LETTER

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The relationship between elderly suicide rates and telephone use: a cross-national study

Social isolation is an important determinant of elderly suicides (Shah and De, 1998). If elderly people have telephones then social isolation can be reduced as they can contact friends and relatives and vice versa. Also, the elderly can use the telephone to seek help from telephone helplines, general practitioners, social workers, psychiatric services and friends and relatives. Additionally, general practitioners, social workers, psychiatric services and friends and relatives can contact elderly people to check on them and support them. However, a major criticism of such interventions is that those determined to kill themselves are unlikely to use a helpline. There are several studies looking at the relationship between suicide and telephone help lines. These studies showed evidence that the helpline reduced suicidality during the course of the telephone consultation or immediately afterwards and reduced the number of re-attempted suicides (De Leo *et al.*, 1995; Mishara and Daigle, 1997; Vaiva *et al.*, 2006; Gould *et al.*, 2007). A study of elderly participants reported an association between lower suicide rates and availability of a telephone help and telephone check service (De Leo *et al.*, 1995). This service provided elderly people with home assistance by allowing them to call for help and to receive weekly assessments of needs and emotional support. However, there are only a limited number of studies in this area. Therefore, a cross-national study examining the relationship between elderly suicide rates and the prevalence of societal use of telephone was undertaken.

Data on elderly suicide rates for both sexes in the age-bands 65–74 years and 75+ years for each listed country were ascertained from the World Health Organization (WHO) website (www.who.int/whosis/mort/table1.cfm). The median (range) of the latest available year for data on elderly suicide rates was 2000 (1985–2003). Data on the prevalence of landline telephones and cell phones (number of users per 1000 population) for each listed country were ascertained from the United Nations Development Program (UNDP) website (www.hdr.undp.org/reports/global/2005/pdf/hdr05_HDI.pdf) for the year 2004. The relationship between elderly suicide rates and the prevalence of landline telephones and cell phones was examined using Spearman's correlation coefficient.

A full data set for both the elderly suicide rate and the prevalence of landline telephones was available for 76 countries and the corresponding figure for cell phones was 82 countries. There was a significant positive correlation between the prevalence of landline telephones and suicide rates in males aged 65–74 years ($\rho = +0.31$, $P = 0.006$), males aged 75+ years ($\rho = +0.37$, $P = 0.001$), females aged 65–74 years ($\rho = +0.31$, $P = 0.007$) and females aged 75+ years ($\rho = +0.37$, $P = 0.007$). There was significant positive correlation between the prevalence of landline telephones and suicide rates in males aged 75+ years ($\rho = +0.29$, $P = 0.009$), females aged 65–74 years ($\rho = +0.23$, $P = 0.038$) and females aged 75+ years ($\rho = +0.30$, $P = 0.006$); this relationship with suicide rates in males aged 65–74 years only approached significance ($\rho = +0.19$, $P = 0.093$).

The results may be an artifact of methodological issues related to using such cross-national data with an ecological design; these have been well described elsewhere (Shah *et al.*, 2008). The ecological design of the study at best can demonstrate an association but the direction of causality cannot be determined. Other factors may independently influence suicide rates and the prevalence of telephones. Nevertheless, the observed positive correlations suggest a need to examine this association further. This should be done in case-control psychological autopsy studies, more of which are now emerging. Findings of such studies may have implications for clinical practice and prevention of suicides.

Conflict of interest

None.

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Ajit Shah,[1] Sofia Zarate-Escudero[2] and Manjunatha Somayaji[2]

[1]Professor of Ageing, Ethnicity and Mental Health, University of Central Lancashire, Preston and Consultant Psychiatrist, West London Mental Health NHS Trust, London, U.K.

[2] West London Mental Health NHS Trust, London, U.K.

Email: ajit.shah@wlmht.nhs.uk

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