Recently widowed people were at greater risk of dying than married people

Lichtenstein P, Gatz M, Berg S. *A twin study of mortality after spousal bereavement*. *Psychol Med* 1998 May;28:635-43.

Question

What are the effects of spousal bereavement on mortality?

Design

Cohort analysis including a co-twin control analysis.

Setting

Community based study in Sweden.

Participants

35 860 people (52% women) who were born between 1886 and 1958. Cohort 1 included people born between 1886 and 1925 (n = 10 040, mean age 65 y in men and 66 y in women) and cohort 2 included people born between 1926 and 1958 (n = 35 852, mean age 40 y in men and 39 y in women).

Assessment of risk factors

Data on marital status and date of death were obtained by linking the Swedish population registry and the cause of death registry. Data on twins were obtained from the Swedish Twin Registry. Questionnaires issued every few years from 1961 provided information on health and health related risk factors. These included smoking status, alcohol consumption, education, body mass index, cardiovascular disease, respiratory disease, and other chronic disease.

Main outcome measure

Mortality in widowed people compared with married people.

Main results

The study sample was analysed in 2 age groups: young-old (≤ 69

y) and old-old (≥ 70 y). Mortality was higher in widowed people than in married people, particularly in the young-old who were bereaved for < 6 months (relative hazard [RH] of death in men 2.68, 95% CI 1.20 to 5.97 and in women 2.35, CI 1.26 to 4.40). The mortality rate decreased the longer the widowed people were followed after their spouse's death. In young-old widows who survived > 4 years after bereavement, the RH of death was lower than that of married women (RH 0.60, CI 0.41 to 0.88). Sufficient questionnaire data were available for cohort 1 to do a covariate analysis controlling for other risk factors. The survival pattern was not substantially affected and still showed a greater mortality rate in recently bereaved young-old people and greater survival in young-old widows who were bereaved > 4 years before. The co-twin control analysis confirmed the results. Recently widowed people had a greater risk of death than married people, the risk decreased the longer the period of time from bereavement, and young-old women who were widowed > 4 years had a lower risk of death than their married twins (RH 0.48, CI 0.23 to 0.98).

Conclusions

The mortality risk in recently widowed people who were ≤ 69 years of age was greater than in married people. Widowed women who survived longer than 4 years after bereavement had a lower risk of dying than married women.

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For correspondence: Dr P Lichtenstein, Institute of Environmental Medicine, The Karolinska Institute, Box 210, S-17177 Stockholm, Sweden. Fax +46 8 30 45 71.

Commentary

The sophisticated and carefully executed epidemiological investigation by Lichtenstein *et al* provides strong evidence that spousal bereavement increases mortality among older people, especially young-old women ≤ 69 years of age. By comparing survival rates between bereaved and still married twins, the authors effectively control for several constitutional and early life risk factors that might otherwise threaten the validity of their results (ie, factors that might compromise long term survival independently of the stressors associated with bereavement). The inclusion of other prognostic indicators (eg, smoking, body mass index, and cardiovascular disease) also helps to rule out alternative interpretations. Thus, the subset of findings in which such sampling and statistical controls could be incorporated provides the most compelling evidence in this report.

Controlling for prognostic factors, the overall pattern of survival among young-old people conformed to that described, but the finding was statistically significant

in only 4 of 8 comparisons against population norms. Among the old-old, it was statistically significant in only 1 of 8. Even fewer comparisons met this criterion when these analyses were repeated to compare survival across bereaved and non-bereaved twins. Psychosocial influences on mortality are subtle and difficult to detect. Given the careful methodology and huge subject pool (> 36 000 people over 100 years), these findings provide compelling evidence that spousal bereavement is importantly linked to mortality. The absence of a more consistent pattern, however, also hints that the causal mechanism is complex and multifactorial.

Considerable evidence links the availability of social support to survival, and this effect can be more powerful than established prognostic factors (eg, smoking, obesity, or alcohol).¹ Involvement in meaningful social relationships can promote survival.² Evidence from chronic disease populations also indicates that mortality can be reduced by routine stress

monitoring,³ regular telephone contact,⁴ and participation in support groups.⁵ Continued involvement in valued activities and interests provides another important mechanism for promoting psychosocial adaptation.⁶ Efforts to enlist loved ones and significant others in providing needed support and encouragement to carry on after bereavement can thus help to promote survival and simultaneously facilitate the resolution of grief.

Gerald M Devins, PhD, CPsych
Centre for Addiction and Mental Health
Toronto, Ontario, Canada

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