The results of experimental studies of the effects of respite care have been difficult to interpret because researchers have lacked experimental control over who actually received the treatment. Data from one such study are reanalyzed, focusing on the linear relationship between amount of respite use and probability of nursing home placement at the end of the treatment period. The results indicate a significant negative relationship between amount of respite use and nursing home placement.
Key Words: Respite, Caregiving, Nursing home placement

The Impact of Respite Use on Nursing Home Placement[1]

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Informal caregiving among family members is the primary instrument of long-term care in America (Horowitz, 1985; McConnell & Riggs, 1994). Approximately 80% of disabled elders reside in the community (U.S. Senate, Special Committee on Aging, 1987), and three-fourths of these individuals receive their assistance entirely from informal sources (Kane & Kane, 1987; Scanlon, 1980). Not surprisingly, there has been great interest among policy makers in supporting the efforts of family caregivers.

Over the past decade, a number of large intervention studies have been undertaken to study the effects of various strategies designed to assist the informal efforts of families. These interventions have generally been of two types: (1) programs designed to improve the caregiver's abilities for managing the patient or the caregiving situation, such as psychoeducational programs and support groups; and (2) the provision of resources designed to relieve the caregiver of some portion of the normal care activities — that is, some form of respite (Zarit, 1990).

For the most part, evaluations of demonstration programs designed to enhance caregivers' abilities have failed to document the utility of such programs. Zarit (1990) reviewed the findings from four major studies that employed psychoeducational interventions (Gallagher, Lovett, & Zeiss, 1989; Haley, Brown, & Levine, 1987; Toseland, Rossiter, & Labrecque, 1989; Zarit, Anthony, & Boutselis, 1987) and concluded that, regardless of whether the outcomes were statistically significant, the impacts were small. More recently, however, Zarit and his colleagues (Whitlatch, Zarit, & von Eye, 1991) reanalyzed data from one of these intervention studies (Zarit, An-

thony, & Boutselis, 1987) using an alternative analytic technique and they found evidence for a treatment effect. The authors conclude that, "in light of these findings, previous reports on caregiver interventions must be re-evaluated" (1991, p. 13).

Although relatively few evaluations of respite interventions have been performed, the initial results have paralleled those observed for the psychoeducational programs in their initial pessimism (e.g., see Callahan, 1989). As with the evaluations of the psychoeducational programs, however, there is substantial justification for reconsidering these initial findings regarding the effects of respite care. When the respite evaluations were first proposed, an experimental design seemed to represent the strongest possible test of the intervention. Emerging understandings of how services are used by caregivers, however, suggest that experimental designs in such circumstances may be inappropriate. For example, in one large demonstration study involving 541 caregiving dyads in the Seattle area (Montgomery & Borgatta, 1989), one-third of the participants randomly assigned to eligibility for free respite services chose not to use any of the services offered under the auspices of the program. In another large demonstration involving 642 caregivers in the Philadelphia area (Lawton, Brody, & Saperstein, 1989), only about half of the eligible participants randomly assigned to eligibility used any respite services. This general pattern has been noted by others as well (e.g., George, 1988).

In a similar fashion, caregivers randomly assigned to the control group of an experimental respite study, while not eligible for respite under the treatment program, have the option to use respite or respite-like services from other sources, if they so desire. In the study by Lawton and his colleagues, for example, the average use of in-home respite by caregivers in the control group in the year prior to the study was 337 hours. Twelve months later, at the end of the experimental treatment, the average use of in-

home respite by these same caregivers in the control group had increased to 412 hours (1991, p. 116). Clearly, the label "control group" in such circumstances is a misnomer. The end result has been that participants in the treatment and control groups were likely to differ very little in the amount of respite they actually used.

When experimental control is not possible, the alternative methodology in evaluation research generally involves analyzing a model containing statistical covariates to control for spurious factors that might bias estimates of treatment effects. In the study that follows, data from the Seattle respite study (Montgomery & Borgatta, 1989) are reanalyzed using a covariance model to address the question of whether respite use has an impact on subsequent nursing home placement. As Lawton and his colleagues have noted, the purpose of respite, aside from its humanitarian element, "is usually linked to the program goal of delaying nursing home admissions, thereby reducing the economic costs of care" (1989, p. 8). In the original analysis, no main effect for respite use on nursing home placement was found using the traditional experimental model. In the reanalysis of these data using a regression model with statistical covariates, the hypothesis that increased respite use is associated with a lower probability of nursing home placement is once again tested.

Specifying the Model

The logic underlying model specification in the present study was to select those covariates that would serve as the most plausible explanations for nursing home placement and which, if uncontrolled, could result in the misattribution of cause of nursing home placement to respite. Since the behavioral model of service use (Andersen, 1968; Andersen & Newman, 1973) is the dominant theoretical model of health service use among the elderly (Wolinsky, 1990), it was used as a general guide to covariate selection.

The behavioral model of service use identifies need, enabling, and predisposing factors as the primary determinants of service use. Need is assessed by the extent of illness perceived by the family. Predisposing factors are seen as creating a propensity toward use by family members. These variables are included to reflect the fact that some families have a greater premorbid propensity toward service use than others. Enabling factors reflect the fact that even though families may be predisposed to use services, certain conditions must be met to enable families to attain them. In order to ensure representation of a broad range of control variables, one or more covariates were selected from each of these three domains. An emphasis was placed on selecting factors shown to be related to nursing home admission in past research. In addition to the variables representing the three domains of the behavioral model, an attempt was made to control for the use of other support services that could have been used as forms of respite care. In all, 11 variables were added to the analysis as statistical controls.

Need Factors. — Variables representing need on the part of the elder that have frequently been found to be related to nursing home placement include poor functional status due to physical dependence, problems with activities of daily living, and cognitive impairment (e.g., Branch & Jette, 1982; Greenberg & Ginn, 1979; Greene, & Ondrich, 1990; Hanley et al., 1990; McFall & Miller, 1992; Shapiro & Tate, 1988). In the present analysis, the functional status of the elder was represented by two factors: level of dependence, and the presence of Alzheimer's disease or related cognitive impairment.

Need on the part of the caregiver has also been shown to be related to nursing home placement (Bass & Noelker, 1987). For example, several studies have shown that high levels of stress or subjective burden increase either the intention to place or the actual risk of institutionalization (Colerick & George, 1986; McFall & Miller, 1992; Morycz, 1985; Pruchno, Michaels, & Potashnik, 1990). Need on the part of the caregiver was represented by three variables: self-rated health of the caregiver, subjective burden, and the total amount of time that the caregiver spent in the past month providing assistance to the elder.

Enabling Factors. — Findings from previous studies indicate that enabling characteristics are not particularly powerful predictors of service use within the behavioral model, with the relationship complicated by the pervasiveness of entitlement programs (see Wolinsky, 1990, for a review). Several studies have reported a positive relationship between income and placement (Chiswick, 1976; Greenberg & Ginn, 1979; Newman et al., 1990). Other studies have found a negative relationship between income and nursing home placement (Liu & Manton, 1984; Vincente, Wiley, & Carrington, 1979). Still other studies have found no relationship (Branch & Jette, 1982; Chiswick, 1979; Coughlin, McBride, & Liu, 1989). Although the exact relationship between income and placement is, as yet, poorly understood, there is a compelling reason to include income as a covariate in the present model of nursing home use. Since there was substantial collinearity between the income of the caregiver and the elder (i.e., for spouses they are generally the same), only the income of the elder was included in the model.

Predisposing Factors. — Four predisposing characteristics were also entered into the model as covariates: (1) the relationship of the caregiver to the elder, (2) the age of the elder, (3) the caregiver's expressed sense of duty to protect the elder, and (4) the caregiver's expressed level of affection for the elder.

Spouses who are caregivers provide more intense care over a longer period of time than children (Colerick & George, 1986; Horowitz, 1985). Although living alone has also been shown to be a risk factor for institutionalization (Branch & Jette, 1982; McCoy & Edwards, 1981), living arrangement was highly collinear with the relationship variable since all of the spouses lived with the dependent elder. Therefore, only the relationship variable was included in the

model. Age of the elder has also been shown to be an important risk factor in placement (Greene & Ondrich, 1990; Shapiro & Tate, 1988).

In contrast, very little is known about how the quality of the caregiving relationship affects the likelihood of institutionalization. Pruchno and her colleagues (Pruchno, Michaels, & Potashnik, 1990) reported a negative correlation between the quality of the relationship and a desire to institutionalize the elder; it was not significant in their multivariate analysis, however. Nonetheless, since it is reasonable that high regard for an elder can be a cause of both support service use and a lower probability of placement, some control for the quality of the caregiving relationship seemed prudent. Two variables were used: the caregiver's expressed sense of duty to protect the elder and the caregiver's rated level of affection for the elder.

Use of Other Support Services. — In addition to the need, enabling, and predisposing factors, whether or not the elder was using other supportive services at the onset of the study was also controlled. Three services were examined: chore services, home health services, and adult day care. Any of these services could conceivably serve as a form of respite. Moreover, all of these services could potentially be continued during the course of the study and their effects misattributed to the experimental respite program.

Methods

Study Design and Sample

The original evaluation employed an experimental design to assess the effects of five types of family support programs: (1) education seminars, (2) support groups, (3) family coordination, (4) respite services, and (5) a combination of all the services (see Montgomery & Borgatta, 1989). Participants were 541 dyads composed of an elder who had at least two limitations in Activities of Daily Living (ADLs) and a family member serving as caregiver. The families were self-referred to the project, having obtained knowledge of the services from social or health service agencies or through mass media advertisements and stories. To be eligible for the study, the impaired person had to be noninstitutionalized and reside within King County, Washington, and the family caregiver had to live within a 1-hour driving distance of the older person. Each dyad was randomly assigned to one of the five treatment groups or to a control group (see Montgomery & Borgatta, 1989, for a description of sample characteristics).

Two waves of data collected 12 months apart were utilized in the present study. At Time 1, all elders resided in the community. At Time 2, 12 months later, 126 elders were still living and available for analysis. Of these, 30 elders (24%) had been institutionalized. The primary outcome variable was whether or not the elder was institutionalized by the end of the one-year treatment period. A dichotomous outcome variable was created to contrast the institutionalized sample with those still in the community at Time 2. As a secondary outcome, the length of time (in months) that individuals were institutionalized during the one-year treatment period was evaluated as well.

Analyses in the present study were restricted to that portion of the total sample for whom respite services were made available. Of the 541 caregiving dyads, 181 were randomly assigned to one of the two treatment conditions offering eligibility for free respite. These 181 caregiving dyads served as the initial sample for the present analyses. Participants in the control group were dropped for two reasons. First, no reliable information was available on the use of respite from outside sources by these dyads during the course of the treatment period. The findings reported by Lawton et al. (1991) clearly indicate that to assume that these families were not using respite from other (i.e., nonexperimental) sources is probably unreasonable. Second, since use of the experimental respite by control group members was a constant (i.e., zero), the partial correlation between the treatment and outcome must also be zero. Including these participants would have attenuated any treatment effects, despite the additional degrees of freedom. Although the findings are reported without control group participants included, their inclusion did not substantively alter the findings.

Respite Use

The primary independent variable was the amount of respite used. Respite was available for a one-year period between Times 1 and 2. Family members were able to choose any of four types of respite: (1) a short nursing home stay, (2) adult day care, (3) home health aide, or (4) visiting nurse. Each family was eligible for up to $882 of free respite services which were offered through a Medicare waiver. Fees were paid on a fee-for-service basis and would afford up to 14 days of respite care in an institutional setting. Caregivers could use the available services in any combination.

Two estimates of respite use were available: (1) the number of visits or instances of respite use, and (2) the total dollar cost of respite care used by the family during the treatment period. The correlation between these two measures was .68. Given the substantial differences between the individual types of respite services in terms of form and duration (e.g., adult day care vs short nursing home stays), the "number of instances of respite use" does not constitute a meaningful dimension of use. Therefore, the total dollar cost of the services used by eligible families during the one-year treatment period was used to represent the treatment variable. These differing conceptualizations of the respite variable, however, did not make a substantive difference in the findings.

Variable Measurement

Composite variables were formed whenever possible to maintain an acceptable subject-to-variable ra-

tio and to avoid empirical redundancy. Where variances differed substantially, individual variables were first standardized to unit variance prior to the creation of the composite index. The constituent variables and their coding schemes are displayed in Table 1.

Table 1. Constituent Variables: Coding Scheme and Descriptive Statistics

Variables	Coding Scheme	Mean / SD
Elder's need		
1a. ADL – count of whether or not help was needed for each of 8 ADLs: dressing, toilet, moving from bed, eating, shopping, using transportation, cooking, doing housework.	Range = 0 to 8	5.2 / 1.7
1b. Overall, how much restriction, disability, or impairment of health do you feel you have, compared to others of your age and sex?	1 – considerably less 2 – less 3 – about the same 4 – somewhat more 5 – considerably more	3.4 / 1.3
1c. How much help do you need with necessary tasks that people usually do for themselves?	0 – don't need any help 1 – a little help 2 – more than just a little help 3 – a great deal of help	1.8 / 1.0
1d. How dependent do you feel on others for help with daily tasks?	0 – not dependent at all 1 – not very dependent 2 – somewhat dependent 3 – very dependent	2.1 / 1.1
2. Alzheimer's disease	1 = yes 0 = no	
Caregiver's need		
3. Considering your age and sex, how would you rate your own health?	1 – not good at all 2 – fair 3 – good 4 – very good 5 – perfect	3.3 / 1.0
4. Total amount of time (hrs/wk) spent by caregiving assisting with:	Range:	
a. transportation	0 – 38	4.7 / 5.0
b. meals	0 – 47	13.3 / 10.7
c. personal care	0 – 61	6.8 / 9.0
d. financial matters	0 – 30	3.9 / 4.4
5. How have these aspects changed from what you experienced 12 months ago:	1 – a lot less	
a. stress in your relationship	2 – a little less	3.1 / 1.1
b. attempts by your relative to manipulate you	3 – the same	2.6 / 1.0
c. nervousness and depression	4 – a little more	3.0 / 1.0
d. excessive demands by your relative	5 – a lot more	2.6 / .9
Enabling factors		
6. Elder's income	1 = less than $5,000 to 10 = more than $45,000	2.8 / 1.4
Predisposing factors		
7. Relationship of caregiver to elder	1 = spouse 0 = other	.36 / .48
8. Age of elder	Range: 59 – 100	80.0 / 9.1
9. How true is each of the following for you and your relative:	0 – not true at all	
a. I personally must protect his/her interests	1 – probably not true	2.7 / .6
b. I am responsible for him/her	2 – probably true 3 – definitely true	2.6 / .6
10. How true is each of the following for you and your relative:	0 – not true at all	
a. I am extremely close to him/her	1 – probably not true	2.2 / 1.0
b. I love him/her very much	2 – probably true	2.6 / .7
c. I have great affection for him/her	3 – definitely true	2.5 / .8
d. I genuinely like him/her		2.5 / .7
e. I am completely devoted to him/her		2.0 / 1.0
f. I have a strong attachment to him/her		2.4 / .8
Other support service use		
11. How many days have you used the following in the past month:	Range:	
a. Home health care	00 – 31	2.0 / 4.8
b. Day chore services	00 – 30	2.2 / 5.9
c. Adult day care	00 – 20	.5 / 2.6
Respite use		
12. Respite use over the study period	Range:	
a. Number of respite visits	00 – 52	15.6 / 16.5
b. Dollar amount of respite visits	$.00 – $1625	492 / 398

The elder's level of dependence was a composite variable formed from four indicators: (1) Activities of Daily Living estimated by the caregiver; and the elder's self-rated level of: (2) physical impairment, (3) amount of assistance required from others, and (4) level of dependence upon others. For cognitively impaired elders, ratings were provided by the caregiver. The internal reliability of the composite index assessing elder's dependence was .81. The presence of Alzheimer's disease was assessed using an indicator variable with which individuals for whom Alzheimer's disease was suspected or had been diagnosed were contrasted with all others.

Need on the part of the caregiver was assessed three ways: self-rated overall health, subjective burden, and the total amount of time providing assistance to the elder in the previous month. Self-rated health of the caregiver was assessed using a single, global indicator. Subjective burden was estimated using four items. These were combined into a composite index with a reliability of .73. The total amount of time that the caregiver spent in the past month providing assistance was assessed in four areas (providing transportation, assistance with meals, personal care, and financial matters). These estimates were then combined into a single indicator to reflect the temporal demands of caregiving. These four indicators of amount of caregiving assistance are viewed as "cause" indicators rather than "effects" indicators (Bollen & Lennox, 1991) in that they are presumed to cause the latent variable rather than reflect it. Since the assumption that correlations among the four sets of individual items are due to a common cause is not appropriate, no estimate of internal consistency was performed for this variable.

The quality of the caregiving relationship was assessed using two variables: (1) the caregiver's expressed sense of duty to protect the elder, and (2) the caregiver's reported level of affection for the elder. The former measure is composed of two items with an estimated reliability of .81; the latter measure has six items and a reliability of .89.

A composite variable was constructed to assess the extent of use of other support services. The composite was formed from two measures. First, the number of different services (i.e., chore services, home health services, or adult day care) used in the previous month was totaled; this variable could range from zero to three. Second, the number of days in the previous month that a service was used was totaled across all three services. The reliability of this two-item composite was .83.

The proportion of missing data generally ranged from zero to just a few percent. There were two exceptions: the presence of Alzheimer's disease, and elder's income (12% and 9%, respectively). The primary reason for missing data on the Alzheimer's disease item was a response of "don't know." Many respondents simply did not know what Alzheimer's disease was. Since families with Alzheimer's patients were likely to know about it, a dichotomous variable was created for the Alzheimer's variable in which responses of "certain" or "probable" were coded

"1," and "no" and "don't know" were coded zero. A mean substitution procedure was used for all the remaining variables.

Data Analysis

In the first set of analyses, logistic regression was used to evaluate the effects of the amount of respite use and the other covariates on nursing home placement. Variables were entered in three steps. In step 1, 10 covariates were entered into the model as statistical controls. The variable reflecting use of other support services was entered as a second step to examine its impact relative to respite use. The amount of "experimental" respite use was entered third. Log likelihood ratio tests were conducted to evaluate the improvement in model fit at each step.

In the second set of analyses, OLS regression was used to estimate the effects of the amount of respite use and the other covariates on the length of time spent in the nursing home during the one-year study period. Strictly speaking, observations on the lifetime duration of stay in the community by participants in the present study are censored on the right. That is, the distribution of these scores after the 12-month study period is unobserved and inferences about this future behavior using OLS regression would likely be biased. It is important to bear in mind, however, that the experimental respite services were only available for 12 months. Arguably, the factors affecting nursing home use, once the experimental respite services were no longer available, were likely to change. Therefore, inferences from the OLS regression analysis must be limited to the range of the data observed (i.e., the 12-month study period). Again, the variables were entered in three steps with R^2 increment tests conducted at each step to evaluate the improvement in model fit. Unstandardized, rather than standardized coefficients, were interpreted because the direct impact of dollars spent on respite on the length of time elders remained in the community was of major substantive interest.

Results

The results of the logistic regression of nursing home status at Time 2 on the sets of covariates measured at Time 1 are shown in Table 2. The elder's age and the presence of Alzheimer's disease were both significant predictors of nursing home placement at Step 1. The model chi-square, showing the improvement in model fit by adding the set of predictors to the model containing only the intercept term, was 14.54 for 10 degrees of freedom and nonsignificant ($p = .09$). The addition of the "use of other support services" at Step 2 also did not improve the model significantly ($p = .12$). Adding the "amount of respite use" to the model at Step 3, however, did improve model fit significantly ($X^2(1) = 4.59$; $p < .02$).

To evaluate the possibility that the relationship between the amount of respite use and the probability of nursing home placement at Time 2 had a nonlinear component, a quadratic term for "amount of

respite use" was added to the model in place of the linear term. The quadratic variable did not add significantly to the model. Standardized residuals from the regression of nursing home placement on the covariates in Table 2 were also examined to determine whether extreme scorers (i.e., outliers) might have contributed to the effect of respite use on nursing home placement. In the bivariate relationship between respite use and placement, there were no standardized residuals with absolute values exceeding 2.5. In the multivariate analysis, six cases were found. Dropping these six cases had no effect on the relationship between respite use and nursing home placement.

The results of the multiple regression of the number of days that elders had been in institutions at Time 2 on the sets of covariates measured at Time 1 are shown in Table 3. Among the statistical control variables, only the presence of Alzheimer's disease was significantly related to the length of time that elders had been institutionalized during the one-year study period. The amount of respite used, however, once again made a significant contribution to the overall model. The unstandardized regression coefficient representing respite use (Table 3) indicates that an increase of $100 in respite used produced approximately a one-week delay in institutionalization in the present sample. Since both the respite use variable and the outcome variable (number of months in a nursing home) were somewhat skewed due to the large number of zeros, they were transformed by adding a constant and taking the natural log and the analysis was repeated. The results remained substantively unchanged with the effect of respite use on nursing home days being slightly enhanced.

Table 2. Impact of Respite Use on Nursing Home Placement (N = 126)

Variable	Step 1		Step 2		Step 3	
Function disability of elder	.12[a]	(.09)[b]	.06	(.10)	.09	(.10)
Caregiver's health	−.13	(.24)	−.22	(.24)	−.32	(.25)
Amount of care provided	−.02	(.02)	−.02	(.02)	−.02	(.02)
Subjective burden	−.02	(.08)	−.02	(.08)	−.01	(.08)
Relationship to elder	1.21	(.71)	1.30	(.71)	1.21	(.71)
Expressed affection for elder	−.06	(.06)	−.07	(.06)	−.06	(.06)
Duty to protect elder	−.02	(.24)	−.03	(.24)	.04	(.25)
Elder's age	.06	(.03)*	.06	(.03)*	.07	(.03)*
Alzheimer's disease	1.21	(.48)**	1.29	(.49)**	1.27	(.50)**
Elder's income	.01	(.19)	.01	(.19)	.02	(.19)
Use of other services			.18	(.11)	.20	(.12)
Respite use (in hundreds of dollars)					−.13	(.06)*
Constant	−4.81	(2.73)	−4.69	(2.79)	−5.17	(2.84)
Model Chi-Square	χ^2 (df = 10) 14.54 p = .09		χ^2 (df = 1) 2.50 p = .12		χ^2 (df = 1) 4.59* p ≤ .02	

[a]Unstandardized regression coefficient.
[b]Standard error.
*p < .05; **p < .01.

Table 3. Impact of Respite Use on Number of Months in a Nursing Home

Variable	Step 1		Step 2		Step 3	
Functional disability of elder	.24[a]	(.12)[b]	.18	(.13)	.25	(.12)*
Caregiver's health	−.16	(.32)	−.25	(.33)	−.38	(.32)
Amount of care provided	−.03	(.02)	−.03	(.02)	−.03	(.02)
Subjective burden	−.06	(.11)	−.07	(.11)	−.05	(.10)
Relationship to elder	1.53	(.89)	1.55	(.89)	1.35	(.86)
Expressed affection for elder	−.04	(.08)	−.04	(.08)	−.01	(.08)
Duty to protect elder	−.03	(.32)	−.04	(.32)	.04	(.31)
Elder's age	.05	(.04)	.05	(.04)	.07	(.04)
Alzheimer's disease	1.66	(.64)*	1.67	(.64)*	1.52	(.62)*
Elder's income	−.29	(.25)	−.29	(.24)	−.27	(.24)
Use of other services			.20	(.16)	.23	(.15)
Respite use (in hundreds of dollars)					−.24	(.07)**
Constant	−.98	(3.61)	−.64	(3.61)	−.94	(3.48)
R² Change	.12 (df = 10)		.01 (df = 1)		.07** (df = 1)	

[a]Unstandardized regression coefficient.
[b]Standard error.
*p < .05; **p < .01.

Discussion

The results of this reanalysis would appear to provide evidence to support the utility of respite as a potential intervention to delay or decrease the likelihood of nursing home placement. Specifically, as respite use increased, the probability of nursing home placement decreased significantly. The impact of respite use persisted even controlling for the effects of 11 other variables, including elder's age and level of disability, the presence of Alzheimer's disease, and the use of other support services. Several issues should be kept in mind when interpreting these results.

First, rethinking earlier evaluation studies is a normal part of the evaluative process (for illustrations, see Haley, 1991). The effective implementation of an evaluation requires an understanding of the fundamental processes that underlie the phenomenon under investigation. Such understandings rarely exist in the initial stages of an evaluation. As better understandings of these issues emerge, the findings from previous evaluations logically must be reconsidered. Although this study represents a step in that direction, there are a number of conceptual and methodological issues that remain to be resolved surrounding the use and expected impact of respite care for caregivers, including characteristics of caregivers, timing and magnitude of services, and measurement of effects (Kosloski & Montgomery, 1993; Zarit, 1990). Thus, even though the process of reevaluation is probably not complete, the process should be interpreted positively rather than negatively.

Second, the plausibility of the present analysis is predicated on the view that experimental models for assessing treatment effects in respite intervention studies are generally inappropriate because they imply experimental control over "who" gets the experimental treatment. Such an assumption would appear to be untenable in most cases. While the present reanalysis of the "experimental" data does not require this assumption, it makes a different assumption: that all important variables that have causal relationships to both respite use and nursing home placement are controlled. Although a concerted attempt was made to identify and control these extraneous influences, complete control can never be assured.

Third, exactly why respite is attractive to some caregivers and not others is poorly understood at present. Evaluating the efficacy of a treatment program that is never fully implemented contains a built-in bias against finding effects. Clearly, more needs to be known about the conditions that make respite care an attractive form of assistance to caregivers. Non-utilization also raises conceptual issues about how best to model the relationship between respite use and nursing home outcomes. If there are unmodeled factors that influence both respite use and risk for nursing home admission, then respite use is itself an endogenous variable and failure to model it as such will produce biased estimates of relationships.

Finally, and perhaps most importantly, researchers and policy makers have yet to identify exactly what outcomes are most appropriate for respite evaluations. Delaying nursing home placement represents but a single goal for respite programs and, even then, there is compelling evidence that such programs may not be cost effective (Weissert et al., 1990). There is also evidence that respite can achieve other outcomes such as enhancing caregiver well-being (e.g., Deimling, 1991) or reducing subjective burden (e.g., Kosloski & Montgomery, 1993). As we move toward resolving these and related issues, we will progressively gain a more complete understanding of the benefits of respite use to informal caregivers as well as its limitations.

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