

Partnership history and health and mortality in later life: an analysis of record linkage data from England & Wales

Emily Grundy, *London School of Hygiene and Tropical Medicine*

Cecilia Tomassini, *London School of Hygiene and Tropical Medicine*

Sabya Farooq, *London School of Hygiene & Tropical Medicine*

Background

An extensive literature has shown associations between marital status and indicators of health with the married having the best health, followed by the never-married and then the formerly married (Vebrugge 1979; Hu and Goldman 1990 Wyke and Ford 1992 Grundy and Sloggett 2003).

This association is hypothesised to reflect both positive health selection (unhealthy people are less likely to marry, stay married or remarry) and the protective effects of companionship, care when ill, sexual intimacy, material advantages (especially for women), domestic services and control of unhealthy behaviours (especially for men) (Umberson 1992; Hahn 1993; Waite 1995; Murphy, Glaser and Grundy 1997; Sherbourne & Hays 1990, Ducharme 1990). The ‘crisis’ effect of experiencing a serious adverse event, such as widowhood or marital breakdown, is also a contributory factor. Widowhood is a particularly difficult life transition associated with loss of physical functioning and an increased risk of death and depression to which men are particularly vulnerable (Stroebe 1987 and Stroebe 1987). A few more recent studies have explicitly looked at partnership statuses such as cohabitation and second marriage, rather than simply contrasting the currently legally married with those of other statuses. One such study using data on reported long term illness rates from the samples of anonymised records drawn from the British census reported rates of long term illness lowest for those in first marriage, followed by the remarried, with intermediate values for the widowed and divorced and highest for the single. Those in cohabiting unions had illness rates intermediate between those of the married and the single; similarly those in second marriages had better health than the divorced but a higher prevalence of illness than those in first marriages [Glaser, Murphy and Grundy 1997].

It has been suggested that associations between marital status and health may weaken, or even be reversed, in older women. Goldman, Korenmen and Weinstein (1995) found that never-married older women had better health outcomes than their married counterparts, a result the authors attributed to more extensive social ties built up as an alternative to marriage. Grundy and Sloggett (2003) similarly found that among 65-84 year old women, the never-married had better health on a range of indicators than the currently married (after control for a range of socio-economic factors and for smoking status). However, these analysis were based on samples excluding the institutional population (the US Longitudinal Study of Aging and the Health Survey for England) and analyses of British data including the institutional population have shown a continuing, although weaker,

advantage for the married, even in the oldest age groups (Murphy, Glaser and Grundy 1997). These uncertainties, however, suggest that further analyses of relationships between health and marriage in later life are needed. Changes in gender and family roles and the longer potential partnership 'careers' available as a result of increased longevity suggest that both the theoretical and empirical basis of the association between marital status and health needs re-examination.[Williams 2003]. In particular we now need more analysis of the effects of marital *history*, rather than marital status alone, given the more diverse partnership pathways followed by increasingly large proportions of the population.

A few studies have examined marital history and the impact of various transitions on health and mortality. A longitudinal study of Danish males, for example, found marital status and cumulated periods divorced/widowed to be strong independent predictors of mortality among younger males. A strong protective effect of being married with never being married or divorced/widowed was also reported. Additionally one or more break ups was associated with higher mortality, whereas increasing number of years married was associated with lower mortality [Lund et al 2003].

A study using data from nine waves of the British household survey (men and women) examining mental health over time, found enduring first partnerships were associated with good mental health while partnership splits with poorer mental health. The study also reported women were more adversely affected by multiple transitions and took longer to recover from partnership splits than men. Single women had good mental health relative to other women but the same was not true for single men relative to other partnership groups [Willitts et al 2004]. An analyses of survey data collected from those in early old age which included marital history data found associations between a range of indicators, such as proportion of adult life married and number of marriages, and health [Grundy and Holt 2000].

Mechanisms underlying such associations are again likely to reflect a mix of selective and protective effects. A recent study on the effect of marital transitions on changes in dietary and other health behaviours in the US found behavioural changes accompanying divorce and widowhood among middle-aged to elderly women are both health damaging (smoking relapse, increase drinking and poorer diet) and health promoting (increase in exercise). Remarriage was found in general to be associated with health promoting behaviours [Lee et al 2004]. Data from the NHEFS a longitudinal national study that interviewed and measured adults in a baseline assessment and reassessed them again in a follow-up approximately 10 years later found women who were unmarried at baseline and married at follow-up had greater weight change than those married at both times. Men who remained divorced/separated and men who became widowed lost more weight than men married at both baseline and follow-up.

In this paper we will examine the relationship between marital history and health and mortality in a large nationally representative study of women and men in England and Wales with a follow up period spanning three decades (1971-2001).

Data and methods

We use data from the ONS longitudinal study, a record linkage study of approximately 1% of the population initially based on those enumerated in the 1971 Census of England and Wales (approximately 500,000 people) to analyse variations in both health status and mortality over three decades of sample members' adult lives. Sample members were traced in the National Health Services Central Register (NHSCR) and record linkage used to add information from subsequent censuses and from vital registration, including births to female sample members, deaths of spouses, and death. The LS has been maintained through the addition of 1% of new births and immigrants but our analyses here are restricted to follow up of women and men from the initial 1971 sample. Information on marital status and history comes from retrospective marital history data collected in the 1971 Census (for women only); current marital status measured at censuses (1971, 1981, 1991 and 2001) and widowhood/widowerhood information from linked event data. Those in cohabiting unions can be identified through direct questions included in the more recent censuses and by examining household composition in the earlier ones.

Study sample

We selected all sample members present in the 1971 census sample and then aged 30-59 (birth cohorts 1912-41). The data were analysed for two separate time periods. Firstly we analyse mortality differentials 1981-91 for sample members present in the 1971 and 1981 censuses. For those who survived to 1991, we also analyse variations in reported limiting long-standing illness in 1991. For these survivors to 1991, we then analyse variations in mortality 1991-2001 and for survivors to 2001, variations in two indicators of health collected in the 2001 census. The first extract included women aged 30-39 years present at the 1971 and 1981 censuses examining and health status in 1991 as outcome measures. The second data set examined mortality 1991-2001 and health status in 2001 (for survivors) for women present at the 1971, 81 and 91 census. Comparable analyses were undertaken for men.

Partnership history was assembled using retrospective data collected in 1971 together with the marital status information from subsequent censuses (which distinguishes the remarried from those in first marriages and allows identification of those in cohabiting unions). Fertility history data were also assembled and used in the analysis, as differentials in health by parenthood status and fertility status may be an important element of the relationship between marital history and health, although in the case of the analysis of men's mortality and health, data on fatherhood was only available for a sub sample. Socio-economic characteristics at the various relevant census points were also used as co-variables in the analysis. Methods of analysis include survival analysis and regression methods.

Results

Analyses completed to date show the importance of cumulative effects and of events. For example we analysed mortality differentials 1991-2001 using models which included indicators of socio-economic status at three time points, an indicator of health status in 1991 and, for women, a parity measure, as well as marital history indicators. Among women (then aged 55-89) results showed significantly lower risks for those married in 1971, 1981 and 1991 but no advantage, compared with the never-married, for those married at one or two of these time points. Ever experiencing divorce was additionally associated with higher mortality risk.

