The psychological stress produced by life events is actively researched because of the effects this stress has on physical and psychological functioning. Bereavement may be the most stressful of these events and therefore it is the subject of this study. A sample of adults from three different geographical areas of Kentucky was assembled and 71.5 percent of the adults months for a total of five interviews. A life event scale testing 54 life events common in older adults was administered. Researchers determined if subjects had attachment bereavement (loss by death of spouse, parent, or child), nonattachment bereavement (loss by death of sibling, grandchild, or friend), and other losses (loss of a house or job). Depression and pre-event variables were measured. The results suggested that bereavement and other losses do independently affect depression when measured within 6 months of the loss. Pre-event differences need to be considered if an accurate estimate of effects of events on depression is to be made. Physical health was the strongest predictor of depression. This approach to the study of bereavement makes it possible to measure the effects of or number of variables prior to the bereavement event. (ABL)
The study of life events is a highly active research area across a variety of fields of psychology. This keen interest is based on the belief that life events produce psychological stress with important and wide-spread ramifications for health and psychological functioning. Among life events, bereavement would appear to be the most intensely stressful and, therefore, the most likely to impact upon psychological well-being.

Research on the effects of bereavement and mental health has generally supported this assumption. Clayton (1979) and Gallagher, Thompson, and Peterson (1981-82) have recently reviewed this literature. While noting that not all studies have found a large increase in depression following bereavement, these reviewers conclude that the preponderance of the evidence suggests that bereavement does increase psychological stress and symptomatology initially, but that within the first year men and women handle the event with minimum morbidity and mortality and most recover psychologically.

As might be expected, there are large methodological differences among the studies in this literature: Some have employed retrospective, while others prospective designs; some contained control or comparison groups, while others did not; and, when control groups were employed, the matching was usually on gross demographic variables like age and sex. Virtually none of the studies has examined or controlled for the
effects of other important pre-event variables that might be related to bereavement and to subsequent mental health. For example, there may be prolonged illness prior to death and that the onset of depression may have occurred long before the actual bereavement event. Differences in depression after bereavement may be a reflection of the prior state of depression rather than a consequence of the bereavement event per se.

An ongoing longitudinal study of the effects of life events on the mental health of older persons enabled us to examine the relationship between bereavement and other loss events and depression. During the course of the study, our respondents experienced various sorts of bereavements and other loss events. Compared to previous work, then, the data reported here are from a much larger community sample of persons who were selected prior to the bereavement events and not because of those events. Since we had repeated measures, it was possible to select from our panel individuals who had experienced various bereavements and on whom we had measures of a number of important variables prior to these events. Thus, it was possible to assess the impact of these variables on subsequent depression and to assess the effects of bereavement and other loss events on subsequent depression while statistically controlling for these other variables.

Method

The sampling technique and measures collected have been described in detail elsewhere (Bonham & Savage, 1983; Himmelfarb, 1984). Briefly, a three-stage area probability sampling design was used to obtain a sample of adults 55 and older that reflect the three different geographic regions of Kentucky and several levels of urbanicity within each region. Over 230 housing segments across the state were randomly se-
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lected for complete sampling. Trained interviewers were instructed to contact all dwellings within the selected segments and to interview all persons 55 and older. Of the persons contacted and eligible for interview, 71.5% completed the entire one-hour interview on the initial wave. Attempts were made to reinterview each respondent every six months for a total of five interviews.

Measures

Life Events and Bereavement Categories. The life event scale was developed specifically for the study after extensive pretesting on older adults (Murrell, Norris, & Hutchins, 1984). The scale consists of 54 events many of which are likely to occur to older persons with adult children. Each respondent was asked whether the event had occurred within the last six months and, if so, to rate the event on a number of dimensions.

The data files of the larger project sample were searched to determine whether a subject had experienced one or more events in three content categories of loss: Attachment Bereavement—loss through death of a spouse, parent or child; Nonattachment Bereavement—loss through death of a sibling, grandchild, or friend; Other Losses—loss of a house, job or business, a pet, a decrease in money to live on, becoming separated or divorced, or having a friend move away. The assignment of subjects with events of more than one type was determined in the above priority order. Subjects were eligible only if they had a valid interview prior to the bereavement of loss event. Variables on the wave immediately prior to the interval containing events in one of these categories became the pre-event variables. The subject's depression score on the wave immediately after the interval was the dependent variable.
If the subject had experienced an event, the rated value of that event on a four-point scale on the amount of change it had produced was used. If more than one event in a category had occurred, the change ratings were summed across all events in that category and the sum was used as the category score in the analysis. Some subjects had events in more than one category and, therefore, had scores on several of the category variables.

In addition, a no loss group was included that had not experienced any events in any of the three categories. For these subjects, one interval was randomly designated as the event interval and measures on the wave immediately prior to that interval became the pre-event variables. These subjects, of course, had zero scores on each of the three loss category variables.

**Depression.** The subject's score on the Center for Epidemiological Studies Depression (CES-D) scale (Radloff, 1977) was the dependent variable in the analysis. The CES-D is a 20-item scale of current depressive symptoms and mood to which the respondents are asked to indicate on a 4-pt. scale from "not at all" to "almost all the time" how frequently they felt that way during the past week. The CES-D had an alpha coefficient of .89 and a six month test-retest correlation of .64. It has been shown to significantly discriminate between a sample of psychiatrically hospitalized, older adult inpatients and a community sample of older adults (Himmelfarb & Murrell, 1983).

**Pre-Event Variables.** The pretest variables included age, sex, marital status, education, a measure of social class, dwelling ownership, an interviewer rating of the quality of the dwelling, geographic region of Kentucky, a measure of available social services in the Coun-
ty, a social support scale, a self-report measure of physical health, the number of medical conditions the person had among a list of 10 common conditions, and a health locus of control scale. Also included as a pre-event measure was the subject's CES-D score on the prior wave.

Results and Discussion

Depression scores on the wave following the loss interval were regressed on the three loss category scores and the pre-event variables. Separate analyses were run for males and females. The analyses were run hierarchically so that we could study the relationships between events in these categories and depression as various kinds of prior-event variables were controlled.

Figure 1 gives the beta weights separately for males and females, for attachment, nonattachment bereavements and for other losses. The four bars in each cluster respectively give the beta weights when only the event category scores are entered, when the events and demographic variables are entered, when events, demographic, and other resource variables are entered, and when events, demographic, resource variables and previous depression scores are entered into the regression equations. All beta weights were significant at the .01 level or lower.

The obtained results show that bereavements and other losses do independently affect depression as measured within 6 months of the bereavement or loss event. Furthermore, the steady declines in the beta weights as more pre-event variables are entered into the equation suggest that there are pre-event differences that are correlated both with these events and subsequent depression that need to be considered if an accurate estimate of the effects of these events on subsequent depression is to be obtained. Comparisons between a group of bereaved and a group of nonbereaved, even though matched on a few demographic vari-
able, will not necessarily yield accurate estimates of the effects of these losses on depression.

Of course, the validity of the present findings and conclusions rests on the assumption that we have captured most of the important variables in our regression equations. While one can never be certain of that, it may be noted that when all of the variables have been entered into the equation the multiple $R$ is .74 for males and .722 for females. These values suggest that we have at least captured some of the major variables.

Another advantage of the present approach to the study of bereavement is that we can look at some of the pre-event factors that contribute to subsequent depression and, with the cautions noted above, make some suggestions about the possible relative contributions of various variables. In addition to the event variables, previous physical health and depression status are the two most significant predictors of subsequent depression for both males and females. The beta weights for previous depression were above .40 for both males and females and those for health either equalled or exceeded those for attachment bereavements. Thus, poor physical health contributes as much or more to depression as do attachment bereavements.

Indeed, in our longitudinal study of older persons, the result that impresses us the most is that, whether we analyze the data cross-sectionally or longitudinally, one of the strongest predictors of depression, if not the strongest, is physical health. Moreover, those persons who suffer the most from depressive symptoms are more likely than others to have visited a physician in the past six months. These findings suggest that interventions be directed toward the prevention and treat-
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ment of physical illness and that the best source of early detection of both physical and mental illness is the general medical practitioner.
References


**MALES (N = 503)**

![Graph showing beta weights for males](image)

**FEMALES (N = 908)**

![Graph showing beta weights for females](image)