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Resilience to Loss in Bereaved Spouses, Bereaved Parents, and Bereaved Gay Men

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Recent research has indicated that many people faced with highly aversive events suffer only minor, transient disruptions in functioning and retain a capacity for positive affect and experiences. This article reports 2 studies that replicate and extend these findings among bereaved parents, spouses, and caregivers of a chronically ill life partner using a range of self-report and objective measures of adjustment. Resilience was evidenced in half of each bereaved sample when compared with matched, nonbereaved counterparts and 36% of the caregiver sample in a more conservative, repeated-measures ipsative comparison. Resilient individuals were not distinguished by the quality of their relationship with spouse/partner or caregiver burden but were rated more positively and as better adjusted by close friends.

Keywords: loss, bereavement, resilience, depression

Social and personality psychologists have become increasingly interested in how people adapt to extreme life circumstances. Although preliminary work in this area has indicated that people tend to return to baseline levels of emotional well-being relatively soon after even the most extreme events (e.g., Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998), more recent longitudinal studies have underscored substantial individual differences, with some people showing enduring emotional upheaval many years later (Lucas, Clark, Georgellis, & Diener, 2003). One specific type of negative life event, the death of a spouse or life partner, is consistently listed among the most highly stressful experiences (e.g., Holmes & Rahe, 1967). The available research indicates that as with extreme life events in general, individuals who experience the death of a spouse or life partner vary greatly in the duration and severity of their grief reactions. Some bereaved individuals, usually 10%–20%, suffer chronic distress and depression for years. Others experience acute distress and depression from which they recover only gradually over a period of several years or longer. However, many, and sometimes the majority, of bereaved individuals exhibit only short-lived grief reactions and a relatively rapid return to baseline functioning (Bonanno, 2004; Bonanno & Kaltman, 2001).

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Despite the parallels between the effects of bereavement and other types of aversive life events, bereavement theorists have tended to assume that the normative responses to loss involve either chronic suffering or gradual recovery lasting at least several years; the relative absence of distress during bereavement is thought to be both rare and psychopathological (Bowlby, 1980; Deutsch, 1937; Jacobs, 1993; Lindemann, 1944; Middleton, Moylan, Raphael, Burnett, & Martinek, 1993; Osterweis, Solomon, & Green, 1984; Rando, 1993; Worden, 1991). Theorists have also tended to assume that bereaved individuals who do not exhibit overt signs of grieving will eventually manifest delayed grief reactions (for a review, see Bonanno & Field, 2001).

As we describe in greater detail below, recent research has provided a strong challenge to these views: The relative absence of grief symptoms and the continued ability to function adequately following the death of a close relation do not appear to reflect denial or pathology but rather an inherent and adaptive resilience in the face of loss. The current study sought to replicate and extend this evidence by examining the prevalence and associated characteristics of genuine resilience during bereavement in several distinctive longitudinal samples.

Empirical Evidence for Resilience During Bereavement

Bonanno (2004) defined *resilience* as "the ability of adults *in otherwise normal circumstances* [italics added] who are exposed to an isolated and potentially highly disruptive event such as the death of a close relation or a violent or life-threatening situation to maintain relatively stable, healthy levels of psychological and physical functioning . . . as well as the capacity for generative experiences and positive emotions" (pp. 20–21). Consistent with this definition, recent research has demonstrated that many, and often the majority, of bereaved individuals experience only transient disruptions in functioning and are able to maintain relatively stable low-distress trajectories throughout bereavement (see Bon-

anno, 2004; Bonanno & Kaltman, 1999, 2001; Wortman & Silver, 2001). For example, in a study that examined various levels of depression among conjugally bereaved adults, approximately half of a sample did not show even mild depression following the loss (Zisook, Paulus, Shuchter, & Judd, 1997). There is also growing evidence for the prevalence and salutary nature of positive emotional experiences during bereavement (Bonanno & Kaltman, 1999). Several studies have demonstrated that the majority of bereaved individuals exhibit genuine smiling and laughter while discussing their recent loss (e.g., Bonanno & Keltner, 1997) and that individuals showing these positive expressions tended to have better adjustment over time and better social relations compared with other bereaved individuals (Bonanno & Keltner, 1997; Keltner & Bonanno, 1997). In a study of gay men who had provided care for their partners with AIDS (Stein, Folkman, Trabasso, & Richards, 1997), the bereaved caregivers described more positive than negative appraisals (e.g., positive beliefs about the relationship, self-growth, feelings of personal strength) in their narratives even in the first few weeks following the death of the partner. Furthermore, a higher proportion of positive appraisals predicted higher levels of psychological well-being 12 months after the partner's death. A subsequent report from this study further demonstrated the importance of positive affect in coping with loss (Moskowitz, Folkman, & Acree, 2003).

Despite the large number of bereaved individuals who appear to evidence this type of resilience to loss, adherents of the traditional view might nonetheless argue that such individuals may be cold and emotionally distant (Bowlby, 1980; Rando, 1993) and only superficially attached to the deceased person or that they had a highly conflicted relationship with the deceased that would have obviated the need for grieving (e.g., Parkes & Weiss, 1983; Raphael, 1983). Because the vast majority of bereavement research uses data collected after the death of the spouse, such arguments have proved notoriously difficult to counter.

A recent prospective study (Bonanno et al., 2002) provided a unique opportunity to examine the preloss functioning of individuals who show an absence of adjustment difficulties during bereavement using measurements obtained several years prior to a spouse's death. In this study, over 1,500 married individuals were recruited regardless of their health status and then interviewed repeatedly over several years. During this period, 205 participants lost a spouse and were interviewed both several years prior to bereavement and at least twice following the spouse's death. Almost half of these participants (46%) reported low levels of depression throughout the study, from preloss through 18 months of bereavement, as well as low levels of grief symptoms (e.g., yearning) during bereavement. An examination of the prebereavement functioning of this resilient group revealed no signs of maladjustment on any of the measures assessed in the study, including the quality of the participant's marriage and the interviewer's ratings of their interactions with participants. The resilient group also had relatively high scores on several measures suggestive of protective factors, such as acceptance of death, belief in a just world, and instrumental support. In addition, as in previous studies (see Bonanno & Field, 2001), there was no evidence for delayed grief. Finally, the availability of preloss data revealed another smaller subset of bereaved individuals (11%) rarely discussed in the literature: participants with elevated depression prior to the loss who show dramatic improvement and consistently low levels of depression during bereavement. A follow-up study found no evidence of postloss maladjustment or denial among either the resilient or improved groups (Bonanno, Wortman, & Nesse, 2004).

The Current Investigation

The findings described above hold important implications for the psychology of loss and trauma as well as for broader psychological and societal issues, such as social norms about extreme adversity or the factors that might influence decision making in such contexts (Bonanno, 2004; Frederick & Loewenstein, 1999). However, the study of resilience is still nascent; there is an imperative need to replicate and extend evidence for resilience in a wider range of populations using broader methods and measures. In the current investigation, we report two studies that replicate and extend the previous research in six important ways. First, we examined resilience among bereaved individuals that were relatively younger than those assessed in previous studies. Older bereaved adults consistently show milder and less enduring grief symptoms than younger bereaved adults (Nolen-Hoeksema & Ahrens, 2002). Thus, it is possible that resilience may be less common among younger bereaved individuals. Second, whereas previous studies have examined resilience solely in the context of conjugal loss, the current studies considered whether the prevalence of resilience might vary across three different types of loss events: the deaths of a spouse, a child (Study 1), or a life partner (Study 2). Third, we examined whether the prevalence of resilience would change when bereavement occurred in the context of chronic stress, in this case caregiving for a partner dying of AIDS (Study 2) and, for some participants, their own seropositive HIV (HIV+) status. Previous studies examining the impact of caregiving on bereavement have produced mixed findings; some studies have associated caregiving with improved adjustment during bereavement (e.g., Schulz et al., 2003), whereas other studies have not (e.g., Bonanno et al., 2002; Robinson-Whelen, Tada, MacCallum, McGuire, & Kiecolt-Glaser, 2001). However, no study has yet examined the particular impact of AIDS caregiving on resilience or whether resilience might be less common when prebereavement stressors (e.g., HIV+ status) continue into bereavement.

A fourth way we extended previous research was to define resilience using both normative and repeated-measures ipsative comparisons (Kazdin, 2003). Given that theorists have taken radically divergent views on the relative absence of grief reaction (e.g., rare and pathological vs. healthy and resilient), how resilience is defined becomes a crucial methodological issue. One approach we used in the current studies was a normative comparison in which a bereaved individual's adjustment was compared with the normal symptom variation in a matched group of nonbereaved individuals. Bereavement researchers have rarely used nonbereaved comparison groups. However, because many people experience at least mild levels of psychological symptoms and distress, even in the absence of a clear stressor event, the use of a comparison group makes it possible to distinguish normal symptom levels for a given population from symptom levels that might arise in response to bereavement. The normative comparison approach is especially useful in the context of chronic stress, because it makes it possible to distinguish context-specific symptoms from symptom levels that may be unique to bereavement. Study 2 also included a more conservative, repeated-measures ipsative compar-

ison of pre- and postloss functioning using multiple measures across time. This approach, which compares each participant's symptom levels during bereavement with their own symptom levels at various points prior to bereavement, makes it possible to identify and track specific outcome trajectories within a given sample.

Fifth, we examined whether the prevalence of resilience varied depending on the way adjustment was measured. The vast majority of bereavement research has relied on a relatively narrow range of outcome measures related to depression or grief symptoms. However, because bereavement researchers and theorists in the past have tended to dismiss resilient functioning as a form of denial or grief inhibition, it is crucial to demonstrate healthy adjustment using measures that go beyond self-report. In the current studies, we included self-report ratings of adjustment (Studies 1 and 2) as well as more objective ratings of participants' adjustment obtained from structured clinical interviews and from participants' close friends (Study 1).

Finally, because relatively little is yet known about resilient individuals or how they manage to cope so well, we extended previous research by exploring several different dimensions, including measures of positive affect (Study 2) and participants' perceptions of their relationship with the deceased (Studies 1 and 2) as well as the subjective impressions of friends and of the clinical interviewers who had interacted with participants (Study 1).

Study 1

Study 1 involved a normative comparison between matched samples of bereaved and nonbereaved participants. From this comparison we defined recently bereaved individuals as resilient when their level of psychological symptoms did not exceed the range of symptoms observed in similar individuals in intact marriages. Specifically, we compared middle-aged bereaved adults who had lost either a spouse or a child with a matched sample of married adults and categorized bereaved individuals as resilient when their symptom levels at both 4 and 18 months of bereavement remained within 1 standard deviation of the married group mean. We also examined different types of adjustment, including symptoms of depression, anxiety, and post-traumatic stress disorder (PTSD) from a structured clinical interview; self-reported adjustment; and friend ratings of both current and past (i.e., preloss) adjustment. In addition, to further examine the common assumption that conjugally bereaved individuals who fail to show prolonged distress must have had conflicted or unsatisfying relationships with their deceased spouses (e.g., Parkes & Weiss, 1983), we measured perceived adjustment in the conjugal relationship. Finally, Study 1 included subjective ratings made by the clinical interviewers pertaining to how much they perceived participants to be suffering during the interview and the extent to which they personally liked or disliked participants. As noted above, resilient individuals have been viewed dismissively in the literature as cold, emotionally distant, and pathological. We included the interviewer's subjective ratings to explore whether clinicians might perceive resilient individuals more negatively or as suffering less than other bereaved individuals.

Method

Participants and Procedure

There are a number of practical and ethical challenges involved in recruiting samples of bereaved individuals (see Bonanno & Kaltman, 1999). In the present study we adopted what seemed to be the most ethically sound approach to obtaining research participants: We disseminated information about the study and encouraged bereaved individuals interested in participating to contact the researchers (Penslar, 1993). Information about the study was made available to potential bereaved participants living in the Washington, DC metropolitan area by sending letters describing the study to (a) recently bereaved individuals who were listed as surviving parents or spouses in newspaper obituary notices and (b) individuals likely to have contact with bereaved individuals (e.g., medical and mental health professionals, clergy). The letters encouraged bereaved individuals under the age of 65 who met recruitment criteria and who might be interested in joining the study to contact the researchers by phone or mail. Seventy-five bereaved individuals contacted the researchers and agreed to participate in the study. Nonbereaved participants were recruited from posted notices describing the study in public locations and encouraging married individuals under the age of 65 who were interested in participating to contact the researchers. Fifty-four nonbereaved participants volunteered to participate in the study.

Once enrolled, all participants completed a packet of mail-in questionnaires and were invited to the laboratory for a structured clinical interview and an open-ended narrative interview. Nonbereaved individuals completed one interview session, and bereaved individuals completed the interviews twice, at approximately 4 months postloss and 18 months postloss. Participants were paid $60 for each interview session. Of the 75 bereaved individuals who participated at 4 months postloss, 11 (15%; 8 conjugally bereaved and 3 parentally bereaved) were unable or refused to visit the laboratory prior to the 18-month assessments. The final bereaved sample consisted of 64 participants (44 conjugally bereaved and 20 parentally bereaved). Bereaved participants who did not complete the study did not differ significantly in demographic characteristics or symptom levels from those who remained in the study through 18 months. From the nonbereaved pool ($n = 54$), we selected 41 individuals for comparisons with the bereaved sample on the basis of matching demographic characteristics (age, gender, ethnicity). There were no significant demographic differences between the conjugally bereaved, parentally bereaved, and nonbereaved samples. The combined bereaved and nonbereaved sample was on average 49.9 years old ($SD = 7.8$ years), primarily female (female = 66, male = 45), and Caucasian (Caucasian = 92, African American = 12, other = 7).

Measures

Structured clinical interviews. Participants were asked a series of questions corresponding to the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM–IV*; American Psychiatric Association, 1994) symptoms for generalized anxiety disorder (9 items, $\alpha = .78$), major depressive disorder (8 items, $\alpha = .92$), and PTSD that did not overlap with major depression (14 items, $\alpha = .82$). Each symptom was coded as present or absent following the format used for the Structured Clinical Interview for the DSM (Spitzer, Williams, Gibbon, & First, 1990). Specifically, each item included an explicit scoring criterion (e.g., markedly increased sadness or distress during the past month in situations that symbolize or remind the subject of the deceased) and a set of standard questions designed to elicit information relevant to the criterion (Bonanno, Keltner, Holen, & Horowitz, 1995; Horowitz et al., 1997). The interviewer's decision as to whether the criterion was met for each item was based on a combination of participant self-report and the interviewer's observations during the interview. The interviews were conducted by seven doctoral candidates in clinical psychology. Interviewers received extensive training in the procedures but were blind to the goals and hypotheses of the current

study. For computation of interrater reliability, the interviews were videotaped, and each interviewer coded a randomly selected set of five additional interviews. Interrater reliability was very high (average $\kappa = .97$). The structured interview data were used to create continuous variables for depression, anxiety, and PTSD symptoms as well as a total symptom score. In addition, a Global Assessment of Functioning (GAF) score was assigned by the interviewer on the basis of criteria detailed in the *DSM–IV*. The GAF ranges from 0 to 100, with higher scores indicating greater levels of "psychological, social and occupational functioning on a hypothetical continuum of mental health–illness" (American Psychiatric Association, 1994, p. 32).

Interviewer subjective ratings of participants. At the completion of the structured interview, interviewers made global judgments as to how much they perceived the participant to be "suffering mentally during the interview" using a 7-point scale (1 = *not at all*; 4 = *moderately*; 7 = *severely*). In addition, the interviewers also rated the degree to which they "liked the participant as a person" using a 7-point scale (1 = *less than other participants/not at all*; 4 = *about the same as other participants/moderately*; 7 = *more than other participants/very much*). Interviewers were also told that ratings for this item "should reflect your honest subjective response, and should be as independent as possible from your clinical judgment" about the participant.

Self-report measures. Self-reported distress was measured using a brief version of the Symptom Check List (Derogatis, 1983). Participants used a 0 (*not at all*) to 4 (*extremely*) scale to indicate how much they had been distressed or bothered during the past week by symptoms from three subscales: depression (e.g., feeling blue), anxiety (e.g., feeling tense or keyed up) and hostility (e.g., feeling easily annoyed or irritated). Responses to these items were averaged to form an overall distress score (29 items, $\alpha = .95$). Participants rated their usual level of adjustment in relation to "most other people" using a 7-point scale (1 = *much worse than most people*; 4 = *about the same as most people*; 7 = *much better than most people*) for five dimensions (mental health, physical health, quality of social interactions, ability to accomplish goals, and coping ability; $\alpha = .82$). For bereaved participants, these ratings were specified as pertaining to "before the loss." Participants rated their current level of adjustment in comparison to their usual level using a 7-point scale (1 = *much worse than usual*; 4 = *about the same as usual*; 7 = *much better than usual*) for the same five dimensions ($\alpha = .89$). For bereaved participants, the comparison for these ratings was specified as pertaining to "before the loss." Self-reported somatic complaints were measured from a checklist developed in previous bereavement research (Bonanno et al., 1995). Participants indicated (yes–no) whether they had experienced any of 18 symptoms (e.g., diarrhea, sore throat, shortness of breath) during the past 2 weeks. Responses were summed for a total score. Perceived relationship adjustment with the spouse (living or deceased) was measured using the Dyadic Adjustment Scale (DAS; Spanier, 1976). Following recommendations from factor analytic studies (e.g., Kazak, Jarmas, & Snitzer, 1988), responses to the DAS were summed to create a global relationship adjustment score (31 items, $\alpha = .87$).

Friend ratings. Each participant distributed rating materials to three close friends who they felt knew them well and with whom they had relatively consistent contact. The materials asked the person to rate the participant on three scales. Two of these scales measured friends' perceptions of the participant's usual level of adjustment and the participant's current level of adjustment using a similar set of items and format (described above) in which participants rated themselves. A third scale asked friends to rate the participant's positive and negative traits in comparison with the "average person of the same age and gender" using a 5-point scale (1 = *below average*; 3 = *average*; 5 = *above average*) for four negative traits (aggressive, self-centered, arrogant, and mean; $\alpha = .74$) and three positive traits (friendly, thoughtful, and honest; $\alpha = .61$). Friends also indicated the duration (in years), frequency of contact, and closeness (1 = *not very close*; 5 = *very close*) of the relationship.

A participant's friend data were used only if data from at least two friends were available. There were no significant demographic differences between participants with usable friend data ($n = 79$) and the remainder of the sample ($n = 26$). Correlations between ratings from different friends for the same participant were all significant and in the moderate range (rs = .26–.40). Friend ratings of adjustment averaged for each participant were highly correlated with participant self-report for ratings of both usual adjustment ($r = .54$) and current adjustment ($r = .50$).

Results

Defining Resilience to Loss as a Normative Comparison

Not surprisingly, nonbereaved participants exhibited relatively few symptoms in the structured clinical interview. Compared with nonbereaved participants, bereaved participants at 4 months had significantly greater symptoms of depression and PTSD and were rated as functioning at a lower GAF (see Table 1). Bereaved participants declined significantly from 4 to 18 months postloss in symptoms of both depression, $t(63) = 2.92$, $p < .01$, and PTSD, $t(63) = 1.52$, $p < .05$. However, at 18 months postloss, bereaved participants still evidenced greater depression and PTSD and had lower GAF ratings than their nonbereaved counterparts.

To distinguish bereaved individuals who were resilient to loss from those who were not, we defined a normative level of symptoms as within 1 standard deviation of the nonbereaved mean total symptom score (1.58 + 2.48 = 4.06). Using this parameter, four or fewer total symptoms were exhibited by 85% ($n = 35$) of the nonbereaved sample, 55% ($n = 35$) of the bereaved participants at 4 months postloss, and 66% ($n = 42$) of the bereaved participants at 18 months postloss. We then defined resilient bereaved individuals as those who met this criterion (i.e., were within 1 standard deviation of the nonbereaved mean) at both 4 and 18 months postloss. Using these criteria, 33 bereaved individuals (52%) qualified as resilient. Of the remaining bereaved participants, 22 (34%) had higher symptom totals than the nonbereaved group at 4 and 18 months postloss, whereas 9 (14%) evidenced the recovery pattern of elevated symptoms at 4 months and reduced symptoms (similar to the nonbereaved group) at 18 months. For data analytic purposes, nonresilient individuals were collapsed into a single symptomatic group ($n = 31$, 48%; see Figure 1).

Resilient bereaved individuals were distributed relatively equally among the conjugally (resilient = 24, symptomatic = 20) and parentally (resilient = 9, symptomatic = 11) bereaved, and significant contingency between resilience and loss type was not observed, $\chi^2(1, N = 64) = .601$, $p = .48$. Differences between the resilient and symptomatic bereaved in age, gender, ethnicity, and type of death (sudden vs. expected) were not significant ($p > .15$). Group differences across the resilient, symptomatic bereaved, and nonbereaved groups on each dependent measure are listed in Table 1.

Structured Clinical Interview

To explore whether resilience varied depending on the type of symptom or measure of functioning, we compared the nonbereaved sample and the resilient and symptomatic bereaved samples at 4 months postloss for symptoms of depression, anxiety, PTSD, total symptoms, and the GAF rating. Each analysis proved significant. A similar set of analyses using data from the bereaved sample at 18 months postloss again produced significant group

Table 1
Means and Standard Deviations for Two-Way (Bereaved vs. Nonbereaved) and Three-Way (Resilient Bereaved vs. Symptomatic Bereaved vs. Nonbereaved) Comparisons

Measure	Bereaved ($N = 64$)		Resilient bereaved ($N = 33$)		Symptomatic bereaved ($N = 31$)		Nonbereaved ($N = 41$)[a]		Bereaved versus nonbereaved (t)[b]	Resilient versus symptomatic versus nonbereaved (F)[c]
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Clinical interview										
Depression										
4 mo.	1.75	1.99	0.51_a	0.71	3.06_b	2.08	0.56_a	1.23	3.43***	34.43***
18 mo.	1.28	2.02	0.12_a	0.33	2.52_b	2.34	0.56_a	1.23	2.26*	23.47***
Anxiety										
4 mo.	0.42	1.49	0.00_a	0.00	0.87	2.06_b	0.40_a	1.26	0.05	3.23*
18 mo.	0.81	2.11	0.00_a	0.00	1.67_b	2.81	0.40_a	1.26	1.12	8.35***
PTSD										
4 mo.	3.06	2.51	1.24_a	1.06	5.00_b	2.13	0.62_a	1.26	5.76***	80.78***
18 mo.	2.45	2.73	0.64_a	0.82	4.39_b	2.72	0.62_a	1.26	4.03***	51.21***
Total symptoms										
4 mo.	5.23	5.11	1.76_a	1.46	8.94_b	5.02	1.59_a	2.48	4.24***	55.09***
18 mo.	4.55	6.07	0.76_a	1.00	8.58_b	6.60	1.59_a	2.48	2.97**	38.50***
GAF										
4 mo.	77.96	10.90	82.20_a	7.50	73.40_b	10.60	84.40_a	11.30	2.71**	9.06***
18 mo.	77.20	12.20	84.30_a	5.80	69.30_b	12.70	84.40_a	11.30	2.72**	19.38***
Self-report										
Distress GSI										
4 mo.	0.85	0.62	0.49_a	0.36	1.22_b	0.63	0.43_a	0.42	3.72***	27.51***
18 mo.	0.67	0.72	0.32_a	0.35	1.05_b	0.82	0.43_a	0.42	2.20*	16.04***
Somatic component										
4 mo.	5.24	3.56	4.12_a	3.19	6.52_b	3.57	3.62_a	2.94	2.39*	7.36***
18 mo.	4.43	3.27	3.27_a	2.67	5.68_b	3.41	3.62_a	2.94	1.29	5.98**
Usual adjustment	5.33	0.94	5.44_a	0.83	5.21_a	1.05	5.01_a	0.92	1.69	1.94
Current adjustment										
4 mo.	3.74	1.14	4.19_a	1.11	3.27_b	0.98	4.39_a	1.03	2.89**	10.84***
18 mo.	4.23	1.39	4.73_a	1.28	3.67_b	1.31	4.39_a	1.03	0.63	6.41**
DAS										
4 mo.	91.21	12.81	91.93_a	12.87	90.39_a	11.82	92.83_a	10.05	0.40	0.21
Friend ratings										
Usual adjustment	5.41	0.80	5.73_a	0.69	5.09_b	0.79	5.19_b	0.68	1.07	6.21**
Current adjustment										
4 mo.	4.19	0.87	4.59_a	0.87	3.79_b	0.67	4.78_a	0.77	2.86**	10.54***
18 mo.	4.46	1.16	4.71_a	0.77	3.97_b	0.95	4.78_a	0.77	1.86	5.29**
Positive traits										
4 mo.	4.43	0.42	4.57_a	0.41	4.30_{ab}	0.39	4.02_b	0.54	3.73***	6.72***
18 mo.	4.38	0.39	4.46_a	0.45	4.31_{ab}	0.29	4.02_b	0.54	3.05**	3.33*
Negative traits										
4 mo.	2.13	0.61	2.10_a	0.68	2.15_a	0.54	2.24	0.61	0.78	0.28
18 mo.	2.15	0.52	2.12_a	0.56	2.18_a	0.49	2.24	0.61	0.66	0.18
Duration	13.80	8.05	12.80_a	7.62	14.90_a	8.52	15.80_a	13.30	1.15	0.87
Frequency of contact										
4 mo.	3.81	0.92	3.96_a	0.99	3.67_a	0.99	2.75_b	0.98	4.65***	11.59***
18 mo.	3.59	0.93	3.64_a	0.84	3.53_a	1.05	2.75_b	0.98	3.34**	5.75*
Closeness										
4 mo.	4.08	0.73	4.04_a	0.62	4.11_a	0.77	2.50_b	0.64	3.20**	5.20**
18 mo.	3.86	0.66	3.79_a	0.77	3.94_a	0.54	2.50_b	0.64	2.03*	2.27
Interviewer ratings										
Suffering										
4 mo.	3.83	1.71	2.89_a	1.48	4.80_b	1.35	2.03	1.36_c	5.03***	28.25***
18 mo.	2.69	1.56	1.97_a	1.25	3.46_b	1.50	2.03	1.36_c	2.01*	11.06***
Liked personally										
4 mo.	4.78	1.33	4.68_a	1.38	4.88_a	1.30	4.81_a	1.31	0.11	0.15
18 mo.	4.69	1.38	4.27	1.31_a	5.24_b	1.33	4.81_a	1.31	0.42	3.11*

Note. Means that share subscripts were not significantly different in Student-Newman–Keuls test for multiple comparisons ($p > .05$). 4 mo. = 4-month assessment; 18 mo. = 18-month assessment; PTSD = posttraumatic stress disorder; GAF = Global Assessment of Functioning; GSI = Global Severity Index; DAS = Dyadic Adjustment Scale.

[a] Nonbereaved data were collected at a single point in time; the same nonbereaved data were used in comparisons with bereaved groups at the 4- and 18-month assessments. [b] For clinical interview and self-report data, $df = 103$; for friend ratings, $df = 77$. [c] For clinical interview and self-report data, dfs = 2, 104; for friend ratings, dfs = 2, 76.

* $p \leq .05$. ** $p < .01$. *** $p < .001$.

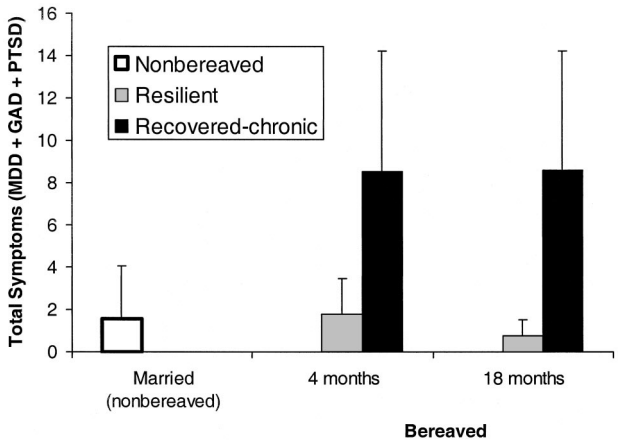

Figure 1. Resilience by normative comparison: Total symptoms from structured clinical interviews for major depressive disorder (MDD), generalized anxiety disorder (GAD), and posttraumatic stress disorder (PTSD) married (100% nonbereaved), resilient bereaved (52%), and symptomatic bereaved (48%) samples.

effects for each variable. Follow-up analyses using the Student-Newman–Keuls (SNK) test for multiple comparisons of means showed that at each time point, the symptomatic bereaved individuals had significantly more symptoms of depression, anxiety, PTSD, and total symptoms and a lower GAF rating than both the resilient bereaved and the nonbereaved groups and that the resilient bereaved and nonbereaved groups did not differ significantly on these variables.

Self-Reported Adjustment

As can be seen in Table 1, the exact same pattern of findings was observed for participants' self-reported distress, somatic complaints, and ratings of current functioning. Specifically, the resilient group reported better current adjustment than other bereaved participants at 4 and 18 months postloss but was not significantly different from the nonbereaved group. It is noteworthy, however, that group differences did not emerge for self-ratings of usual (i.e., before the loss) adjustment.

Perceived Relationship Adjustment

To examine the traditional assumption that conjugally bereaved individuals who do not evidence prolonged distress had conflicted or maladjusted relationships with their deceased spouses, we compared perceived adjustment in the relationship with the spouse (DAS) with that of the nonbereaved group and with the resilient and symptomatic bereaved groups at 4 months postloss. This analysis did not approach significance. A similar analysis using only the conjugally bereaved and nonbereaved participants (i.e., excluding the parentally bereaved and thus maximizing the relevance of the spousal representations) likewise failed to approach significance, $F(2, 74) = 0.23$, $p = .79$.

Friend Ratings

Participant's usual and current adjustment. Anonymous ratings from participants' close friends also indicated that resilient individuals were better adjusted than other bereaved participants at 4 and 18 months postloss and that resilient individuals' current adjustment at these time points did not differ from the nonbereaved group. However, in contrast to the self-report data, the friend ratings also indicated a significant group effect for ratings of usual adjustment. Follow-up SNK tests showed that resilient individuals' friends rated them as usually significantly better adjusted (i.e., before the loss) than both the symptomatic bereaved before the loss and the nonbereaved group.

Positive and negative traits. Comparison of friend ratings of participants' positive and negative traits for the nonbereaved group and the bereaved groups at 4 months postloss indicated significant group effect only for positive trait ratings. Comparisons involving the bereaved groups at 18 months postloss also indicated a significant group effect only for positive ratings. Follow-up tests showed that at both 4 and 18 months postloss, the resilient group was viewed significantly more positively than the nonbereaved group, with the symptomatic bereaved group at an intermediate level not significantly different from either group.

Duration, frequency of contact, and closeness. There were significant group differences between nonbereaved and bereaved groups for friend ratings of frequency of contact and closeness. Follow-up tests showed that friends from both bereaved groups reported significantly more frequent contact at both 4 and 18 months postloss and a significantly closer relationship at 4 months postloss relative to friends from the nonbereaved group. The resilient and symptomatic bereaved groups' friends did not differ significantly on these variables.

Interviewer's Subjective Ratings

Comparison of the interviewers' ratings (degree to which they liked participants and perceived participants to be suffering) for the nonbereaved group and bereaved groups at 4 months postloss indicated a significant group effect only for the degree of suffering. SNK tests indicated that symptomatic bereaved at 4 months postloss were rated as suffering significantly more than both the resilient bereaved and nonbereaved groups but also that the resilient bereaved were rated as suffering significantly more at 4 months than the nonbereaved group. The group effect for ratings of how well the interviewer liked the participant at 4 months did not approach significance. Comparisons involving the bereaved groups at 18 months postloss again indicated a significant group effect for ratings of perceived suffering but also showed a significant group effect for how well the interviewer liked the participant. SNK tests indicated that at 18 months, the symptomatic bereaved group was again seen as suffering significantly more than the resilient and nonbereaved groups. However, at this point, the resilient and nonbereaved groups were no longer significantly different from each other. Also, at 18 months, the interviewers liked the symptomatic bereaved group significantly more than the resilient bereaved group but did not distinguish between the resilient and nonbereaved groups. These findings suggest that at 18 months postloss, the interviewers may have liked the symptomatic bereaved individuals more than the resilient individuals because they perceived them to be suffering more. Consistent with this possibility, although the interviewers' ratings of how much they liked participants and how much they thought participants were suffering were not correlated at 4 months ($r = -.05$, *ns*), these

variables were significantly correlated at 18 months postloss ($r = .31$, $p < .05$).

Relationship Variables and Adjustment

In a final analysis, we examined how the quality of relationships (DAS, friend ratings of frequency of contact and closeness) related to adjustment (total symptoms from the structured clinical interview) across groups. DAS scores were unrelated to symptoms in each group. Friend ratings of closeness were highly inversely correlated with symptoms for nonbereaved participants ($r = -.71$, $p < .001$) but not significantly related to symptoms at any point for either the resilient or symptomatic bereaved. By contrast, friend ratings of frequency of contact with participants were significantly inversely correlated with 18-month symptoms for the symptomatic bereaved ($r = -.38$, $p = .05$) but were not associated with symptoms among the nonbereaved or resilient bereaved.

Discussion

The results of Study 1 replicate and extend previous research on resilience to loss through the use of a normative comparison of bereaved and nonbereaved samples. Slightly more than half of the recently bereaved parents and spouses in this study evidenced healthy functioning and did not differ significantly from a matched sample of married adults when assessed at both 4 and 18 months postloss. A potential limitation of this approach is its vulnerability to selection biases. It is possible, for example, that relatively more distressed bereaved individuals would be less likely to volunteer for this type of research. Although we cannot rule out this possibility, it is noteworthy that the proportions showing the resilient pattern were strikingly similar to those observed in previous studies using either ipsative comparison (e.g., Bonanno et al., 2002) or absolute levels of symptoms (Zisook et al., 1997). A strength of this study is that resilience was robustly observed across multiple measures, including self-reported adjustment; ratings of symptoms and assessments of functioning derived from more objective, structured clinical interviews; and anonymous ratings of participants' adjustment provided by their close friends. In addition, resilient individuals did not differ from other bereaved or nonbereaved participants in their perceptions of adjustment in the conjugal relationship, and perceptions of adjustment in the conjugal relationship were unrelated to outcome. Although for bereaved participants these ratings were necessarily retrospective, they are consistent with previous findings obtained using preloss assessments indicating that resilient individuals had relatively normative marital relations (e.g., Bonanno et al., 2002).

There were several potentially important new findings. First, resilient individuals' friends rated them as better adjusted than other bereaved individuals and also at approximately the same level as the nonbereaved group. It is also noteworthy that resilient individuals' friends rated them as having a level of adjustment approximate to their usual (i.e., nonbereaved) level at both 4 and 18 months, whereas more symptomatic bereaved individuals were consistently rated as less well adjusted than usual. Second, resilient individuals' friends rated them as usually better adjusted (i.e., before the loss) than both symptomatic bereaved individuals before the loss and than the nonbereaved individuals and as possessing more positive traits (friendly, thoughtful, honest) compared with nonbereaved individuals. These findings extend previous data suggesting that although resilience is common, individuals who are resilient in the face of interpersonal loss tend to possess considerable psychological strengths (e.g., Bonanno et al., 2002) and even while bereaved tend to maintain their usual healthy level of functioning.

Third, although the groups did not differ in the duration of the friendships, bereaved participants' friends reported more frequent contact and closer friendships than did nonbereaved participants' friends. Although these findings appear to indicate that all bereaved individuals experience an increased social need, resilient individuals coped effectively regardless of the frequency of contact with friends, whereas for symptomatic bereaved individuals, the frequency of social contact was a more crucial predictor of later adjustment. Fourth, in a related vein, subjective ratings provided by the clinical interviewers revealed that despite resilient individuals' healthy adjustment, at 4 months postloss they still appeared to suffer during the interview more than the nonbereaved participants but less than the symptomatic bereaved participants. These findings add to evidence from previous studies that even resilient individuals experience some loss-related distress early in bereavement (Bonanno et al., 2004). Also consistent with this idea, by 18 months of bereavement, resilient individuals were not distinguished from nonbereaved individuals, and both were rated by the interviewers as suffering less than the symptomatic bereaved. Finally, although the interviewers' subjective feelings about participants were similar across groups at 4 months postloss, at 18 months postloss the interviewers liked participants more if they perceived them to be suffering more, and consequently, the interviewers liked the symptomatic bereaved better than they liked the resilient bereaved. This latter finding may be due in part to the prevalent view among clinicians that resilient individuals are cold and unfeeling (Bowlby, 1980; Rando, 1993). Alternatively, this finding may simply reflect the interviewers' sympathy or professional interest in more distressed individuals (Bonanno, 2004).

Study 2

The findings from Study 1 replicate and extend previous research that had identified resilience among individuals "in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event" (Bonanno, 2004, p. 20). However, these findings say little about the prevalence or characteristics of resilience among adults exposed to potentially disruptive events that occur in the context of more ongoing aversive life circumstances. Research on risk and resilience in childhood has clearly shown that as the number of adverse factors increases (e.g., parental conflict, socioeconomic adversity, sexual abuse), so does the prevalence of psychopathology. This work has also shown, however, that psychopathology is less likely, even in high-adversity contexts, when more resilience factors (e.g., parental bonding, peer affiliations, academic achievement) are present (Fergusson & Horwood, 2003).

As a first step toward examining this issue in adults, in Study 2 we assessed resilience to loss in a sample of bereaved gay men from the University of California San Francisco (UCSF) Coping Project (Folkman, Chesney, Collette, Boccellari, & Cooke, 1996; Moskowitz et al., 2003; Moskowitz, Folkman, Collette, & Vittinghoff, 1996). The men in this study were assessed repeatedly as they provided care for their partners who were dying from AIDS and

then afterward as they attempted to recover from the loss. Some of the caregivers in the study were themselves HIV+.

We anticipated that the unique and highly stressful context of HIV/AIDS-related caregiving would result in higher overall levels of depressed mood both before and after the partner's death relative to normative samples. Representative samples of gay men in general tend to exhibit high levels of depression (Mills et al., 2004). This factor, combined with the unusually intense strain of providing care to a partner dying of AIDS led us to expect that the prebereavement depression scores of this sample would include an unusually high proportion of individuals experiencing elevated depression. In addition, we expected unusually high levels of depressed mood following the partner's death. These data were collected before the widespread use of highly active antiretroviral therapy, when many people were dying of AIDS at a comparatively young age. Thus, bereavement was occurring "off time" at a premature age (Neugarten, 1979). People who become bereaved at a younger age tend to have more intense grief reactions and poorer adjustment than those who are bereaved later in life (Lichtenstein, Gatz, Pedersen, Berg, & McClearn, 1996; Nolen-Hoeksema & Ahrens, 2002). Further, many of the men in the study had lost numerous close friends to AIDS. Such repeated bereavements may thus deplete social networks and valuable emotional resources that could have buffered the effects of the partner's death (Neugebauer et al., 1992). Finally, many of the bereaved caregivers in this sample were themselves infected with HIV. During the time of this study, a partner's dying and death could have been an especially depressing reminder of what could lie ahead for the HIV-infected caregiver (Pearlin, Semple, & Turner, 1988).

These considerations further underscore the importance of defining resilience to loss in relative rather than absolute terms (i.e., by comparing participants' levels of adjustment following the loss to levels of adjustment that might be considered normative for a given stressful context). Extending the normative comparison approach from Study 1, in Study 2 we compared depressed mood in HIV+ bereaved caregivers with that of noncaregiving HIV+ men in committed relationships with a healthy partner. As in Study 1, we anticipated that approximately half of the bereaved HIV+ caregiver sample would consistently evidence levels of depression within the range observed for nonbereaved HIV+ individuals. Replication of this proportion would greatly strengthen the conclusions of Study 1, because the data in Study 2 were obtained from a prospective longitudinal sample and thus provide considerably greater control over the issue of selection biases.

A second relative measure of resilience to loss involved a repeated-measures ipsative comparison of participants' levels of adjustment following a loss to their baseline levels of adjustment prior to the loss. The data from the UCSF Coping Project were ideal for this purpose. Preloss baseline data are rarely available, and when they are, they are often collected near the time of death and thus are likely to be confounded with anticipatory reactions. The Bonanno et al. (2002) study, cited above, was able to obviate this concern by examining the prebereavement characteristics of resilient individuals using data collected on average 3 years prior to the spouse's death, when measurements could be reasonably assumed to be independent from anticipation of the spouse's eventual death. The data from the UCSF Coping Project also permitted examination of prebereavement data (e.g., Folkman et al., 1996; Moskowitz et al., 1996). Although the men in this sample were caregivers and, as noted above, were expected to exhibit higher than usual prebereavement levels of depression, it was nonetheless possible to estimate the point of anticipatory elevations in depression. As we describe below, dramatic elevations in depression occurred for most of the caregivers 2 months prior to the partner's death. Thus, data obtained several months prior to this point could serve as an adequate prebereavement baseline for ipsative comparisons with changes in depression following the partner's death. In addition, because these data were available bimonthly from prebereavement to postloss, it was possible to examine the as yet untested assumption that resilient individuals evidence a stable low-distress profile across time.

These data also permitted analyses of bimonthly positive affect scores for examination of the assumption that resilience is characterized by both low levels of symptoms and high levels of positive emotional experiences (Bonanno, 2004). Finally, we examined whether the different outcome trajectories were related to variations in perceived relationship adjustment before and after the partner's death or with caregiver burden prior to the partner's death. Study 1 indicates that resilient individuals did not differ from other participants in their perceptions of adjustment in the relationship with the deceased partner. A previous study (Bonanno et al., 2002) had also demonstrated that neither pre- nor postbereavement measures of relationship adjustment were predictive of grief reactions during bereavement. We sought to replicate this effect in Study 2. Additionally, because previous studies examining the impact of caregiving on bereavement have produced mixed findings, we examined whether caregiver burden might inform outcome in the context of HIV/AIDS-related death.

Method

The data for this study come from the UCSF Coping Project, a longitudinal study of caregiving partners of men with AIDS. Further details of the study have been described elsewhere (Folkman, Chesney, & Christopher-Richards, 1994; Folkman et al., 1996). Participants were gay or bisexual men from the San Francisco Bay area who were recruited through advertisements in the gay press, public service announcements on radio and TV, referrals from clinics and gay organizations, and annual mailings to residents of selected San Francisco zip codes. To be eligible as a caregiver, the participant had to identify as gay or bisexual, be in a committed relationship, and share living quarters with a partner with an AIDS diagnosis. Caregivers could be HIV+ or HIV negative (HIV−). In addition, the care recipient had to need help with at least two activities of daily living. Participants were excluded if they had more than two symptoms of HIV disease, a diagnosis of AIDS, or used injection drugs. To be eligible for the HIV+ noncaregiving comparison group, a participant had to have previously tested positive for HIV but not have an AIDS diagnosis or more than two symptoms of HIV− disease. He also had to self-identify as gay or bisexual and be in a committed relationship with a healthy partner and thus not currently providing care for his partner. Participants were excluded if they currently used injection drugs. HIV serostatus was confirmed via blood test on entry into the study.

The original sample included 86 HIV+ and 167 HIV− men in the caregiving group and 61 HIV+ men with healthy partners in the comparison group. The sample was predominantly White (90% White, 3% African American, 4% Latino, and 3% other), with an average age of 36.6 years (SD = 6.8), a modal income of between $20,000 and $29,000 a year at entry into the study, and average length of relationship with their partners of 6.2 years (SD = 4.9).

Recruitment took place over the course of 2 years, from April 1990 to June 1992. Interviews were conducted through May 1997. Participants were interviewed face to face every 2 months for 2 years, then every 6 months for an additional 3 years. Participants whose partners died were

interviewed approximately 2 weeks and 4 weeks after the death of their partner. Participants were paid $20 per interview.

Depressive mood was assessed with the 20-item Center for Epidemiological Studies—Depression (CES-D) scale (Radloff, 1977) by summing ratings on a 4-point scale for how frequently each symptom occurred during the previous week. Items included, "I felt that I could not shake off the blues even with help from my family or friends," "I felt fearful," and "My sleep was restless." Cronbach's alphas ranged from .89 to .95 throughout the postbereavement period.

Positive Affect

Using a modified version of the Bradburn Affect Balance Scale (Bradburn, 1969), participants indicated on a 0 (*never*) to 4 (*often*) scale how often they felt each of the 8 positive affects (e.g., "on top of the world," "happy," "optimistic," and "cheerful") during the past week. These items were summed to form a total positive affect score ($\alpha = .90$ at baseline). Although positive affect scores tended to be highly inversely correlated with depression (rs ranged from $-.60$ to $-.75$), previous studies from the UCSF Coping Project (Moskowitz et al., 2003) and other data sets (Ong, Bergeman, & Bisconti, 2004) have shown positive affect to be a meaningful predictor of long-term bereavement outcome independent from its concurrent association with depression.

Caregiving Need and Burden

We modified the Caregiver Dislocations Scale (Gottlieb & Chrisjohn, 1988) for use with gay men. Participants indicated the instrumental needs of their partner across 16 items covering seven domains (grocery shopping, preparing meals, housekeeping, physical tasks, transportation, medication routine, financial management). The sum of the partner's needs represented a total caregiving need score. Each need that a participant endorsed was followed by the question "How much does this bother you, if at all?" scored on a 5-point scale. Following previous research (Folkman, Chesney, Cooke, Boccellari, & Collette, 1994), these ratings were summed to create an index of caregiving burden ($\alpha = .91$). Participants completed this scale repeatedly during prebereavement. These scores were then summed as measures of total prebereavement caregiver need and caregiver burden.

Perceived Relationship Adjustment

The quality of the relationship was assessed with an abbreviated, 22-item version of the DAS scale used in Study 1 ($\alpha = .90$; see Folkman et al., 1996). Data on this measure were available at each bimonthly assessment before and after the partner's death. After the death of the partner, the items were modified to be in the past tense.

Results

Resilience by Normative Comparison: Bereaved HIV+ Caregivers Versus Noncaregivng, Nonbereaved HIV+ Men

We first examined resilience as we did in Study 1 by comparing similar bereaved and nonbereaved groups. Specifically, we examined a group of HIV+ caregivers for whom data were available at 4 and 14 months postloss ($n = 34$) and a nonbereaved, noncaregiver HIV+ group for whom data were available bimonthly over a 24-month period ($n = 45$). These bereaved and nonbereaved groups did not differ significantly from each other or from participants in the original sample on any of the demographic variables considered in this study. Serial pairwise comparisons of the first assessment and each subsequent assessment among the HIV+ nonbereaved group revealed significant change in only one of the 12 comparisons, and there was no evidence of a linear trend in the data. Accordingly, we averaged each HIV+ nonbereaved participant's CES-D score and then computed the average for the comparison sample ($M = 13.81$, $SD = 7.16$).

As in Study 1, bereaved caregivers were categorized as resilient if their levels of depressed mood fell within 1 standard deviation of the mean level of depressed mood observed in the nonbereaved comparison group (CES-D = 20.87). Exactly half ($n = 17$) of the HIV+ caregivers met this resilience criterion at both 4 and 14 months postloss (86% of the HIV+ nonbereaved comparison group had scores below this point). Thus, despite the exceptionally high levels of depression among the HIV+ caregivers, the percentage of bereaved participants in this group that had similar levels of depression as the nonbereaved, noncaregiver HIV+ sample was similar to that observed in comparisons of married and bereaved spouses (Study 1).

Examination of mean CES-D scores and error bars for each group (see Figure 2) suggests smaller group differences than Study 1. However, comparisons of the resilient and symptomatic HIV+ caregiver groups at 4 months postloss with the nonbereaved HIV+ group revealed robust differences, $F(2, 76) = 15.15$, $p < .001$. Similar to the comparisons in Study 1, SNK tests revealed that the HIV+ resilient caregivers ($M = 16.41$, $SD = 10.54$) and HIV+ nonbereaved ($M = 13.81$, $SD = 7.16$) did not differ significantly, and both groups had significantly lower CES-D scores than the symptomatic HIV+ caregivers ($M = 26.61$, $SD = 12.76$). A similar analysis using the 14-month bereavement data again revealed a significant effect, $F(2, 76) = 15.81$, $p < .01$, and SNK tests again showed that the resilient HIV+ caregiver ($M = 10.47$, $SD = 6.01$) and nonbereaved HIV+ groups did not differ. Both groups had significantly lower CES-D scores than symptomatic HIV+ caregivers ($M = 28.16$, $SD = 10.76$).

Resilience by Ipsative Comparison: Pre- and Postloss Assessments in HIV+ and HIV− Men

In the next set of analyses, we examined both HIV+ and HIV− caregivers in repeated, bimonthly assessments of depres-

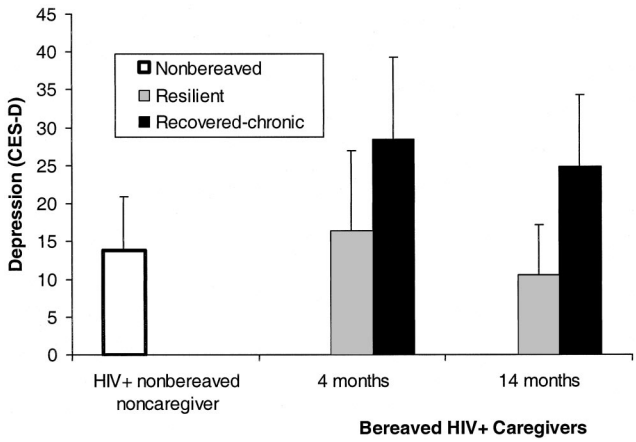

Figure 2. Resilience by normative comparison: Depressed mood (Center for Epidemiological Studies—Depression [CES-D] scale) in HIV+ nonbereaved noncaregivers (100%) and HIV+ bereaved caregivers (resilient, 50%; symptomatic, 50%).

sion beginning 8 months prior to the partner's death and culminating 8 months after the partner's death. These analyses addressed the crucial question of how resilient individuals might respond in the early months of bereavement (Bonanno, Papa, Lalande, Nanping, & Noll, 2005). Because no study has yet examined resilience to loss using repeated assessments beginning near the point of the loss, we sought in these analyses to include all possible data points. Accordingly, we examined data only from caregivers for whom repeated assessments were available at 2 weeks and 1, 2, 4, 6, and 8 months postloss (N = 111). This sample did not differ significantly from the original sample on any demographic or symptom measures. The cutoff point for clinically relevant levels of depressed mood on the CES-D has commonly been set at the 80th percentile (e.g., Comstock & Helsing, 1976) or higher (e.g., Myers & Weissman, 1980). As anticipated, relative to the typical course of symptoms during bereavement, these individuals evidenced unusually elevated levels of depressed mood. As can be seen in Figure 3, most of the sample exceeded the normative cutoff for clinically relevant depression (CES-D > 15). In the 2-week period after the partner's death, over 90% of the sample evidenced elevated depressed mood. Although the proportion dropped over time, the proportion of depressed individuals still hovered near 50% of the sample even 8 months after the partner's death. These proportions contrast markedly with the 10%–15% rate of chronic depression typically observed following conjugal loss (Bonanno & Kaltman, 2001). Although the HIV+ caregivers appeared to exhibit the greatest frequency of depression, HIV status did not result in significant differences at any time point.

We next examined a subset of the participants from the above analyses (n = 56) for whom bimonthly data on depressed mood were also available beginning 8 months prior to the death of the partner. This sample did not differ significantly from the larger (N = 111) sample on any demographic and symptom measures. The proportion of this sample showing elevated depressed mood at each time point from 8 months prior to 8 months after bereavement is displayed in Figure 4. Because of the lack of statistically significant differences in depressed mood, HIV status was not considered further. Figure 4 indicates a clear symmetry between pre- and postloss elevations in depressed mood. In other words, although the overall level of depression in this sample was quite high (e.g., close to 50% of the sample were depressed even 8 months prior to the death of their partner), there does appear to be a normative return to baseline levels in the months following the partner's death. Figure 4 also suggests that depressed mood begins to increase dramatically approximately 2 months prior to the partner's death. However, there was still considerable variability in depressed mood at this point (SD = 12.50). At 8 months prior to the death, variability in depression (SD = 9.57) was close to that observed in normal samples. Thus, the 8-month prebereavement assessment was used as baseline in subsequent ipsative analyses.

To calculate relative change, we created discrepancy scores by comparing each participant's depressed mood at 8 months prebereavement with their own depressed mood at 2, 4, 6, and 8 months postloss. Bonanno et al. (2002) defined change in a conjugally bereaved sample from prebereavement to 6 and 18 months postloss using the standard deviation from a prebereavement measure of depression. Participants were defined as showing an increase (i.e., a grief reaction) or a decrease (i.e., improvement) if their depressed mood scores at either 6 or 18 months of bereavement increased or decreased more than 1 standard deviation from their prebereavement scores.

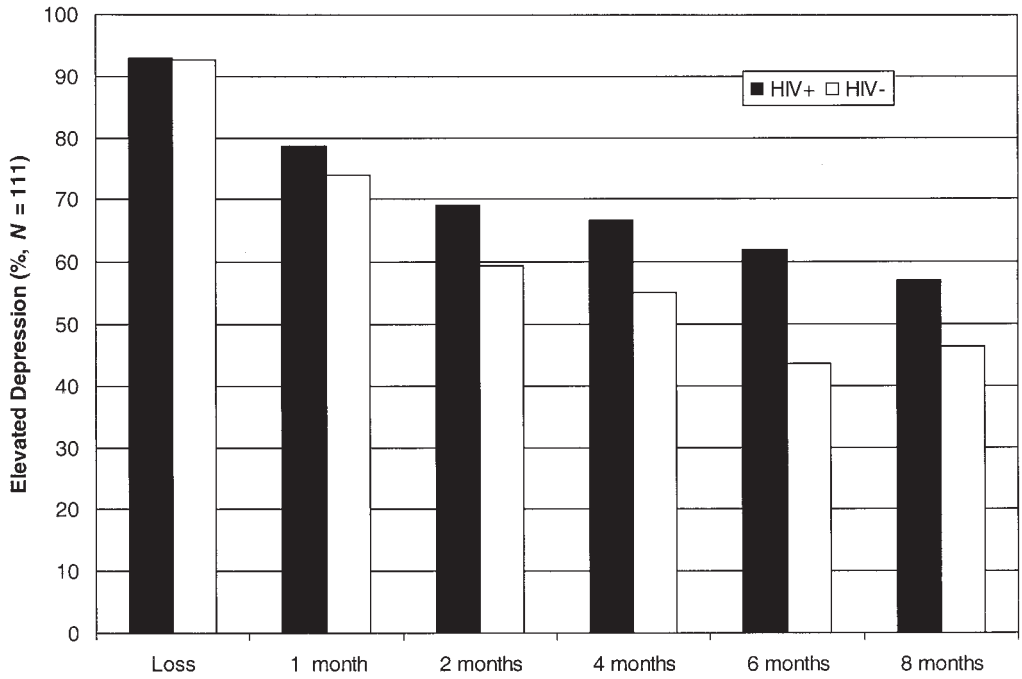

Figure 3. Proportion of HIV+ and HIV− bereaved caregivers exhibiting elevated depressed mood (Center for Epidemiological Studies—Depression scale) across the first 8 months of bereavement.

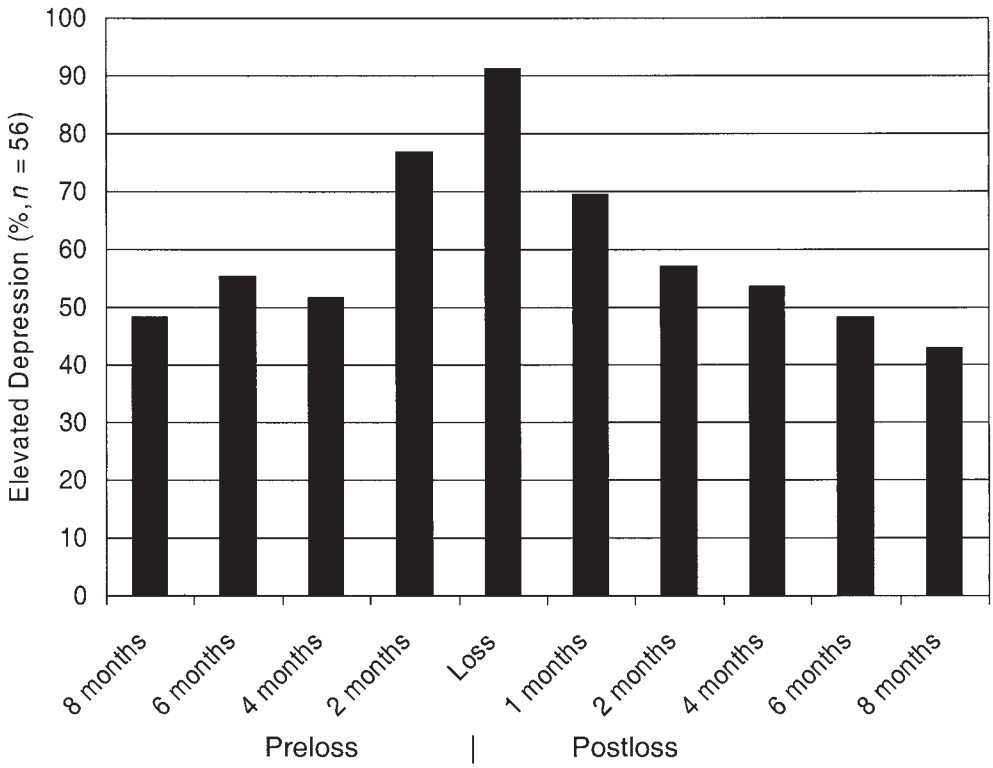

Figure 4. Proportion of bereaved caregivers exhibiting elevated depressed mood (Center for Epidemiological Studies—Depression scale) from 8 months prebereavement to 8 months postbereavement.

Extending this approach in the present study, participants were categorized as changing during bereavement if their depressed mood at either 2, 4, 6, or 8 months postloss was 1 standard deviation (9.57) or greater than their depressed mood 8 months prior to the loss. Participants were categorized as not changing during bereavement if their depression scores remained within a standard deviation of their 8-month prebereavement depression score at each of the postloss assessments. This approach made it possible to identify four trajectories.[1] Participants were categorized as resilient if they did not show elevated depressed mood (CES-D $<$ 16) at 8 months prior to the loss and if their depressed mood score did not change during bereavement. Despite the fact that the greater number of assessments in this study makes this a more conservative measure of resilience than the one used in Bonanno et al. (2002) and that the sample in general was highly depressed, the resilient pattern was nonetheless observed in 27% (n = 15) of the sample. We categorized participants as improved if they exhibited elevated depressed mood 8 months prior to the loss (CES-D $>$ 15) and if their depression scores during bereavement remained 1 standard deviation lower than their prebereavement scores at each of the four postloss assessments. An additional 9% of the sample (n = 5) met this relatively conservative criterion for improvement, bringing the proportion of participants showing stable low depressed mood during bereavement to 36%. We categorized participants as exhibiting a variable grief reaction if they did not exhibit elevated depressed mood 8 months prior to the loss and their depression scores were 1 standard deviation above their prebereavement scores at one or more of the four postloss assessments. Fourteen participants (25%) were categorized as showing a grief reaction. Finally, we categorized participants as exhibiting chronic depression if they had elevated depressed mood 8 months prior to the loss and if their depression scores remained elevated at each assessment point during bereavement. Fourteen participants (25%) of the sample met the chronic depression criterion. The remaining participants (n = 8, 14%) had variable scores across time that did not cleanly fit any of these categories.

Analyses comparing levels of depressed mood at each time point verified the classification scheme (see Figure 5). A repeated-measures analysis of variance (ANOVA) comparing the resilient, improved, grief reaction, and chronic depression groups and HIV status revealed main effects of time, $F(9, 36) = 6.08$, $p < .001$, and group, $F(4, 44) = 12.34$, $p < .001$, as well as a significant Time $\times$ Group interaction, $F(27, 114) = 2.30$, $p < .001$. HIV status was not involved in any significant effects.

We also conducted a series of follow-up one-way ANOVAs for the effects of group at each time point and SNK tests for multiple group comparisons. These analyses, which are summarized in

[1] Bonanno et al. (2002) identified five groups by distinguishing chronic grief reactions (elevated depression through 18 months postloss) from recovery reactions (initial increases in grief followed by a return to baseline levels of depression at 18 months postloss). Because we used multiple repeated measures in the current study, however, sufficient data were available only to 8 months postloss. Thus, the chronic and recovered trajectories were subsumed in a single grief reaction category.

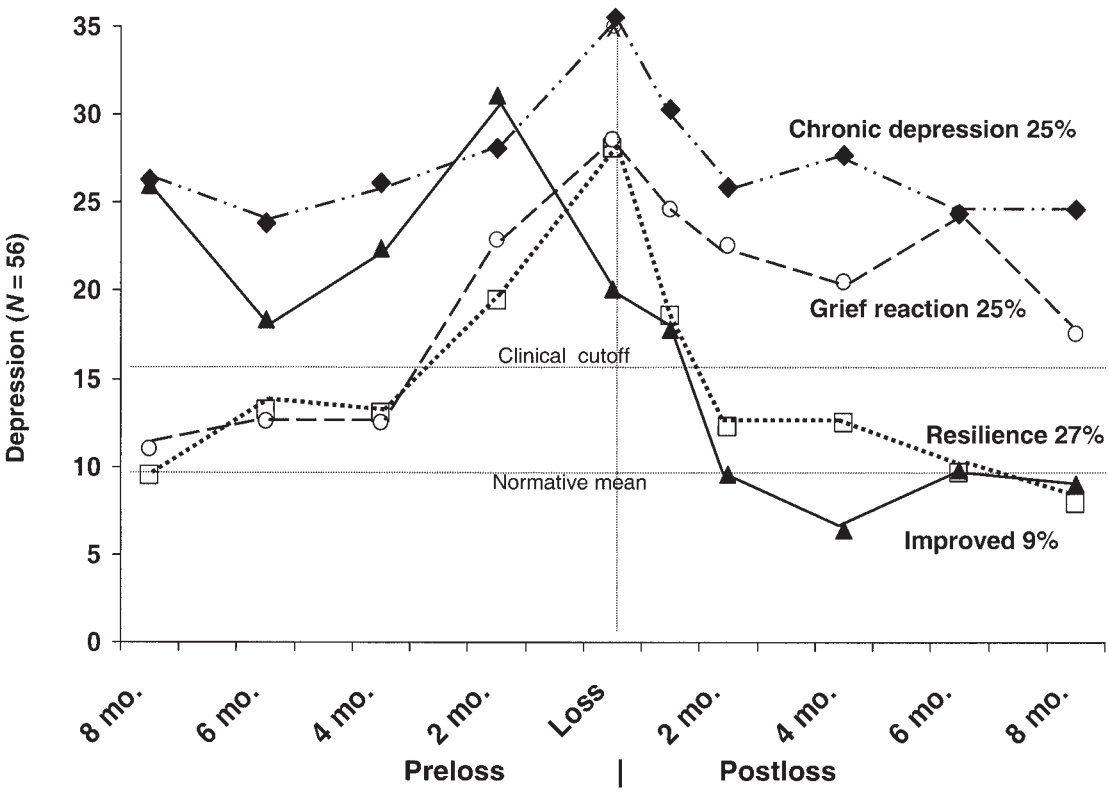

Figure 5. Resilience by ipsative comparison: Patterns of pre- and postbereavement depressed mood (Center for Epidemiological Studies—Depression scale) from 8 months prebereavement to 8 months postbereavement. mo. = months.

Table 2, revealed significant group differences at each time point except the 2 months prior to the partner's death. Most noteworthy were the findings that both the resilient and improved groups had significantly lower depressed mood than the chronic depression and grief reaction groups from 2 months of bereavement onward.

Positive Affect in Pre- and Postloss Assessments

A graph of positive affect scores from 8 months preloss to 8 months postloss for each of the trajectories identified in the preceding analysis (see Figure 6) indicates clear support for the

Table 2
Means and Standard Deviations for Depression (Center for Epidemiologic Studies—Depression Scale) Across Trajectory Groups at Each Time Point

	Resilient		Improved		Grief reaction		Chronic depression		
Time	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*(3, 47)
Preloss (months)									
8	9.53_{a}	4.60	26.00_{b}	10.27	11.00_{a}	4.21	28.00_{b}	8.56	26.55***
6	13.20_{a}	9.13	18.40_{ab}	7.16	12.57_{a}	8.31	25.36_{b}	10.46	5.87**
4	13.07_{a}	9.21	22.40_{ab}	12.34	12.50_{a}	9.73	28.07_{b}	13.96	6.08**
2	19.47_{a}	5.85	31.60_{a}	19.68	22.93_{a}	10.67	28.14_{a}	13.88	2.07
Loss	28.07_{ab}	9.47	20.60_{a}	15.04	28.64_{ab}	10.83	36.21_{b}	12.30	2.76*
Postloss (months)									
1	18.53_{a}	6.89	17.80_{a}	11.14	24.57_{a}	13.02	30.36_{a}	13.65	3.06*
2	12.33_{a}	4.65	9.60_{a}	8.68	22.57_{b}	10.09	26.36_{b}	8.30	10.62***
4	12.47_{a}	6.47	6.40_{a}	5.22	20.50_{b}	9.81	27.07_{c}	11.65	9.33***
6	9.73_{a}	5.55	9.80_{a}	6.06	23.86_{b}	12.64	24.43_{b}	10.60	8.63***
8	7.93_{a}	4.56	9.00_{a}	4.53	17.64_{b}	7.85	25.93_{c}	11.43	13.47***

Note. Means that share subscripts were not significantly different in Student-Newman–Keuls test for multiple comparisons ($p > .05$).
* $p \leq .05$. ** $p < .01$. *** $p < .001$.

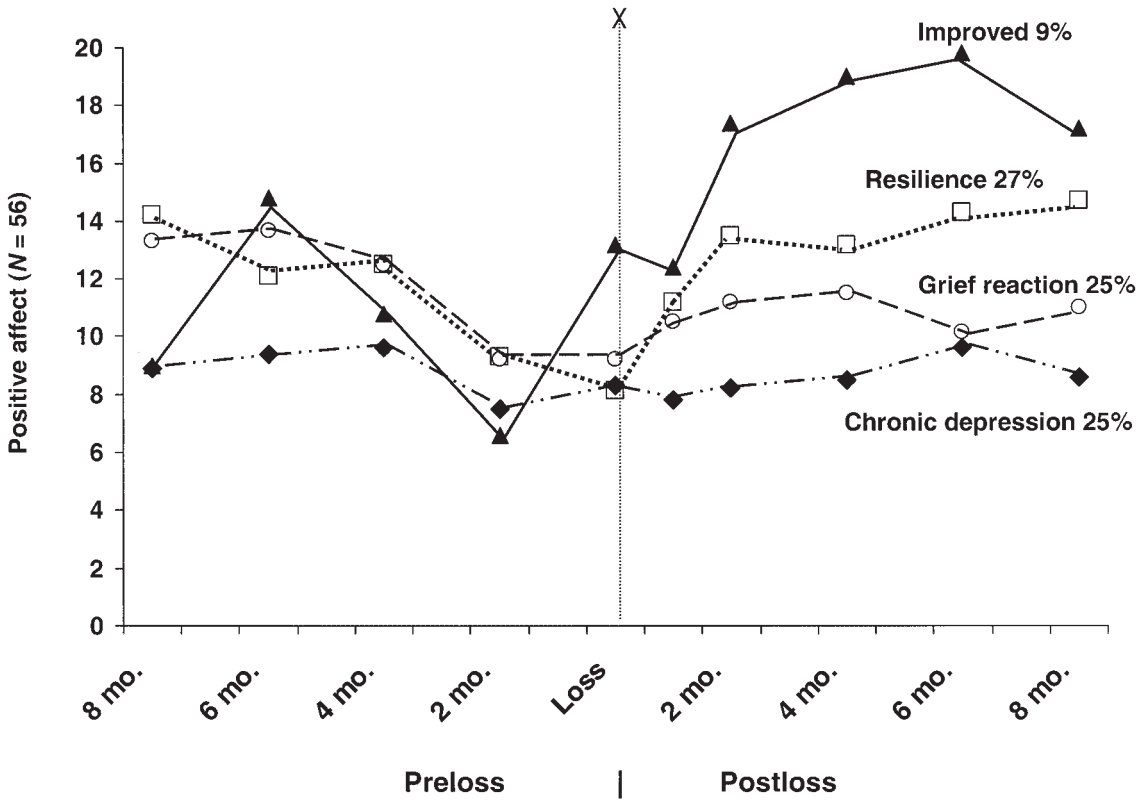

Figure 6. Patterns of pre- and postbereavement positive affect from 8 months prebereavement to 8 months postbereavement. mo. = months.

hypothesis that resilience to loss includes the capacity for positive affect (Bonanno, 2004). However, this graph also indicates that the highest levels of positive affect during bereavement were found among the improved group. A series of one-way ANOVAs at each time point (see Table 3) revealed significant group differences in positive affect at 8 months prebereavement and at each point from 2 months postloss onward. SNK tests indicated that at 8 months prebereavement, the resilient and grief reaction groups had higher positive affect than the improved and chronic depression groups. These tests also indicated that although the resilient group had higher positive affect than the grief reaction and chronic depression groups throughout bereavement, the differences were not significant until 6 months postloss. Finally, the improved group had significantly higher positive affect than the grief reaction and chronic depression groups from 2 months of bereavement onward and also significantly higher positive affect than resilient individuals at 4 and 6 months of bereavement.

Caregiver Burden and Perceived Relationship Adjustment

To further explore the possible role of relationship adjustment in bereavement outcome, we examined repeated pre- and postloss DAS scores in a multivariate ANOVA for the effects of group, time, and their interaction. Consistent with Study 1, none of the effects in this analysis approached significance ($ps > .15$). To explore the possibility that relief from caregiver burden may have informed the improved trajectory, we conducted one-way ANOVAs for group differences on variables representing caregiving needs, number of needs in which the participant was the one who provided help, and caregiver burden. None of these analyses approached significance ($ps > .15$). The prebereavement assessments of caregiver burden and DAS were generally uncorrelated. Although both caregiver burden and DAS tended to correlate moderately with concurrent prebereavement depression (e.g., at 8 months prebereavement, CES-D correlated positively with caregiver burden, $r = .37$, $p < .01$, and inversely with DAS, $r = -.30$, $p < .05$), neither the summary nor 8-month prebereavement scores on these variables correlated significantly with the postbereavement depression measures.

Discussion

As expected, the added stress of caregiving in the context of AIDS and, for some participants their own HIV+ status, resulted in a marked increase in depression both before and after the partner's death. It is noteworthy, however, that even in the context of additional stressors, so many participants nonetheless evidenced resilience to the potentially devastating impact of the partner's death. Normative comparisons among HIV+ participants indicated that half of the bereaved caregivers had levels of depressed mood statistically similar to nonbereaved noncaregivers, a proportion almost identical to that observed in Study 1. Resilience to loss was somewhat less common when we used a more stringent repeated-measures ipsative comparison based on absolute levels of depression assessed bimonthly. Yet even in this more stringent analysis, 27% of the bereaved caregivers showed a resilient pattern

Table 3
Means and Standard Deviations for Positive Affect Across Trajectory Groups at Each Time Point

	Resilient		Improved		Grief reaction		Chronic depression		
Time	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*(3, 47)
Preloss (months)									
8	14.20_{a}	4.11	9.00_{b}	4.00	13.43_{a}	4.64	8.86_{b}	3.11	5.89**
6	12.07_{a}	6.77	14.80_{a}	3.83	13.64_{a}	5.03	9.43_{a}	3.92	2.02
4	12.53_{a}	4.78	10.80_{a}	5.97	12.14_{a}	4.38	9.57_{a}	5.30	1.03
2	9.27_{a}	4.91	6.60_{a}	6.99	9.57_{a}	6.42	7.50_{a}	5.14	0.59
Loss	8.13_{a}	4.44	13.20_{a}	10.47	9.29_{a}	6.12	8.29_{a}	6.03	0.94
Postloss (months)									
1	11.20_{a}	4.39	12.40_{a}	6.62	10.54_{a}	8.17	7.79_{a}	5.25	1.09
2	13.53_{ab}	4.26	17.40_{a}	8.05	10.93_{b}	5.43	8.21_{b}	4.17	5.11**
4	13.20_{a}	4.97	19.00_{b}	5.39	11.29_{a}	5.90	8.50_{a}	4.59	5.48**
6	14.33_{a}	4.20	19.80_{b}	4.71	9.93_{c}	3.54	9.57_{c}	4.80	9.66***
8	14.73_{a}	4.56	17.20_{a}	5.63	10.79_{b}	4.02	8.57_{b}	4.43	7.27***

Note. Means that share subscripts were not significantly different in Student-Newman–Keuls test for multiple comparisons ($p > .05$).
** $p < .01$. *** $p < .001$.

of stable low depressed mood from pre- to postbereavement. An additional 9% of the caregivers were depressed prior to the loss but improved after the loss and had consistently low levels of depression during bereavement. We found no evidence that either of these trajectories was influenced by the perceived quality of adjustment in the relationship measured at both pre- and postloss or by variables measured prior to the partner's death associated with caregiver burden.

These analyses illuminated several important aspects of how resilient individuals responded to bereavement across time. Resilient individuals had low depressed mood 8 months prior to the partner's death and were essentially indistinguishable in their prebereavement depression trajectory from caregivers who eventually developed more enduring grief reactions. Although both groups evidenced marked increases in depressed mood beginning 2 months prior to the partner's death, the grief reaction group remained elevated during bereavement, whereas resilient individuals showed an even steeper decline in depression after the loss and had effectively returned to baseline levels by the 2-month point of bereavement. These findings add to previous evidence (e.g., Bonanno et al., 2004) indicating that almost all bereaved individuals, including resilient individuals, experience at least some transient disregulation in their initial response to the death of a loved one.

Identification of a group of caregivers who were highly depressed at prebereavement but improved markedly during bereavement adds to the growing number of studies documenting this pattern (Bonanno et al., 2002; Schulz et al., 2003). Additionally, although over 90% of the sample had elevated depressed mood at the time of the loss, the multiple data points used for the current analysis revealed the intriguing finding that the improved group had actually peaked in depressed mood 2 months prior to the partner's death and had already improved markedly by the death. Although our data cannot address this issue further, an obvious explanation would be that these participants had already begun to reconcile themselves to their partner's pending death.

Finally, the analyses of changes in positive affect across time provided clear support for the hypothesis that resilience during bereavement involves both a relatively stable low-symptom trajectory and the capacity for positive affect. Resilient individuals had relatively higher levels of positive affect throughout bereavement, and their distinction on this variable from the grief reaction and chronic depression groups became stronger over time. It is noteworthy, however, that the improved group had the highest levels of positive affect, and for several months these participants were significantly higher in positive affect than even the resilient group.

General Discussion

The two studies reported in this article provide robust documentation for the prevalence of the resilience trajectory following interpersonal loss, and they support the interpretation of this pattern as one of genuinely healthy adjustment to loss. These findings extend our understanding of resilience to loss in six important ways: (a) by demonstrating a comparable prevalence of resilience in younger bereaved individuals than considered in previous studies, (b) in the context of three different types of loss (the death of a spouse, child, or life partner), (c) by using both normative and repeated-measures ipsative comparisons and (d) a range of self-report and objective (clinical interviews, friend ratings) measures of adjustment as well as a measure of positive affect, (e) by demonstrating that resilience was prevalent even when bereavement occurred in the context of chronic stress and regardless of caregiver burden, and (f) by replicating previous evidence linking resilient individuals with normative rather than dysfunctional relationship patterns.

Before we discuss these findings, however, it is important to note two important methodological limitations. One issue is the relatively small size of the samples, which raises concerns of selection bias and generalizability. The issue of selection bias was of greater concern in Study 1, where participants were recruited after the loss. However, this issue was greatly reduced in Study 2, which used a prebereavement prospective sample. In addition, similar proportions of resilient individuals were evidenced in the normative comparisons from each study, and these proportions were strikingly similar to those observed in previous studies of larger samples (e.g., Bonanno et al., 2002; Zisook et al., 1997).

Small sample size may be a more pressing concern for the ipsative comparison in Study 2. The relatively small sample size limited the number of caregivers that might be captured within each of the trajectories, thus reducing power for comparisons between trajectories. Small sample size also increased the possibility that low-frequency but nonetheless important trajectories would not be identified. It is noteworthy, however, that the proportion of the sample that could not be categorized (14%) was similar to that observed in an ipsative comparison based on a larger sample (Bonanno et al., 2002).

Another limitation was that sufficient data for repeated-measures ipsative comparisons were available only through 8 months of bereavement. Because this was the first study to examine the resilience trajectory during the earliest months of bereavement, it was essential that these analyses include all possible observations, and as anticipated, this approach revealed interesting nuances of the grief reaction (e.g., the resilient group showed a rapid increase and then a rapid decrease in depression pre- and postloss). However, because these data were not available beyond 8 months postloss, it was not possible to examine longer term trajectories (e.g., chronic grief vs. recovery) or to examine longer term distinctions between the resilient and improved groups.

Within the context of these limitations, the results of the present studies resonate with recent arguments that apart from transient disruptions in initial functioning, many if not most bereaved individuals evidence a relatively stable resilient trajectory following interpersonal loss and that such individuals should not be considered candidates for clinical intervention (Bonanno et al., 2004). Indeed, there is growing evidence that indiscriminately encouraging bereaved or traumatized individuals to participate in grief counseling or other forms of crisis intervention is not only ineffective but can actually be harmful (Bonanno, 2004; Jordan & Neimeyer, 2003; McNally, Bryant, & Ehlers, 2003). A leading explanation for these effects is that most people exposed to loss or potential trauma adjust adequately without clinical intervention and that for such individuals clinical intervention may actually impede natural resilience processes (Bonanno, 2004; Jordan & Neimeyer, 2003; Litz, Gray, Bryant, & Adler, 2002).

The subjective impressions of the clinical interviewers in Study 1 were particularly intriguing in this context. The interviewers' ratings of how much they liked or disliked the participants did not distinguish the groups at 4 months of bereavement, when both resilient and symptomatic bereaved groups appeared to be suffering more than nonbereaved participants. By 18 months postloss, however, when resilient individuals were no longer distinguishable in this regard, the interviewers liked them less than the symptomatic bereaved. Indeed, the degree to which the interviewers liked bereaved participants at 18 months was positively correlated with their perceptions of how much participants were suffering. It is tempting to conclude that clinicians' less favorable reactions to resilient individuals were at least partially fueled by long-held beliefs that such individuals are pathological or emotionally cold (Bonanno, 2004). Unfortunately, the current data cannot address this point. Indeed, an alternative and equally plausible explanation is that the interviewers' perceptions simply reflected their sympathy toward those bereaved participants who were suffering most. It is hoped that future research will help shed further light on this intriguing issue.

Perhaps there is more to coping with loss than healthy adjustment. Although adjustment is of primary concern in the aftermath of extreme adversity, it has been argued within the bereavement literature that a person's level of functioning captures only one aspect of a grief reaction and that successful coping with loss also requires reorganization and maintenance of a healthy, ongoing representation of the relationship with the deceased (e.g., Rubin, 1999). This perspective suggests that some bereaved individuals might evidence low levels of symptoms but nonetheless continue to struggle with preoccupation about the lost relationship. A serious limitation inherent in this argument, however, is that an appropriate operational definition of a healthy representation of lost loved ones can be elusive. Several recent studies have shown, for example, that variables measuring what was thought to be an adaptive psychological bond with a deceased spouse (e.g., "my spouse continues to be a loving presence in my life") turn out to predict surprisingly poor long-term adjustment (Field, Gal-Oz, & Bonanno, 2003; Field, Nichols, Holen, & Horowitz, 1999).

In their earlier study of pre- and postloss outcome trajectories, Bonanno et al. (2002) partially addressed this issue among participants who showed either resilience or improvement during bereavement. Prior to the loss, members of the improved group were most likely to have an ill spouse and high levels of marital conflict, and after 6 months of bereavement, they reported greater anger at the deceased and less ability to gain comfort from positive memories of the deceased (Bonanno et al., 2004). Although these findings might be taken to suggest that improved participants were less depressed but still preoccupied with the relationship to the deceased (Rubin, 1999), the improved group had low levels of grief symptoms (e.g., yearning) similar to those of the resilient participants and increased markedly over time in their ability to gain comfort from positive memories of the deceased, so that by 18 months of bereavement they scored as high as the resilient group on this variable. Additionally, participants' ratings of the quality of their marriage at several points in bereavement were unrelated to adjustment during bereavement and, perhaps more important, all groups rated their marriages more positively after the loss than prior to the loss, indicating that all participants, including those improved or resilient, had idealized the lost relationship.

In the present studies, participants' ratings of their relationship with the spouse/partner were also unrelated to adjustment during bereavement, again regardless of whether these ratings were obtained before or after the spouse/partner's death. However, for symptomatic bereaved participants in Study 1, greater contact with friends predicted improved adjustment, whereas resilient individuals coped well regardless of the frequency of contact with friends. Does this finding confirm that most resilient individuals are cold and avoidant, as bereavement theorists have long suspected (Middleton et al., 1993)? As in previous studies (Bonanno et al., 2002), the data do not support this view. The friends of resilient bereaved and symptomatic bereaved alike reported more contact and closer relations than friends of nonbereaved individuals, suggesting an apparently greater social need among all bereaved participants. In addition, resilient individuals were rated by their friends more positively (e.g., friendly, thoughtful, honest) than other participants, clearly indicating that their friends viewed them as socially well adjusted.

Although these findings are relevant to the issue of how the representation of the deceased spouse/partner impacts adjustment, they do not fully address the issue; that must await additional research. It might also be illuminating to learn more about the ways resilient individuals understand a loss. Bereavement re-

searchers have long championed meaning reconstruction as a key ingredient of successful coping with loss (e.g., Neimeyer, Prigerson, & Davies, 2002). However, as recent studies have demonstrated (Davis, Nolen-Hoeksema, & Larson, 1998; Davis, Wortman, Lehman, & Silver, 2000), bereaved people who report not searching for and not finding meaning often show the best adjustment. This seeming contradiction is more comprehensible if loss is conceptualized as an interaction between global (i.e., enduring) and situational meaning structures (Park & Folkman, 1997). For example, consistent with previous research, resilient individuals in the Bonanno et al. (2004) study were more likely to report not searching for meaning. However, resilient individuals in that study also scored higher on prebereavement measures of the acceptance of death and belief in a just world (Bonanno et al., 2004). Together, these findings suggest that resilient individuals may be prepared to experience the death of a loved one as a painful but unavoidable turn of events that has no meaning, or at least none that will benefit them to search for (see also Neimeyer, in press).

Beyond the question of resilience, the present data also suggest implications regarding the subgroup of individuals with chronic depression. These individuals (25% in Study 2) had extremely high levels of depressed mood both before and after the death of their partner and showed only a mild and transient elevation in depression around the time of the partner's death. This pattern might be explained, of course, by ceiling effects. However, a previous ipsative comparison had shown that during bereavement, chronically depressed individuals tended to engage in less processing of the loss and less searching for meaning relative to a chronic grief group (Bonanno et al., 2004), which is consistent with the idea that individuals with enduring depressed mood are more likely to be concerned with ongoing difficulties during bereavement rather than with the specific meaning or pain of the loss.

These issues are heightened by contrasting the results of the normative and ipsative analyses for the chronic stress caregivers of Study 2. Whereas approximately half of the HIV+ caregiver sample showed resilience to loss when defined by normative comparison with nonbereaved HIV+ individuals, fewer caregivers evidenced low depressed mood during bereavement when defined in terms of either consistently low absolute levels (i.e., near the normative mean) of pre- and postloss depression (27%) or as improvement from prebereavement levels (9%). Nonetheless, the more conservative repeated-measures ipsative comparisons also indicated that only 25% of the sample showed what could appropriately be labeled a grief reaction worthy of possible intervention. Also, as we note above, many of these individuals are likely to return to their preloss baseline between the 1st and 2nd year of bereavement without the aid of clinical intervention (Bonanno, 2004).

In sum, the findings of the current investigation add to the growing body of evidence documenting the prevalence of genuine resilience in the face of highly aversive events, such as interpersonal loss. Clinical researchers have tended to ignore or underestimate this prevalence (see Bonanno, 2004). Similarly, social psychological studies conceptualizing adversity in the context of set-point theory have until recently ignored individual differences (but see Lucas et al., 2003). The findings from the current investigation clearly argue that a full understanding of either normative tendencies or extreme reactions that might warrant clinical intervention cannot emerge without an appreciation of the prevalence of the resilient (i.e., stable low symptom) trajectory or of the characteristics of individuals who might evidence this trajectory.

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