Re: Location, vocation, procreation: how choice influences life expectancy in doctors

In their recent paper, Holleyman and Vann Jones describe a study which aimed “to establish the influence of various modifiable risk factors on the life expectancy of UK doctors” [1]. Based on differences in mean ages at death as recorded in obituaries over a 10-year period, they conclude, for example, that “having children conferred a survival benefit” and that “public health doctors were found to have a significantly longer life expectancy than other doctors”.

Their report illustrates an elementary but serious epidemiological error. Average age at death in a cross-sectional analysis is not a measure of life expectancy from any age or time point. Thus for example, the average age at death of men with prostate cancer is greater than that of the male population as a whole, but it does not follow that prostate cancer increases life expectancy or confers a survival benefit. The difference occurs because most men do not develop prostate cancer until old age. In the same way, doctors who die young do not have the same opportunity to complete their families as those who die when they are older.

The older mean age at death of public health doctors may simply reflect a decline in the numbers of medical graduates entering the specialty in recent years (as compared with other disciplines). As a consequence, the population of public health doctors at risk of dying would tend on average to be older.

In discussing their findings, Holleyman and Vann Jones acknowledge a lack of information about populations at risk, but then disregard the problem when drawing their conclusions. Only rarely would I describe a paper as fatally flawed, but in this case, a fundamental methodological error means that no useful conclusions can be drawn.

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# References

1. Holleyman R, Vann Jones S. Location, vocation, procreation: how choice influences life expectancy in doctors. Occupational Medicine 2016;66:276-8.