duncan-Jones, P. (1981). Neurosis and the social environment. Sydney, Australia: Academic Press.
- Holahan, C. J., & Moos, R. H. (1985). Life stress and health: Personality, coping, and family support in stress resistance. Journal of Personality and Social Psychology, 49, 739-747.
- Kinney, J. M., & Stephens, M. A. P. (1989). Hassles and uplifts of giving care to a family member with dementia. Psychology and Aging, 4,
- Knight, B. G., Lutzky, S. M., & Macofsky-Urban, F. (1993). A meta-analytic review of interventions for caregiver distress: Recommendations for future research. The Gerontologist, 33, 240-248.
- Kobasa, S. C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. Journal of Personality and Social Psychology, 37, 1–11.
- Lawton, M. P., Kleban, M. H., Moss, M., Rovine, M., & Glicksman, A. (1989). Measuring caregiving appraisal. Journal of Gerontology: Psychological Sciences, 44, P61-P71.
- Lazarus, R. S., DeLongis, A., Folkman, S., & Gruen, R. (1985). Stress and adaptational outcomes: The problem of confounded measures. American Psychologist, 40, 770-779.
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal and coping. New York: Springer.

- Leahan, K. (1995). Successful adaptation in the elderly: The role of possible selves in the coping process. Unpublished fourth year honors thesis, Division of Psychology, Australian National University, Canberra.
- Maslow, A. H. (1962). Toward a psychology of being. New York: Van Nostrand.
- Morris, L. W., Morris, R. G., & Britton, P. G. (1988). The relationship between marital intimacy, perceived strain and depression in spouse caregivers of dementia sufferers. British Journal of Medical Psychology, 61, 231-236.
- Pagel, M. D., Becker, J., & Coppel, D. B. (1985). Loss of control, self blame, and depression: An investigation of spouse caregivers of Alzheimer's disease patients. Journal of Abnormal Psychology, 94, 169–182.
- Parker, G. B. (1978). The bonds of depression. Sydney, Australia: Angus & Robertson.
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. Journal of Health and Social Behaviour, 19, 2-21
- Pruchno, R. A., Michaels, J. E., & Potashnik, S. L. (1990). Predictors of institutionalization among Alzheimer disease victims with caregiving spouses. Journal of Gerontology: Social Sciences, 45, S259-S266.
- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.
- Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistence to psychiatric disorder. British Journal of Psychiatry, 147,
- Stull, D. E., Kosloski, K., & Kercher, K. (1994). Caregiver burden and generic well-being: Opposite sides of the same coin. The Gerontologist,
- Tabachnick, B. G., & Fidell, L. S. (1983). Using multivariate statistics. New York: Harper & Row.
- Wheaton, B. (1983). Stress, personal coping resources, and psychiatric symptoms: An investigation of interactive models. Journal of Health and Social Behavior, 24, 208-229.
- Zarit, S. H., Anthony, C., & Boutselis, M. (1987). Interventions with care givers of dementia patients: Comparison of two approaches. Psychology and Aging, 2, 225-232.

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# **Appendix**

Scale Items and Descriptive Statistics for the 27 Appraisal Variables and the Threat to Basic Needs Scale

# Task-oriented workload

- (1) The personal care scale ( $\alpha = .87$ , M = 29.78, SD = 11.32) involved five point ratings from the caregiver of the level of help required with (a) cutting toenails, (b) combing hair or shaving, (c) dressing or undressing, (d) washing hair, (e) bathing, (f) toileting, (g) getting into or out of bed, (h) sitting or standing or transfers, (i) walking, (j) feeding, and (k) medication.
- (2) The supervision scale ( $\alpha = .54$ , M = 4.57, SD =1.03) comprised three items scored dichotomously: Was the care receiver left alone unsupervised for a couple of hours (a) during the day and (b) during the night, and (c) could the care receiver use the telephone or call for assistance if no one was on hand.
- (3) The decision making scale ( $\alpha = .68$ , M = 8.95, SD = 2.64) was made up of five items asking caregivers whether or not the person receiving care made decisions about (a) clothing, (b) food, (c) the daily routine, (d) watching television or listening to the radio, and (e) seeing the doctor.

# Social-emotional workload

(4) Available care receiver social support was assessed through asking the carer: (a) how many people the care receiver had contact with in an ordinary week, (b) how many people with similar interests the care receiver had contact with, (c) how many friends did the care receiver have who could visit at any time regardless of circumstances, (d) how many friends and relatives could the care receiver contact at any time and talk with freely and frankly. The maximum number of people coded for any item was seven (Henderson et al., 1981;  $\alpha = .62$ , M = 13.59, SD = 6.76).

- (5) The availability of a care receiver confidant was assessed by asking carers to name the person who met the following criteria for the care receiver: (a) someone they could lean on, (b) someone they were very close to, (c) someone they could share their happiness with, (d) someone they could share their most private feelings with, and (e) someone who comforted them with a hug. The number of different people mentioned in answering these five questions constituted the measure of availability of a confidant (M = 2.47, SD = 1.15).
- (6) Caregiver as confidant was operationalized as the number of times the carer mentioned him/herself as the confidant of the care receiver in answering the set of questions above (M = 2.83, SD = 1.60).

# Social resources

- (7) The availability of *social support* scale ( $\alpha = .71$ , M = 26.22, SD = 9.26) comprised the following subset of items: (a) how many people carers had contact with in an ordinary week, (b) how many people with similar interests they had contact with, (c) how many people they could ask small favors of, (d) how many friends they had who could visit at any time regardless of circumstances, (e) how many friends and relatives they had who they could talk with freely and frankly, and (f) how many people there were who depended on them particularly for help and advice. The maximum number coded for any item was seven (Henderson et al., 1981).
- (8) Availability of a *confidant* ( $\alpha = .57$ , M = 9.23, SD = 1.11) was assessed using the following items: Is there a particular person who (a) you feel you can lean on, (b) you feel very close to, (c) shares your happiness with you, (d) shares your most private feelings, and (e) gives you a hug.

# **Personal resources**

- (9) The mastery scale ( $\alpha = .71$ , M = 21.57, SD = 4.67), derived from Pearlin and Schooler (1978), comprised six items measuring beliefs in control over one's life and capacity to deal with life's difficulties. Responses to each item were made on a 5-point scale.
- (10) Rosenberg's (1965) 10-item *self-esteem* scale ( $\alpha$  = .84, M = 40.04, SD = 6.64) measured beliefs in one's worth, competence, and capacity for success. Responses to each item were made on a 5-point scale.
- (11) Caregiver's *physical health* was indexed by a 3-point self-rating scale: good endorsed by 58%, fair by 33%, and poor by 9%.

- (12) The *sociability* scale (5 items,  $\alpha$  = .69, M = 16.57, SD = 4.29), based on Buss and Plomin's (1975) EASI-III Temperament Survey (Braithwaite, 1987; Braithwaite et al., 1984), measured enjoying the company of others. Responses to each item were made on a 5-point scale.
- (13) The *emotionality* scale 15 items ( $\alpha = .83$ , M = 37.50, SD = 9.97), based on Buss and Plomin's (1975) EASI-III Temperament Survey (Braithwaite, 1987; Braithwaite et al., 1984), measured the tendency to be readily upset, fearful, angry, and impulsive. Responses to each item were made on a 5-point scale.

# **Caregiving context measures**

- (14) Seeking solutions ( $\alpha = .65$ , M = 13.66, SD = 3.09) represented problem-focused strategies directed toward controlling the situation through seeking outside assistance and advice: (a) thinking through the problem, (b) discussing the problem with someone, (c) seeing the situation as a challenge to be met, (d) getting assistance with caring from relatives, friends, or agencies, and (e) using mechanical aids or devices to ease the caring load. Responses to each item were made on a 4-point scale.
- (15) Reinterpretation and acceptance ( $\alpha = .87$ , M =34.46, SD = 8.53) involved changing the meaning of the situation and seeking comfort for oneself. The scale represented emotion-focused and cognitive reframing strategies: (a) telling yourself there is no alternative and you just have to see it through, (b) telling yourself that there are others worse off than you, (c) telling yourself that things could be worse, (d) telling yourself it's the right thing to do, (e) telling yourself to take the good with the bad, (f) telling yourself it isn't as bad as all that, (g) telling yourself the problem can't last forever, (h) praying, (i) expressing your feelings (e.g., having a cry, letting off steam), (j) thinking of the good things that have come out of the situation, (k) having a cigarette or a drink, (l) accepting hardship because it's meant to be, and (m) telling yourself you will be a stronger and better person for the experience. Responses to each item were made on a 4-point scale.
- (16) The family's moral support was measured using the following items: Does your family (a) admire what you are doing, (b) think you have taken on too much, (c) take your contribution for granted (reverse scored). Responses were made on a 3-point scale. The family moral support scale had an alpha reliability coefficient of .65, a mean of 6.67, and standard deviation of 2.11.
- (17) Friends' moral support was measured using the same items as above. The friends' support scale had an alpha reliability coefficient of .52, a mean of 7.13, and standard deviation of 1.69.
- (18) *Instrumental support* with caregiving (M = 3.06, SD = .82) was assessed using two yes–no items: (a) have you asked for help and received it, and (b) have you been offered help and accepted it. The items correlated .35.

- (19) Having *informal backup* (M = 3.10, SD = .74) was measured through asking carers whether or not they had family or friends who would take over if they were out of action for: (a) two or three days and (b) two or three weeks. The items correlated .34.
- (20) *Reciprocity* was defined in terms of care receiver appreciation and was measured through three items: the care receiver (a) telling or showing the carer that her (his) efforts are appreciated and not taken for granted, (b) giving small gifts to the carer and/or the carer's family, and (c) having a chat with the carer to cheer her (him) up. Carers responded in terms of "rarely," "sometimes," and "regularly" ( $\alpha = .49$ , M = 5.98, SD = 1.76).
- (21) Personal benefit was measured through its polar opposite: *missing nothing*. A small, but significant, proportion of carers (17%) explicitly denied that anything would be missed if they no longer provided care, even after probing by the researcher. In contrast, 83% mentioned things like companionship, keeping busy, having someone in the house, and being useful.

# **Crises of decline variables**

(22) Emotional, social, and cognitive degeneration was represented through combining two scales: one focusing on social-emotional loss of control, the other on cognitive loss of control. All behaviors represented in these scales represented deviation from mature adult behavior, and caregivers gave their views on whether each characterized the care receiver, using a yes-no format. Social-emotional loss of control encompassed (a) worries unnecessarily, (b) wants to be the central concern of your life, (c) goes on and on about certain things, (d) constantly demands assistance, (e) gets very upset, may cry, (f) is irritable, (g) gets deeply depressed, (h) has sudden changes of mood, (i) is overly critical, (j) tends to expect the worst all the time, and (k) becomes angry and threatening ( $\alpha = .87$ , M = 17.94, SD = 3.44). Cognitive loss of control comprised: (a) does strange things, (b) gets off the subject when having a conversation, (c) gets mixed up about the day, the year, (d) does not understand what is said, (e) is not interested in news of friends or relatives, (f) fails to recognize familiar people and places, (g) does not respond sensibly when spoken to, (h) endangers her/himself, and (i) wanders outside the house ( $\alpha = .86$ , M = 13.71, SD = 2.96). Because these two scales were correlated with each other (r = .48, p < .001) and showed similar patterns of relationships to other variables, they were combined for the factor analysis below.

(23) The *physical degeneration* scale also used a yes–no response format and comprised the items: (a) lacks mobility, (b) has trouble controlling bladder, and (c) has trouble controlling bowels ( $\alpha = .71$ , M = 4.73, SD = 1.13).

(24) Conflict between caregiver and care receiver was measured through asking carers about the frequency of differences of opinion between them. The sample divided evenly across the three response categories of "hardly ever," "sometimes," and "a lot of the time."

(25) A history of conflict between caregiver and care receiver ( $\alpha' = .84$ , M = 24.09, SD = 6.01) captured the degree to which the care receiver dominated the caregiver in the past (prior to the need for care). The measure, a modified version of Parker's (1978) autonomy scale, comprised eight items representing the amount of independence the carer had been given and how much confidence the care receiver had shown in the carer's judgment: (a) let me do things I liked doing, (b) liked me to make my own decisions, (c) gave me as much freedom as I wanted, (d) let me decide things for myself, (e) felt I could not look after myself unless she/he was around (reverse scored), (f) was overprotective of me (reverse scored), (g) tried to make me dependent on her/him (reverse scored), (h) tried to control everything I did (reverse scored). Responses were made on a 4-point rating scale from "not at all like him/her" to "very like him/her."

(26) The 5-item *time constraints* scale ( $\alpha$  = .79, M = 9.10, SD = 1.41) represented enmeshment and asked carers whether or not they had (a) missed out on holidays and outings, (b) had to plan holidays and outings well in advance, (c) had less time to spend with the family, (d) had little time to themselves, and (e) had given up interests, leisure activities, and hobbies.

(27) The *unpreparedness* index had a mean of 3.49 and a standard deviation of 1.36 and comprised two items: how much the carer (a) knew about the care receiver's problems when they began to care (reverse scored) and (b) had to learn about providing care. Responses were made on a 3-point rating scale from "none" to "quite a lot." The items correlated .20.

# **Threat to Basic Needs Scale**

The Threat to Basic Needs Scale ( $\alpha = .84$ , M =28.38, SD = 4.11) measured whether or not the following threats were perceived by the caregiver: (a) being unable to get enough sleep, (b) being unable to rest when ill yourself, (c) having health problems as a result of caregiving, (d) not having a regular daily routine, (e) having to constantly be on call to assist the person you are caring for, (f) having to change your plans at the last minute, (g) being unable to get your household chores done, (h) losing patience with the person you are caring for, (i) feeling divided loyalties between the person you are caring for and other members of your family, (j) feeling guilty about what you have or have not done for the person you are caring for, (k) feelings of resentment at what has happened to the person you are caring for, (I) feelings of resentment that this has happened to you, (m) feeling that you don't understand the nature of the other person's illness, (n) feeling that you cannot get on top of all the things you have to do, (o) feeling that you are not doing anything as well as you should, (p) not being able to do your job as well as you'd like, (g) feeling you have lost control over your life.