

Health outcomes of bereavement

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In this Review, we look at the relation between bereavement and physical and mental health. Although grief is not a disease and most people adjust without professional psychological intervention, bereavement is associated with excess risk of mortality, particularly in the early weeks and months after loss. It is related to decrements in physical health, indicated by presence of symptoms and illnesses, and use of medical services. Furthermore, bereaved individuals report diverse psychological reactions. For a few people, mental disorders or complications in the grieving process ensue. We summarise research on risk factors that increase vulnerability of some bereaved individuals. Diverse factors (circumstances of death, intrapersonal and interpersonal variables, ways of coping) are likely to co-determine excesses in ill-health. We also assess the effectiveness of psychological intervention programmes. Intervention should be targeted at high-risk people and those with complicated grief or bereavement-related depression and stress disorders.

Introduction

Research on stressful life-events has progressed during the past three decades, from study of the cumulative effect of life-events (measured with scales such as the social readjustment rating scale [SRRS])⁸ to a focus on specific life-events, such as bereavement. Death of a spouse ranks as the life-event needing the most intense readjustment on the SRRS, confirming the status of bereavement as a highly stressful event. Much research has been undertaken on bereavement, defined as the situation of having recently lost a significant person through death.³ Although comparatively rare in childhood, bereavement is a life-event that, sooner or later, becomes part of nearly everyone's experience. Of children younger than 18 years, 3–4% have experienced the death of a parent,⁹ whereas in elderly populations, spousal bereavement is most frequent, with about 45% of women and 15% of men older than 65 years becoming widowed.¹⁰ As such, bereavement can be viewed as a normal, natural human experience, one which most people manage to come to terms with over the course of time. Nevertheless, it is associated with a period of intense suffering for most individuals, with an increased risk of developing mental and physical health problems. Adjustment can take months or even years and is subject to substantial variation between individuals and across cultures. For a few people, mental and physical ill-health is extreme and persistent. For this reason, bereavement is a concern not only for preventive care but also for clinical practice.

Grief is defined as the mainly emotional reaction to bereavement, incorporating diverse psychological and physical reactions.³ Over the past few decades, scientific study of the symptoms, mental and physical health outcomes, and ways of coping with grief has expanded rapidly.^{3,11} This research seeks to develop ways to identify and provide preventive care for individuals at risk for bereavement-related health problems. The current state of knowledge with respect to the consequences of bereavement and care of bereaved people is the focus of this Review. We review scientific published work on the mental and physical health outcomes of bereavement. We address two basic questions. What psychological and

physical effects does loss of a loved person have on survivors? Is the risk of succumbing to health disorders greater in bereaved than non-bereaved counterparts? We try to establish prevalence of health outcomes, identifying subgroups that are especially vulnerable. Furthermore, we review studies on the effectiveness of psychological intervention programmes in reducing the risk of negative health issues in bereaved individuals, asking a third question: Can counsellors and therapists help to reduce the health problems of bereaved people?

The mortality of bereavement

Overall patterns

For several decades, researchers have examined whether the death of a loved one increases the mortality risk of the bereaved person—understood popularly as dying of a broken heart. The most valid and reliable information is provided in longitudinal investigations comparing bereaved with non-bereaved counterparts, controlling for several confounders¹² such as socioeconomic and lifestyle factors the bereaved spouse would have shared with their deceased partner, which could affect the bereaved spouse's health as well. Other potential confounders include cases of deaths from accidents involving both spouses (where one outlives the other and becomes categorised as widowed—thereby increasing the number of deaths of widows that are unrelated to the bereavement) and selection into remarriage of the healthiest widowed individuals

Search strategy and selection criteria

We searched PubMed, Medline, and PsycINFO with the terms "bereavement" and "grief" for reports published after 1997. When selecting reports for inclusion, we gave priority to: recent studies; those meeting quality criteria (sample size, response rate, use of standardised measurements, analytical techniques, etc); those that included a control group of non-bereaved individuals (where appropriate); prospective studies (before or after a death); and longitudinal studies. We also referred to our previous publications.^{1–7}

Reference/location	Sample characteristics	Follow-up (years)	Findings
Agerbo (2005) ¹³ Denmark	Spouses or cohabitants and parents Relatives of n=9011 who committed suicide, 180 220 matched controls Men and women, age 25–60 years	15	Men who had lost partner by suicide had relative risk of suicide of 46.2 (95% CI 1.3–116.4) and risk of mortality by other causes of 10.1 (6.5–15.8) Women's risks were 15.8 (6.6–37.4) and 3.3 (1.5–7.2), respectively Child bereavement by suicide or other causes imposed about a two-fold increased risk in parents
Bowling (1994) ¹⁴ UK	Spouses, n=505 Widows of men aged >64 years, widowers of women aged >59 years	13	Early excess mortality for widowers older than 74 years, no other significant high rates
Christakis and Allison (2006) ¹⁵ USA	Spouses whose partners spent time in hospital before death Widows=252 557, widowers=156 004 aged >65 years	9	Hazard ratio for widowers=1.21 (95% CI 1.19–1.22), for widows=1.17 (1.15–1.19) compared with people with a living spouse Very high increased risk in first 30 days after bereavement
Elwert and Christakis (2006) ¹⁶ USA	410 272 couples 86 323 widowers, 176 671 widows aged older than 65 years	9	Excess mortality seen in white but not black widowers and widows (similar in both sexes), especially in the first month, but remaining raised over many years
Erlangsen et al (2004) ¹⁷ Denmark	n=2323 (deaths from suicides, widowed vs other marital status of deceased was established) Men and women, age 50 years or older,	4	Significant increase in suicide risk during first year of bereavement, especially for men In absolute terms, oldest men had highest increase in suicide risk immediately after loss (15-fold > than middle-aged still-married men)
Kposowa (2000) ¹⁸ USA	Spouses Longitudinal survey of 50 000 households, 545 suicides Males and females, age 15 years and older	9	Being widowed had no significant effect on suicide risk
Li (1995) ¹⁹ USA	Spouses n=3486 widowed, n=6266 married Men and women, age 60 years or older	12	Suicide risk for widowers was 3.3 times as high as for married men For the widows, no increased risk noted
Li et al (2003) ²⁰ Denmark	Parents of children who died at age <18 years n=21 060 bereaved, n=293 745 controls Men and women, age 22–47 years	18	Overall increased mortality from natural and unnatural causes in mothers Early increased mortality from unnatural causes in fathers
Lichtenstein et al (1998) ²¹ Sweden	Spouses n=1993 pairs of twins, one widowed, the other still married	7	Bereavement was a mortality risk factor for both men and women, higher for the "young-old" (age <70 years) and for those recently widowed Decrease in risk of death after 4 years of bereavement in "young-old" widows (age <70 years) compared with married women
Lillard and Waite (1995) ²² USA	Spouses n=706 from cohort of 11 112 individuals Male and female, age 10 years or older	17	Risk of dying for widowed individuals was significantly higher than for married people (among both blacks and whites), but this risk was accounted for by deaths among widowers Widows' risks were similar to those of married women
Manor and Eisenbach (2003) ²³ Israel	Spouses n=4420 bereaved men, n=11 114 bereaved women; n=49 566 men, n=41 264 women in study population Age 50–79 years	9.5	Excess mortality for both bereaved men and women, especially with short duration of bereavement (during first 6 months, during which time excess mortality was 40% for men, 50% for women)
Martikainen and Valkonen (1996 [two studies] and 1998) ^{24,26} Finland	Spouses n=22 294 men, n=61 686 women, from n=1 580 000 married at start of follow-up Age 35–84 years	5	Excess mortality was 17% in men, 6% in women Higher risk for shorter than longer durations of bereavement
Mendes de Leon et al (1993) ²⁷ USA	Spouses n=237 widowed from a cohort of 1046 married Age 65 years and older	6	Increase of about 75–100% in risk of mortality in first 6 months in elderly widowers, but results not statistically significant due to limited power of the study Higher risk in widows than widowers (age 65–74 years)
Qin and Mortensen (2003) ²⁸ Denmark	Parents completing suicide n=18 611, controls n=372 220 Men and women aged 18–75 years	17	Both fathers and mothers (similar excess rates) had raised suicide risk (greater than other causes) after death of a child, especially after younger child loss and in first month of bereavement
Schaefer et al (1995) ²⁹ USA	Spouses n=1453 men, n=3294 women bereaved in cohort of n=12 522 married people Men and women, age 40 years or older	13	Raised relative risk in both sexes, particularly during second half of first year (when risk was about 2.0) In men, risk decreased after 24 months but remained high over years after bereavement In women, effects were restricted mostly to first year
Smith and Zick (1996) ³⁰ USA	Spouses n=141 men, n=351 women, n=1782 married controls Men and women, age 25 years or older	10	Younger (<65 years old) widowers' rates were raised when wife died suddenly (at 6 months or less onset of disease) Older (>64 years old) widows' rates were lower when husband died of long-term illness

Cross-sectional surveys, including national or other large-scale ones, are omitted from table 1 because even if they introduce controls for confounding factors, they do not have information on the duration of bereavement at death. Compared with individuals who have not been bereaved, cross-sectional surveys typically find patterns of high mortality in widowed people. They also find higher mortality in widowers compared with widows, and in younger compared with old widowed individuals (likewise, when the ratios are compared with non-bereaved individuals).

Table 1: Mortality of bereavement

(therefore the individuals left in the widow group tend to be the least healthy and more vulnerable to mortality).

Table 1 presents an overview of findings of longitudinal studies published since our 1993 review¹² on the mortality of bereavement. Nearly all reports have been of spousal bereavement, partly because these statistics are somewhat easier for researchers to access than other data but also because this type of bereavement is fairly common (compared with child loss) and has a great personal effect (compared with parental loss in adulthood). Most of the findings indicate an early excess risk of mortality,^{21,23–25,27} although some researchers have also noted risks persisting for longer than 6 months after bereavement.^{20,24,29}

Subgroup differences

Importantly, in some studies, researchers have examined subgroup differences—eg, sex and age patterns, education and ethnic origin, household size and number of children. For example, a controlled, large-scale study¹⁶ reported a greater risk of bereavement-related mortality in white people than in black people. Sex and age patterns have been recorded most frequently. Generally most, though not all,¹⁵ findings confirm that there are sex differences in the mortality of spousal bereavement (table 1):⁴ widowers (compared with married same-sex counterparts) are at relatively more excessive risk of mortality than widows (compared with married same-sex counterparts). That widowers with poor health tend not to remarry does not account for the differences in mortality. That sex-difference patterns can vary across types of loss (eg, spousal, child, parent) is noteworthy. Death of a child has been reported to have an even greater effect on mothers than fathers.¹⁹ Furthermore, patterns of mortality by sex in bereaved people could be altering with changing sex roles in recent decades.

With respect to age, findings of studies have also indicated a greater mortality risk for younger than for older bereaved people who have lost their spouse,^{24,29} confirming earlier reported patterns.¹² This effect might be more pronounced for widowers than for widows.^{23,30} However, caution must be used in interpretation of age differences in the mortality of bereavement.¹⁰ For example, institutionalised individuals (ie, those in prisons, nursing homes, juvenile detention facilities, or residential mental hospitals) are sometimes excluded purposely from large-scale samples¹⁸ and rates for residential relocation increase on the death of a partner.³¹ Thus, those people who are very frail and whose mortality risk is therefore high could be excluded from samples, thereby boosting the relative survival rates of elderly populations compared with young people.

Causes of death

Bereaved people die excessively from various causes, which are, not surprisingly, differentially related to the

duration of bereavement. Excess mortality in widowed populations is highest in the early months, and decreases with increasing duration of bereavement.²⁴ Martikainen and Valkonen²⁴ reported higher rates for widows and widowers compared with married people: mortality was very high for accidental and violent causes and alcohol-related diseases, moderate for chronic ischaemic heart disease and lung cancer, and small for other causes of death. Of bereaved parents, excess risk of mortality for mothers has been seen to extend for 18 years in one study, with deaths attributable to natural and unnatural causes, whereas for fathers, greater risk was noted early on in bereavement from unnatural causes.²⁰

As seen in table 1, several longitudinal studies have focused specifically on the risk that bereaved people will take their own lives, with most investigations finding excess mortality.^{13,17,20,28,32,33} Kaprio and colleagues,³³ for example, noted large excess mortality in the first week of bereavement: 66-fold for widowers and 9·6-fold for widows. In some of the other studies included in table 1, analyses by suicide were also reported.²⁰ In general, these findings confirmed the pattern of excess mortality seen in the suicide-specific studies listed. In some cases, studies have included analysis of the person whose death had been the cause of bereavement.¹³ Agerbo¹³ noted that death by suicide increased the suicide risk for bereaved widowers and parents even more than other causes.

Conclusions

Bereavement is associated with an increased risk of mortality from many causes, including suicide. In published studies, confounders have been well-controlled, and patterns are quite consistent, enabling the conclusion that the mortality of bereavement is attributable in large part to a so-called broken heart (ie, psychological distress due to the loss, such as loneliness³⁴ and secondary consequences of the loss, such as changes in social ties, living arrangements, eating habits and economic support³⁵). For widowers, the increased risk will probably be associated with alcohol consumption and the loss of their sole confidante, who would have overseen her husband's health status.⁴ Some evidence is available that excess mortality rates extend beyond spousal loss, to include parents (and possibly others too, such as children). Individuals who have been bereaved for a short time are at greater risk of mortality than are those bereaved for longer, although raised risk might persist (particularly from certain causes such as alcohol-related diseases, or for bereaved parents).

Although mortality is a drastic outcome of losing a loved one, it must be assessed in terms of the absolute number of bereaved people who die. Baseline rates are low, with, for instance, about 5% of widowers versus 3% of married men in the 55 years and older age category dying in the first 6 months of bereavement.⁴

Physical ill health

General patterns

Some investigators have reported a greater occurrence of physical health complaints in bereaved people (compared with matched controls), ranging from physical symptoms (eg, headaches, dizziness, indigestion, and chest pain) to high rates of disability and illness, greater use of medical services (in some studies), and drug use.^{1,35} Many surveys have been undertaken cross-sectionally, thus researchers have not identified recently bereaved people. Most studies have been done with bereaved partners, although a few have been undertaken for other types of loss. For example, Murphy and colleagues³⁶ compared the health of mothers and fathers after the violent death of a child. They recorded poorer physical health in mothers than in fathers, but unlike mothers, the health of fathers deteriorated rather than improved over time (14% of fathers rated their health as poor at 4 months after bereavement and 24% did so at 24 months).

Some studies have included findings across the wide range of physical ailments and illnesses, specifically for recently bereaved spouses, comparing rates with longer term bereaved and non-bereaved counterparts. In a classic study, Thompson and co-workers³⁷ reported odds of a new or worsened illness in older bereaved spouses at 2 months after their loss, estimating these odds to be 1.40 times the risk of non-bereaved people. Similarly, self-reported medication use was higher among bereaved individuals (1.73 times greater), as were perceived current ill health and ratings on illness severity. Visits to doctors were not increased in this elderly sample. By 6 months, most of these differences had declined.

The finding that visits to doctors were not increased in bereaved populations in the Thompson study³⁷ is noteworthy. In a study of women who had been bereaved for about 4 months, Prigerson and colleagues³⁸ noted that women who reported high intensities of grief had reduced use of health services for physical health disorders despite the fact that they had a significantly increased likelihood of high blood pressure and functional impairment compared with widows reporting low grief intensities.

The results suggest that bereaved individuals who are most in need of health care might not be obtaining such help. The findings of this investigation are particularly worrisome in view of results of a pre-post bereavement investigation of hospital patients' spouses.³⁹ High intensities of grief at an earlier point in the investigation predicted severe physical health disorders (eg, cancer, heart attack) in bereaved individuals more than a year subsequently.

Specific debilitating aspects

Other research groups have identified additional debilitating aspects of physical ill health in bereaved populations. For example, in a cross-sectional investigation, Bradbeer and colleagues⁴⁰ examined the occur-

rence of pain in older widowed individuals, focusing on particular aspects (activity-limiting pain, strength of most severe pain, and current pain). Those bereaved for short durations had substantially increased activity-limiting pain and moderate-to-severe current pain. In general, compared with non-bereaved controls, widowed people were three times more likely to report having current strong pain. The current level of mood disturbance mediated the relation between widowhood and pain.

Bereavement has also been associated with weight loss.^{35,41} Schulz and colleagues⁴² reported that, in general, individuals who had not undertaken caregiving of their spouse before their death were more likely to have weight loss in bereavement. These people were also more likely to be using non-tricyclic antidepressants. The researchers suggested that these patterns might be attributable to the unpredictable nature of the death.

Conclusions

People who have been bereaved are more likely to have physical health problems, particularly those who have been bereaved recently. Bereaved individuals also have higher rates of disability, medication use, and hospitalisation than non-bereaved counterparts. Although widowed people in general consult with doctors more frequently, most likely because of symptoms of anxiety and tension,³⁵ findings suggest that many of those with intense grief might fail to consult with doctors when they need to.

Psychological symptoms and ill health

Psychological symptoms

Bereavement is also associated with various psychological symptoms and illnesses;^{1,35} panel 1 provides an overview of common reactions.^{1,7} Neimeyer and Hogan have reviewed grief assessment methods.⁴³ Psychological reactions are, generally speaking, most intense in early bereavement.^{35,44} Studies of individual psychological reactions to bereavement, such as those listed in panel 1, have been undertaken by many researchers, including investigation of suicidal ideation,^{34,44-48} loneliness,^{49,50} and insomnia.⁵¹ Other workers have identified relations between grief-specific symptoms and depression, anxiety, distress, somatic symptoms, insomnia, and social dysfunction at 6 months' bereavement duration.^{39,44}

Researchers have also studied the similarities and differences between depression and grief,^{43,52-56} even at a physiological level.⁵⁷ Growing evidence suggests that depression and grief might represent distinct, though related, clusters of reactions to bereavement.^{52,56}

Bereavement is a harrowing experience for most people, one that causes considerable upset and disruption of everyday life. For most people the experience, though difficult, is tolerable and abates with time. For some, however, the suffering is intense and prolonged.

Psychological reactions to bereavement are diverse,^{49,58} varying between individuals as well as between cultures and ethnic groups.⁵⁹⁻⁶¹ Few well-controlled studies of

cultural differences in bereavement have been done. A study⁶⁰ of qualitative interviews with bereaved African-American individuals described unique characteristics of grief in that population, undermining general assumptions made about grief based on studies of white Americans. Generally, clinical experience and accounts of grieving in specific societal and ethnic groups suggest there are differences in cultural patterns of grief and grieving, with some differences attributable to religious beliefs. For example, Egyptian Muslims express intense overt grief, but the Muslim community in Bali does not; they avoid any display of grief such as crying.⁶²

Some studies of depression suggested the possibility of cultural differences, specifically, increased soma-

tisation of grief in non-western cultures.⁶³ However, later studies do not support this notion. In a large-scale international study, Simon and colleagues⁶⁴ noted that cognitive and somatic symptoms were alike across diverse cultures. Although patients' experience of depression seemed to differ little across cultures, variation was evident in presenting symptoms. For example, at centres where depressed patients did not have an ongoing relationship with a primary-care physician, a situation that is more common in non-western settings, patients were more likely to present with somatic symptoms than were those who had a personal physician. These results suggest that the differences in different countries' health care systems may play a role in how patients present as well as patients' beliefs about the best way to seek help and have one's troubles recognised. Nevertheless, it is likely that the fundamental manifestations of grief are universal.⁶⁵

Reactions vary in nature and intensity according to the type of lost relationship. Scientific investigation has recorded specific reaction patterns to various different types of bereavements. For example, uniquely, in the case of a child's death, many bereaved grandparents feel enormous sadness and pain for their grieving adult child and a sense of generational survivor guilt.⁶⁶ Studies have been done looking at a wide variety of bereavements, including loss of a parent in childhood or adolescence⁶⁷⁻⁶⁹ and in adulthood,⁷⁰ the death of a child,⁷¹⁻⁷³ perinatal loss,^{74,75} loss of a grandchild,⁶⁶ or death of a friend.⁷⁶ AIDS-related grief and coping—with a focus on gay communities—has also been a concern of scientific investigation in recent decades.⁷⁷⁻⁷⁹

Changes during bereavement

Changes in symptoms of bereavement over time were originally described in terms of stages or phases of shock, yearning and protest, despair, and recovery,⁸⁰ and lately in terms of tasks.⁸¹ This so-called task model is used in guiding counselling and therapy. The four tasks of grieving are: accepting reality of loss; experiencing the pain of grief; adjusting to the environment without the deceased; and relocating the deceased emotionally and moving on. We should note, however, that not all grieving individuals undertake these tasks, nor, if they do, do they undertake them in a fixed order. Both individual and cultural differences may play a role. In addition, bereaved individuals are far from uniform in their emotional reactions over time, leading some investigators to suggest that there are different trajectories of adaptation.^{58,82}

Resilience versus vulnerability

Researchers have reported that over the long-term, most bereaved people are resilient, recovering from their loss, emotionally and physically, with time.^{58,83} These claims are in line with general scientific opinion that bereavement is a normal life event to which most

Panel 1: Reactions to bereavement

Affective

Depression, despair, dejection, distress
Anxiety, fears, dreads
Guilt, self-blame, self-accusation
Anger, hostility, irritability
Anhedonia—loss of pleasure
Loneliness
Yearning, longing, pining
Shock, numbness

Cognitive

Preoccupation with thoughts of deceased, intrusive ruminations
Sense of presence of deceased
Suppression, denial
Lowered self-esteem
Self-reproach
Helplessness, hopelessness
Suicidal ideation
Sense of unreality
Memory, concentration difficulties

Behavioural

Agitation, tenseness, restlessness
Fatigue
Overactivity
Searching
Weeping, sobbing, crying
Social withdrawal

Physiological-somatic

Loss of appetite
Sleep disturbances
Energy loss, exhaustion
Somatic complaints
Physical complaints similar to deceased

Immunological and endocrine changes

Susceptibility to illness, disease, mortality

Adapted from references 1 and 7, with permission.

people adjust.^{1,3,84} Depression is thought to be such a normal response to bereavement that the Diagnostic and Statistical Manual of Mental Disorders, 4th edition⁸⁵ excludes people bereaved for less than 2 months from the diagnosis of major depressive disorder. Although identifying what makes people susceptible to psychological disorders has a long research tradition, the problem of bereavement can also be approached by studying the factors that make people resilient. For example, researchers have focused on positive growth⁸⁶ or, more specifically (albeit with limited empirical evidence so far), on creativity that might come about as a result of (early-life) bereavement.⁸⁷ Thus some people gain from their bereavement experience.

Psychiatric disorders

In general, most people have acute suffering, particularly early on in bereavement.^{3,35,84} And for a few, symptoms for reactions listed in panel 1, such as depression or anxiety, can become clinically important.⁸⁸ Many studies report an increase in depressive symptoms in bereaved populations.³⁵ For a few people depression reaches clinical importance,⁸⁸ with findings of studies suggesting that 25–45% have mild levels of depressive symptoms and 10–20% show clinical levels.¹⁰

In some cases, especially when the loss of life has been massive or the nature of the deaths horrific, the bereaved develop post-traumatic stress disorder.^{88,89} In a sample of bereaved parents 5 years after the death of their child, 27.7% of mothers and 12.5% of fathers met diagnostic criteria for post-traumatic stress disorder compared with 9.5% women and 6.3% men in normative samples.⁹⁰ Psychiatric morbidity increases after widowhood⁹¹ and bereaved parents have higher rates of psychiatric morbidity than non-bereaved individuals.⁹² In a study by Li and colleagues,⁹² mothers especially had high rates of first psychiatric admission, particularly during the first year of bereavement. Of course, bereaved individuals can have a combination of disorders, developing, for example, both post-traumatic stress disorder and major depressive disorder, further complicating their grief reaction.^{88,93}

Complications in the grieving process

In some cases, the grieving process can become complicated or disturbed, perhaps because of other mental-health difficulties.^{38,94–96} Complicated grief has been defined as a deviation from the normal (in cultural and societal terms) grief experience in either time course, intensity, or both, entailing a chronic and more intense emotional experience or an inhibited response, which either lacks the usual symptoms or in which onset of symptoms is delayed.^{3,35,97,98}

Prigerson and Jacobs⁹³ have suggested criteria for complicated grief in terms of separation distress (eg, preoccupation with thoughts of the deceased) and traumatic distress (eg, feelings of disbelief about the death). Their construct of complicated (long-term) grief bears similarity to chronic grief while omitting delayed or

Panel 2: Criteria for complicated grief proposed for Diagnostic and Statistical Manual of Mental Disorders, 5th edition⁹⁶

Criterion A

Chronic and disruptive yearning, pining, longing for the deceased (yearning & longing)

Criterion B

The individual must have four of the following eight remaining symptoms at least several times a day or to a degree intense enough to be distressing and disruptive:

- 1 Trouble accepting the death
- 2 Inability to trust others
- 3 Excessive bitterness or anger related to the death
- 4 Uneasy about moving on
- 5 Numbness or detachment
- 6 Feeling life is empty or meaningless without deceased
- 7 Bleak future
- 8 Agitated

Criterion C

The above symptom disturbance causes marked and persistent dysfunction in social, occupational, or other important domains

Criterion D

The above symptom disturbance must last at least 6 months

*For a diagnosis of complicated grief, A, B, C, and D criteria must be met. Reprinted from reference 96 with permission.

inhibited grief. Prigerson and colleagues have used their analysis to develop diagnostic criteria for complicated (prolonged) grief (panel 2). An alternative diagnostic system in terms of a stress response model is presented by Horowitz and coworkers.⁹⁹ Complicated grief has not yet been classified as a category of mental disorder in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition,⁸⁵ although efforts are being made to have it included as a separate category in forthcoming editions.¹⁰⁰

Estimates of the occurrence of complicated forms of grief vary across investigations and diagnostic criteria. For example, chronic grief has been reported to occur in about 9% of a population of adults experiencing bereavement,⁸⁸ whereas 20% prevalence for complicated grief was recorded in another investigation.⁹³ In a study of parents who had lost a child 18 months previously,¹⁰¹ as many as 78% of those bereaved by suicide or accidents and 58% by sudden infant death syndrome scored above a suggested cutoff level, using the Prigerson and Jacobs⁹³ criteria for complicated grief reactions. Such large numbers might indicate high intensity of grief in parents but, given the nature of the parent-child relationship, they may not necessarily indicate pathological processes. This raises the question whether this cut-off point is a good marker of chronic grief or whether norm scores for parents need to be reset.

	Specific risk factor	Main findings
Situation and circumstances of death	Cause of death (including sudden, unprepared, untimely, traumatic)	Inconsistent results for sudden vs expected deaths; ^{111,112} traumatic deaths: worse outcomes; ^{89,113} note also parents' reactions to traumatic deaths; ^{36,90} Sudden death likely to have the most effect on vulnerable people (eg, those with low self-esteem) and those who are personally less well-prepared ^{114,115} Few differences in effect of suicide or non-suicide deaths in some studies, but longer adaptation and some aspects (eg, stigmatisation, shame) more of an issue after suicide deaths than after other deaths. ¹¹⁶ Excessive risk of mortality (including suicide) after suicide death. ¹³ Suicide-bereaved children might be vulnerable ¹¹⁷
	Circumstances surrounding death or place of death	Multiple (concurrent) losses; ² witnessing extreme distress in terminal illness increases effect of loss, ¹¹⁸ but a so-called good death (eg, appropriate medical care, reducing distress for dying and bereaved) ameliorates the effect ¹¹⁹ Rituals can help, particularly for children ¹²⁰ Deaths with hospice care are sometimes (not always ¹²¹) associated with better outcomes than deaths in hospital in bereaved people. Some evidence suggests that deaths in hospice care are associated with lower mortality rates in the bereaved. ¹²² Death of a child in hospital is associated with more symptoms for parents than the death of a child at home ¹²³
	Pre-bereavement caregiver strain	Strain affects health of caregiver before and after bereavement, ^{7,42,124-126} although successful caregiving can be helpful, caregiving benefits might also be associated with high amounts of grief ¹²⁷ Health consequences not only owing to burden and responsibilities but also to personal neglect of one's own health, nutrition, physical and emotional needs ⁴² Death might on occasion be judged a relief for patient and bereaved ¹²⁸
	Type of lost relationship (eg, child vs spouse)	Findings of a few studies show that kinship relationship moderates type of effect on health. ^{129,130} Loss of a child (adult) associated with more intense and persistent grief and depression than loss of spouse ^{131,132}
	Quality of relationship with deceased	Earlier claims that poor relationships (eg, ambivalence, dependency) lead to difficulties in bereavement, some benefits from good relationships, ⁹⁵ but findings not consistent concerning positive or negative outcomes and marital quality with respect to dependency, closeness, harmony, etc ¹³³⁻¹³⁵
	Ongoing conflicts, concurrent work and legal difficulties; poverty or economic decline	Concurrent stressors affect bereavement outcome, eg, financial hardship that compounds difficulties in adjustment. If bereavement is accompanied by a drop in economic resources, or insufficient income, effects of bereavement might be exacerbated. ^{7,26,136} Poor eating habits and loss of weight compared with married people ⁴¹
Intrapersonal risk or protective factors	Personality or attachment style	Some protective factors identified (eg, optimism, ^{132,137} perceived control over daily activities, ¹¹⁵ high self-esteem, ^{115,138} secure attachment style in relationships with others) ^{56,139,140}
	Predisposing factors or previous bereavements	Pre-bereavement depression probably associated with high risk of intensification of depression in bereavement ⁸⁸ Findings of most studies show early (childhood or adolescent) bereavement to be a risk for later (adulthood) mental and physical health issues; ¹⁴¹⁻¹⁴⁴ also noted are: cortisol concentration differences, ^{142,143} information processing biases; ¹⁴⁵ different sibling relationships. ¹⁴⁶ Adequacy of remaining parent care and personal characteristics of child are important ⁴¹
	Religious beliefs and other meaning systems	Findings of some, but by no means all, studies show religion helps ^{132,147-149}
	Sociodemographic variables	Socioeconomic status: findings of some studies suggest that health outcomes of bereavement are not related to socioeconomic status (see also economic resources below). ^{2,7} Some reports of poorer health in lower socioeconomic groups probably indicate non-bereavement-specific patterns. ² Relative mortality is similar across education and income groups but absolute differences compared with married people are greater in lower social strata ²⁵ Gender: widowers are relatively more vulnerable than widows; ^{4,150-151} mothers are affected more than fathers ^{19,152} Age: young people are reported to be more vulnerable in some studies, ^{7,84} curvilinear relations also noted ¹⁵³ Ethnic group: similarities in grieving recorded between black and white people; however, anger and despair are lower in black populations, ¹³⁴ and high rates of psychiatric disorders ¹⁵⁴ and mortality are seen in both black and white bereaved people (patterns of comparative sex differences are less clear). ²² Differing ethnic groups also have unique features of grief ⁶⁰
Interpersonal or non-personal resources and protective factors	Social support, cultural setting	Social support helps bereaved and non-bereaved individuals alike, but bereaved people with higher support are not comparatively better-adjusted than are those with low support, compared with non-bereaved counterparts ⁵ Social isolation compounds difficulties in adjustment ¹⁰¹ Cultural and social embedding probably affects bereavement outcome ⁶⁰
	Economic resources	Material resources (money; services) might buffer against extra stresses, but in general, effects of bereavement are broadly similar across income groups ^{2,26}
	Professional intervention	See table 3
Coping styles, strategies, processes	Grief work, appraisal processes	Grief work, sharing, and disclosure are not as predictive of outcome as has been previously claimed. Avoidance is not necessarily so detrimental, but rumination is associated with poor outcomes, whereas positive (re)appraisal is associated with good outcomes. ^{5,52,77,137,155-159} Meaning making is regarded as beneficial ^{157,158}
	Emotion regulation	Regulation (confrontation or avoidance; positive and negative appraisals) in the grieving process is likely to be beneficial ^{52,59,160}

Table 2: Potential risk or protective factors in bereavement

Conclusions

A wide range of psychological reactions are associated with bereavement, causing researchers to regard grief as a complex emotional syndrome.¹⁰² Although some responses can be more symptomatic of grief than others, no one response is essential to the syndrome. Furthermore, reactions range from mild and comparatively short-lived

to extreme and long-lasting over the months or even years of bereavement.

Additional medical implications

Bereavement can have an even broader range of consequences than those already discussed. Bereavement has been shown to be associated with impaired memory

performance,¹⁰³ nutritional problems,¹⁰⁴ work and relationship difficulties and difficulties concentrating; and decreases in social participation.^{105,106} And health-care costs for bereaved individuals have been shown to be higher.¹¹ These health effects are likely to be associated with changes in different underlying physiological mechanisms. A full discussion of these mechanisms is beyond the scope of this Review, however, research has begun to show biological links between bereavement and increased risks of physical illnesses. For example, research has been done looking at how bereavement affects the immune system, leads to changes in the endocrine, autonomic nervous, and cardiovascular systems, and helps to account for increased vulnerability to external agents;^{2,3,107} how MRI scans can be used to study the neuroanatomy of grief,¹⁰⁸ and how autonomic and emotion regulation indicators can be used to identify physiological differences between bereaved, depressed, and control individuals.¹⁰⁹

Risk factors

Much research effort has been directed at identification of risk factors to understand why people are affected by bereavement in different ways; why some people have extreme or lasting outcomes and others do not.¹¹⁰ Bereavement researchers use the term risk factor to signify the situational and intrapersonal and interpersonal characteristics associated with increased vulnerability to the range of bereavement outcomes.^{110,111} Some researchers have integrated into their analyses protective factors that appear to promote resilience and to lower risk of adverse health outcomes.⁸³ Indeed, research should incorporate analyses of the coping process, which can impede or facilitate adjustment, to determine whether there are healthy and unhealthy ways of going about grieving.

Table 2 categorises risk factors into four categories, indicating the scope of empirical research and providing some key findings and references. Although some of the listed factors have been investigated empirically, others are suggested in clinical or qualitative published work and need further quantitative investigation. Furthermore, in some studies non-bereaved controls are omitted. Thus, whether the specific risk factor is general (present in non-bereaved people too) or bereavement-specific remains unclear.

There is considerable evidence that many of the variables listed under situation and circumstances of death contribute to differences in adjustment (although some work has yielded inconclusive or contradictory results). It is important, then, to take the broader circumstances of death, including cause of death and caregiver strain, into account and to realise the complex combination of personal and situational factors that account for the effect of variables such as these. We noted in table 2 discrepancies in findings on quality of relationship to the deceased (placed in this category since it bears on circumstances and situation of death, but it is relevant to other categories too). Further investigation of the various features of

relationships (eg, over-dependency vs typical dependency; lack of harmony vs autonomy) might shed light on apparent inconsistencies.¹³³ Research on attachment strongly supports the view that the quality or nature of the lost relationship has much effect on outcome.^{80,95,139,140}

Intrapersonal resources and protective factors refer to characteristics intrinsic to the bereaved individual. Remarkably little research has been undertaken on these aspects of personality, despite the fact that clinicians assume that people with well-adjusted personalities would be better able to deal with loss than those who are less well-adjusted.⁸⁸ Findings of available studies support the view that robust individuals adjust to bereavement better than people who are fragile. These patterns are probably related to attributional⁵² and emotional regulation processes.^{52,59,160} Attributions refer to the interpretations with which people make sense of what is happening to them; emotion regulation processes refer to the strategies people use to modify aspects of their emotions. Research into such risk factors and the associated underlying cognitive processes is incomplete. Further research is also needed on other predisposing vulnerabilities (eg, previous mental-health disorders, medical or physical health issues, age-related frailty, substance abuse), but childhood loss of a parent has been better researched, indicating various long-term effects. Importantly, evidence suggests that the adequacy of remaining parental care (eg, warmth and discipline) after the death of one parent, and personal characteristics of the child (ie, factors contributing to resilience) are more powerful predictors of later adjustment than the loss of the parent per se.^{141,142}

Of interpersonal factors, social support from others would generally be regarded as a major variable, buffering individuals against the negative health outcomes of bereavement. However, this assumption has not been well-founded empirically.^{5,161} Inadequate social support is a general risk factor, one that affects the health and well-being of non-bereaved people as much as those who

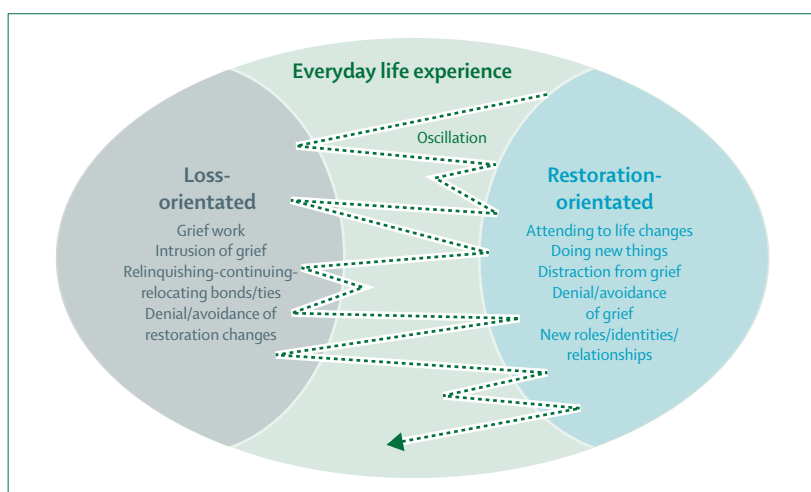


Figure: Dual process model of coping with bereavement¹⁶⁰

	Results	Comments
Primary		
16 studies before 2001	Not effective in most	Absence of effects possibly because nearly all studies used outreaching recruitment procedures (help offered rather than asked for) ¹⁷¹
4 studies after 2001	More positive results than previous studies. ^{78,79,173,174} Suggestions of better results seen in females (adults and young girls) than in young males. ^{78,79,174} Better results in people with mental-health problems at baseline, for both adults ¹⁷⁵ and children ^{174,176}	Positive results possibly because three of four studies were inreaching studies (bereaved requested help). Efficacy for those with higher levels of mental-health problems before intervention suggests rationale for secondary intervention
Secondary		
7 studies before 2001	Generally, though not unequivocally, more effective than primary intervention, though effects were modest and improvements were temporary	Effectiveness associated with strict use of risk criteria, showing need to differentiate more within groups and tailor intervention to the subgroup (eg, by gender ¹⁸¹)
3 studies after 2001	Improvements in children bereaved by suicide in group intervention (compared with community care). ¹⁷⁷ Families at high-risk showed slightly more improvement after family-focused grief therapy ^{178,179} in terms of general distress (not family functioning). Those with worst symptoms had most improvement. No effects of a highly-specific (body touching) therapy ¹⁸⁰ on bereaved mothers. Emotion-focused interventions most effective for distressed widowers; problem-focused for distressed widows. ¹⁸¹ Fathers in general, and mothers with low baseline values of distress and grief did not benefit from group intervention focused on problems and emotions; highly distressed or grieving mothers improved most through intervention ¹⁸²	
Tertiary		
7 studies before 2001	Modest but lasting positive effects on symptoms of pathology and grief (individual and group interventions; from analytically oriented dynamic psychotherapy to cognitive and behaviour therapy)	Therapy for complicated grief or bereavement-related depression and stress disorders has led to substantial and lasting results. 3 additional studies were difficult to interpret (no non-intervention control group) but were interesting for future research. ^{51,165,185,186} For example, gender differences in effects of time-limited supportive and interpretative group therapy in bereaved people with major depression: women improved more than men in depression, anxiety, avoidance and general distress; men reported less grief than women after interpretive group therapy. ¹⁸⁵ A specific individual treatment module for complicated grief was more effective than standard interpersonal psychotherapy ¹⁶⁵
2 studies after 2001	Substantiate earlier findings: strong effects in terms of intrusion, avoidance, grief, depression & anxiety. ^{183,184} Assessed nortriptyline and interpersonal psychotherapy (alone and in combination) for people with bereavement-related major depressive episodes examined. ¹⁸⁴ Nortriptyline led to less remission than placebo and psychotherapy. Indication that combination of medication and psychotherapy gave best results	

Table 3: Effectiveness of bereavement intervention programmes: psychosocial and psychological counselling and therapy^{105,170}

are bereaved, but others cannot easily take the place of the deceased individual. Use of professional support can also be regarded as an interpersonal resource factor, encompassing the more formal level of social support than that provided within the family, friendship, and neighbourhood networks.

The way that an individual goes about coping with bereavement is important because, unlike many other variables, it can be changed—eg, it may be amenable to brief interventions.⁷⁷ In recent decades, researchers have been critical of the generally accepted notion that so-called grief work (confronting the reality of loss and relinquishing the bond to the deceased individual)¹⁶² is essential for overcoming bereavement.⁵ Empirical research has shown that people who do not work through their grief frequently recover as well as, if not better than, those who do so.^{155,163} Findings of studies on benefits of emotional disclosure or social sharing,^{5,156} or on negative effects of avoidance or repression,^{59,155} also provided little support for the grief-work notion.

By contrast, finer-grained examinations of maladaptive processes have provided useful leads. Findings of such studies suggest the importance of positive and negative cognitions and the regulation of emotion in the grieving process,⁵² both of which have been integrated in the dual process model of coping with loss.¹⁶⁰ This model (figure) addresses shortcomings of the grief work model and posits an oscillation process, whereby the bereaved individuals would confront and avoid stressors to do

directly with the loss, such as going over death events (loss orientation) versus sources of secondary stress, such as dealing with finances (restoration orientation). Following this model, adaptive grieving entails both confrontation and avoidance of the two types of stressor. Researchers are currently testing variables of the model and using the model as a guideline for designing intervention programmes.^{164,165}

Conclusions

We have noted that situational, intrapersonal, interpersonal, and coping factors affect bereavement outcome. They do so in complex ways and there could be interactions between factors (eg, between personality and circumstances of death) that operate to affect outcome. Many potential risk factors have been under-researched. The ways that risk factors relate precisely to the different health outcomes also remain to be seen—eg, why one person can succumb to mental-health disorders while another might die prematurely after bereavement.

Intervention efficacy

Since bereavement increases the risk of negative health outcomes for some individuals, research needs to establish whether intervention is to be recommended and whether intervention is actually effective. The focus here is on psychological and not medical or pharmacological intervention: we restrict the discussion to effectiveness studies of psychosocial and psychological counselling and

therapy programmes (to our knowledge, very little research exists on the effectiveness of pharmacological and medical interventions for bereaved people, but Alexopoulos¹⁶⁶ and Raphael and colleagues⁸⁸ provide relevant information. The Center for the Advancement of Health addresses the role of health-care professionals and health systems issues¹¹). A few previous reviews have been published.^{6,11,167-170} Our own narrative review published in 2001⁶ was based on strict methodological selection criteria (presence of control groups, non-systematic assignment to the experimental and control condition, an appropriate design with valid and reliable assessment instruments, correct statistical analyses, etc) and excluded studies that were not primarily aimed at bereaved people. Table 3 summarises and updates the conclusions arrived at in 2001 and 2005.

Grief interventions can be divided into primary, secondary, and tertiary preventive interventions.⁶ Primary preventive interventions are those in which professional help is available to all bereaved individuals irrespective of whether intervention is indicated. Secondary preventive interventions are designed for bereaved individuals who, through screening or assessment, can be regarded as more vulnerable to the risks of bereavement (eg, high levels of distress, traumatic circumstances of loss, etc). Tertiary preventive interventions denote those providing therapy for complicated grief, grief-related depression, or post-traumatic disorders, usually evident longer after bereavement (since pathological processes usually take time to develop).

Conclusions

As Parkes,¹⁸⁷ the leading expert on bereavement, stated, there is “no evidence that all bereaved people will benefit from counselling and research has shown no benefits to arise from the routine referral to counselling for no other reason than that they have suffered a bereavement”. Primary prevention can, however, be helpful when the initiative is left with the bereaved individual. Both in terms of suffering and finances, this strategy is to be recommended. This approach needs an accessible infrastructure of grief counselling organisations. Interventions for risk groups are an important provision, but improvements in assessment of empirically based risk factors are essential for better results to be achieved. A reasonably wide variety of treatment modalities for complicated grief is available and these are generally quite effective.⁶ Systematic comparison of the relative effectiveness of different therapeutic approaches is needed to understand what works for whom. A first step in this direction would be to address closely gender differences in the effectiveness of intervention.¹⁸¹

Final comments

We have recorded negative health issues across various mental and physical outcomes and for some different types of bereavement, finding quite consistent patterns in research from various (mostly the USA, Europe, and

Australia) countries. At the same time, we have noted that grief is a normal natural process after bereavement. Most reactions are not complicated and for most bereaved people, family and friends, religious and community groups, and various societal resources will provide the necessary support. Professional psychological intervention is generally neither justified nor effective for uncomplicated forms of grief.

Much is now known about typical manifestations of grief and grieving, and there is growing understanding about factors that either complicate the course of grief over time, raise the risk of other mental and physical disabilities, or both. Progress has also been made in the design and provision of psychological intervention for those who need it. Nevertheless, although the quality of studies in the various areas reviewed above is better than in previous research, methodological shortcomings still are present in some investigations (eg, selection biases, small samples, poor response, and high dropout rates).

Furthermore, even though we were able to make statements about general occurrences and manifestations associated with bereavement, considerable gaps in knowledge remain. For example, some of the most recent studies of the mortality of bereavement are still of spousal loss: the effect of other types of bereavement on mortality has received too little research attention. Likewise, we need to learn more about codeterminants of the poorer outcomes of bereavement, to understand how the circumstances of bereavement interact with pre-bereavement experience, personal factors, and ways of coping with grief to cause difficulties. Finally, there is scope for improvement in the design of intervention studies and for strict assessment of their effectiveness following evidence-based treatment criteria.

Conflict of interest statement

We declare that we have no conflict of interest.

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