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RESEARCH

Parliamentary privilege—mortality in members of the Houses of Parliament compared with the UK general population: retrospective cohort analysis, 1945-2011

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John Dennis *PhD student*^{1 2}, Tim Crayford *chief medical advisor*²¹University of Exeter Medical School, Exeter EX1 2LU, UK; ²Just Retirement, Vale House, Reigate, Surrey, UK

Abstract

Objective To examine mortality in members of the two UK Houses of Parliament compared with the general population, 1945-2011.**Design** Retrospective cohort analysis of death rates and predictors of mortality in Members of Parliament (MPs) and members of the House of Lords (Lords).**Setting** UK.**Participants** 4950 MPs and Lords first joining the UK parliament in 1945-2011.**Main outcome measure** Standardised mortality ratios, comparing all cause death rates of MPs and Lords from first election or appointment with those in the age, sex, and calendar year matched general population.**Results** Between 1945 and 2011, mortality was lower in MPs (standardised mortality ratio 0.72, 95% confidence interval 0.67 to 0.76) and Lords (0.63, 0.60 to 0.67) than in the general population. Over the same period, death rates among MPs also improved more quickly than in the general population. For every 100 expected deaths, 22 fewer deaths occurred among MPs first elected in 1990-99 compared with MPs first elected in 1945-49. Labour party MPs had 19% higher death rates compared with the general population than did Conservative MPs (relative mortality ratio 1.19, 95% confidence interval 1.01 to 1.40). The effect of political party on mortality disappeared when controlling for education level.**Conclusions** From 1945 to 2011, MPs and Lords experienced lower mortality than the UK general population, and, at least until 1999, the mortality gap between newly elected MPs and the general population widened. Even among MPs, educational background was an important predictor of mortality, and education possibly explains much of the mortality difference between Labour and Conservative MPs. Social inequalities are alive and well in UK parliamentarians, and at least in terms of mortality, MPs are likely to have never had it so good.

Introduction

Are members of the House of Commons (MPs) and the House of Lords (Lords) similar to other UK citizens (box)? To answer this, we examined the simple and fundamental measure of mortality. The only published study that has examined this point is almost 50 years old, and it established that in 1945-67 MPs had lower death rates than those of the general population, but that mortality did not differ by political party.¹ It did not consider the Lords. Anecdotal evidence suggests that the working environment and lifestyle of MPs has negative consequences on cardiovascular illness.² Another study found that Dutch parliamentarians had similar death rates to the general population.³

We examined the death rates of MPs and Lords compared with the UK general population in 1945-2011. We also searched for predictors of mortality among MPs. Measuring relative mortality allowed death rates in MPs and Lords from the year they joined parliament to be compared with those in the UK population matched for age, sex, and calendar year. This enabled mortality to be examined while controlling for the considerable improvements in death rates at almost all ages experienced in the population since 1945.

Methods

Data sources

From UK parliament data we extracted biographical data on MPs and Lords in parliament from 1979 to 2011.⁴ The parliamentary archive of MPs⁵ (1945-2006 only), the UK peerage database,⁶ and the peerages of the UK database,⁷ provided further information from multiple sources, including *Who's Who*, biographies, and newspapers.

Correspondence to: j.dennis@exeter.ac.uk

Data supplements on bmj.com (see <http://www.bmj.com/content/351/bmj.h6563?tab=related#datasupp>)**Appendices 1-6:** Further data on characteristics and relative mortality of parliamentarians and sensitivity analysis on categorisation of MPs' education level

Definitions

Parliament—the supreme governing body of the United Kingdom of Great Britain and Northern Ireland and comprising the House of Commons and the House of Lords

Members of the House of Lords (Lords)—the House of Lords holds an unelected chamber made up of the Lords Spiritual, 26 senior bishops of the Church of England, and Lords Temporal, the majority of whom are appointed by the monarch during their lifetimes (life peers) or inherit their title (hereditary peers). Since 1999, membership has been restricted to 92 hereditary peers. Currently there are around 760 sitting Lords. However, membership numbers are not fixed and Lords have no set retirement age or tenure

Members of Parliament—650 MPs sit and work in the chamber of the House of Commons, subject to election by the general public every five years. Nearly all MPs represent a political party (many Lords do not)

Conservative and Labour—historically the two biggest UK political parties. Conservatives lean to the centre-right in the political spectrum, whereas Labour is centre-left and has traditionally been the party of the working class

The Cabinet—the main decision making body in parliament, consisting of the Prime Minister and around 20 senior MPs

Knighthood—an honorary title given by the Monarch in recognition of service to the country

Schools—UK secondary schools (ages 11-18) are typically grouped into state schools funded by the government, grammar schools funded by the government but with a selective entry based on academic ability, and fee paying schools (referred to as public or private schools), usually attended by the children of wealthier families

Oxbridge—the term used for the elite universities of Oxford and Cambridge combined

We cross referenced sources to determine members' dates of birth, election or appointment, and, if applicable, death, sex, and party affiliation. For MPs we compiled information on education, time in parliament, Cabinet appointments, and knighthoods.⁵ We obtained further data on year of appointment to the Cabinet or knighthood from similar sources to the parliamentary archive of MPs.⁵

Procedures

MPs and Lords first elected or appointed from 1945 to 2011 were eligible. Follow-up began on the date a member first joined parliament and ended at death or 31 December 2011. We censored MPs who later became Lords as MPs on the date they became Lords, and they were included as Lords from that date onwards.

We compared the observed mortality in members with the expected mortality of the general population, matched to the same sex or age of the member in the year of entry to parliament. For each member we derived the expected lifetime, conditional on survival until entry into the study, from general population life tables.⁸ Conditioning prevents immortal time bias.^{9 10} The "strs" command¹¹ in Stata V13 was used to derive expected deaths and person years at risk for MPs and Lords separately, overall, and stratified by calendar period of election or appointment. We used Poisson generalised linear models with expected deaths as the offset to estimate relative mortality, interpretable as standardised mortality ratios and relative mortality ratios, as previously applied to study mortality in type 2 diabetes.¹² Time since entry was the timescale. We examined the relative mortality time trend over the study for MPs and Lords separately by including year of election or appointment as a linear term in additional models. In MPs we studied relative mortality by political party. MPs were categorised as Conservative, Labour, or other (MPs of all other parties). MPs who crossed the floor were classified by original party of allegiance.

Further predictors of mortality among Labour and Conservative MPs were investigated in those first elected in 1945-2006, for whom we had additional information.⁵ Small numbers precluded investigation of MPs from other parties. Highest recorded education level was defined as "secondary" if an MP did not attend university or had a schooling record only, and within the secondary category as "grammar or public" if they attended either type of school or "state or unknown" if they attended a state school or other institution or did not attend university and had a missing schooling record. The two other categories comprised MPs who attended university, grouped as "Oxbridge" if they attended Oxford or Cambridge, otherwise "other." We

tested the sensitivity of this categorisation for missing data (see supplementary appendix 6).

We compared relative mortality in MPs with a Cabinet appointment or knighthood with other MPs, avoiding immortal time bias by beginning follow-up at the year of appointment or knighthood. To examine whether length of service was protective, while removing the possibility of immortal time bias, we compared mortality in those serving 20 years or more (n=1199), starting observed time at the 20th year after election. In two multivariable regression models we then examined the association between relative mortality and sex, age at election, calendar period of election, and political party, with and without adjustment for education.

Results

The median follow-up for MPs and Lords was 19 years, and 359 MPs became Lords (table 1).¹³

Mortality of Lords and MPs (1945-2011)

The death rates of MPs were 28% lower than those of the general population (standardised mortality ratio 0.72, 95% confidence interval 0.67 to 0.76). Lords experienced 37% lower relative mortality (0.63, 0.60 to 0.67) (see supplementary appendix 1). The mortality of MPs who later became Lords was similar to that of other Lords (relative mortality ratio 1.02, 95% confidence interval 0.87 to 1.20).

Relative mortality over time (1945-2011)

Relative mortality decreased by 39% among Lords, a decrease in standardised mortality ratio from 0.67 (0.56 to 0.79) to 0.41 (0.25 to 0.67) (fig 1), see supplementary appendix 2), although the linear time trend by year of appointment was not significant (P=0.17). Mortality for MPs first elected in 2000-11 was similar to that of the general population (standardised mortality ratio 0.61, 0.26 to 1.47), although only five deaths occurred. From 1945 to 1999 relative mortality decreased by 28% among MPs, a decrease in standardised mortality ratio from 0.79 (0.70 to 0.89) to 0.57 (0.37 to 0.88) (fig 1), see supplementary appendix 2). From 1945 to 2011 overall, the linear time trend by year of election was significant for MPs (P<0.05).

Characteristics of MPs by party (1945-2011)

Table 2 shows the characteristics of MPs by political party. Male Conservative MPs had a higher median age at death compared with Labour MPs and MPs from other political parties.

Mortality in MPs by political party (1945-2011)

MPs of all parties experienced lower death rates than the general population, and Conservative MPs had the lowest death rates (table 3). Relative mortality in Conservatives first elected in 1980-2011 was 24% lower than in Conservatives first elected in 1945-79; however, relative mortality was similar for Labour MPs across these periods (see supplementary appendix 3).

Social background and career of Conservative and Labour MPs (1945-2006)

Conservative MPs (n=965) were more likely than Labour MPs (n=1148) to attend Oxbridge, and if they did not attend university were more likely to have attended grammar or public school (fig 2). A higher proportion of Conservative than Labour MPs were knighted (23% v 3%) and attained a Cabinet appointment (8.8% v 7.5%) (see supplementary appendix 4).

Predictors of mortality in Conservative and Labour MPs

The mortality of MPs with a Cabinet appointment or knighthood was similar to that of other MPs: respective relative mortality ratios 0.79 (0.56 to 1.10) and 0.97 (0.80 to 1.18). MPs who served for 20 years or more had lower mortality than those who served for less (0.74, 0.63 to 0.87). In a univariate model, compared with MPs categorised as having state or unknown education, mortality was reduced for those educated at grammar or public schools (0.80, 0.65 to 0.97) and Oxbridge (0.73, 0.61 to 0.97), but not for other universities (0.86, 0.71 to 1.04). Data were insufficient to analyse the effect of floating duck houses on mortality (n=1 known), although it was observed that Sir Peter Viggers, who infamously claimed for his personal duck island on parliamentary expenses, was still alive at the time of writing.¹³

In the multivariable model excluding education, the relative mortality of Labour MPs was 18% higher than that of Conservative MPs (1.18, 1.01 to 1.37) (see supplementary appendix 5). However, when education was included, the mortality of Labour MPs was similar to that of Conservatives (1.05, 0.89 to 1.25), whereas the association between education and mortality remained (table 4). We found no difference in mortality by sex (the model accounts for underlying sex differences in the population), but lower mortality in MPs first elected at age 60 or more.

Discussion

During 1945 to 1999, the UK population experienced considerable improvements in death rates. At the same time, death rates among Lords remained consistently lower than those of the general population. Mortality among MPs, however, decreased even more quickly. Much of the difference between MPs can be explained not by political party but rather by education.

Conservatives had the lowest death rates of all MPs. This party difference may be explained by MPs' social background, as measured by education. The relative death rates of MPs of either party who attended Oxbridge were reduced by 29% compared with those of MPs not educated beyond state school. MPs first elected at age 60 or more had lower relative mortality than MPs who were elected when younger. This may reflect a selection effect among MPs who were older at entry to parliament, by virtue of the fact they were fitter for office at that older age. Long serving MPs went on to live longer lives than other MPs.

Current and aspiring national politicians may do well to note a hitherto unforeseen benefit of seeking a safe parliamentary seat.

Strengths and weaknesses

This is the only study examining the mortality of both MPs and Lords, cross referencing multiple sources. Our statistical approach allowed unbiased measurement of the relative death rates of parliamentarians. However, a selection effect may partially explain the mortality differences, as parliamentarians would be expected to be healthier than the general population at election or appointment. Mortality differences therefore reflect lifetime social inequalities as well as health gains accrued in parliament.

A limitation of this study is the completeness of education data (see supplementary appendix 4). However, university attendance, the primary measure used to differentiate MPs, was complete for 95%, and similar differences by party have been reported elsewhere.¹⁴⁻¹⁶ Sensitivity analyses support a true difference in education by political party (see supplementary appendix 6).

In keeping with our findings the only previous study found death rates in MPs in 1945-67 to be 20% lower than those in the general population.¹ With greater follow-up in the current study, we have shown a clear mortality difference by political party.

Conclusion

From 1945 to 2011, MPs and Lords experienced lower mortality than the UK general population. Furthermore, the mortality gap for MPs widened from 1945 to 1999, suggesting that over this period MPs may have become less representative of the population they serve. We are unable to draw meaningful conclusions in more recent MPs, as so few elected after 2000 are yet deceased. The fall in death rates among MPs may reflect improvements in lifestyle or working conditions, or perhaps that latter day MPs reap greater long term economic benefit from their time in parliament. Even among MPs—a narrow stratum of UK society—we found education to be an important predictor of mortality, and education possibly explains much of the mortality difference between Conservative and Labour MPs. Social inequalities are alive and well in UK parliamentarians, and at least in terms of mortality, MPs are likely to have never had it so good.

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Competing interests: All authors have completed the ICMJE uniform disclosure form at www.icmje.org/doi_disclosure.pdf and declare: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.

Contributors: JD and TC contributed equally to the design and are guarantors. JD acquired, cleaned, analysed and interpreted the data and drafted the manuscript. TC had the original idea for the study and reviewed the analysis and manuscript. Both authors declare that they had full access to all of the data in the study, can take responsibility for the integrity of the data and the accuracy of the data analysis, and controlled the decision to publish.

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What is already known on this topic

The mortality of UK MPs has not been examined since 1969, when Pincherle reported that MPs had lower death rates than the general population in 1945-67

No previous study has examined the mortality of members of the House of Lords

What this study adds

Mortality among MPs and Lords was, respectively, 28% and 37% lower than that of the general population in 1945-2011

The mortality gap between MPs and the general population has widened significantly over time

Mortality among Conservative MPs is lower than in MPs from other political parties, and this may reflect underlying differences in social background, as measured in this study by education

Ethical approval: Not required.

Data sharing: No additional data available.

Transparency: The authors affirm that this manuscript is an honest, accurate, and transparent account of the study being reported and that no aspects have been omitted.

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Tables

Table 1 | Characteristics of MPs and Lords (first elected 1945-2011). Values are numbers (percentages) unless specified otherwise

Characteristics	MPs (n=2695)	Lords (n=2614)
Median (interquartile range) age at joining parliament (years)	42 (37-48)	58 (47-64)
Median (interquartile range) year of election or appointment	1978 (1959-97)	1983 (1966-97)
Men	2366 (88)	2348 (90)
Deaths	937 (35)	1270 (49)
Median (interquartile range) age at death (years)	75 (66-83)	80 (72-86)
Median (interquartile range) length of service (years)	14 (6-20)	17 (9-29)
Median (interquartile range) duration of follow-up (years)	20 (11-33)	17 (10-28)
Lords with history as MP	Not applicable	359 (14)
Political party		
Conservative	1138 (42)	662 (30)
Labour	1231 (46)	385 (17)
Other	326 (12)	642 (29)
Crossbench (Lords only)	Not applicable	526 (24)

Table 2| Characteristics of MPs first elected in 1945-2011, by political party. Values are medians (interquartile ranges) unless specified otherwise

Characteristics	Conservative (n=1138)	Labour (n=1231)	Other (n=326)
Age at election (years)	40 (36-46)	43 (38-50)	43 (35-50)
Year of entry	1977 (1959-92)	1974 (1955-97)	1986 (1966-2001)
No (%) of men	1052 (92)	1024 (83)	290 (89)
No (%) of deaths	384 (34)	462 (38)	91 (28)
Age of men at death	75 (67-83)	74 (64-82)	74 (68-82)
Age of women at death	78 (66-90)	78 (69-87)	≤5 deaths
Length of service (years)	14 (6-22)	14 (8-21)	10 (5-16)
Follow-up (years)	25 (12-33)	20 (13-30)	15 (10-30)

Table 3| Deaths in MPs relative to general population by political party (1945-2011)

Party	No	Deaths	Person years at risk	Standardised mortality ratio (95% CI)
Conservative	1138	384	27 004	0.66 (0.60 to 0.73)
Labour	1231	462	26 464	0.76 (0.70 to 0.84)
Other	326	91	6602	0.76 (0.62 to 0.93)

Table 4| Multivariable regression model of relative mortality

Political party	Standardised mortality ratio (95% CI)
Conservative	1 (ref)
Labour	1.05 (0.89 to 1.25)
Highest education level	
Secondary: state or unknown	1 (ref)
Secondary: grammar or public	0.80 (0.64 to 0.99)
University: other	0.82 (0.67 to 1.01)
University: Oxbridge	0.71 (0.57 to 0.87)
Sex	
Women	1.01 (0.71 to 1.44)
Men	1 (ref)
Period of election	
1945-49	1.15 (0.91 to 1.44)
1950-59	1.10 (0.88 to 1.36)
1960-69	0.92 (0.72 to 1.18)
1970-79	1 (ref)
1980-89	0.91 (0.61 to 1.37)
1990-99	0.98 (0.60 to 1.60)
2000-11	0.84 (0.21 to 3.41)
Age group at election (years)	
0-29.9	1.21 (0.76 to 1.93)
30-39.9	0.91 (0.76 to 1.09)
40-49.9	1 (ref)
50-59.9	0.92 (0.77 to 1.10)
≥60	0.66 (0.47 to 0.92)

Figures

Fig 1 Standardised mortality ratios for MPs and Lords compared with UK general population, by period of first election

Fig 2 Highest recorded education level in Conservative and Labour MPs first elected 1945-2006