

The data in this letter provide some insights into the complex needs of older adult psychiatric patients. If this sample is representative of a typical older adult population, then other services providing psychiatric care for older adults with similarly high levels of aggressive and challenging behavior may consider adopting a similar model in the safe practice of physical interventions. As this letter reveals, failure to do so may increase the probability of the application of standard physical intervention techniques causing pain and/or injury. Clearly this is something all mental healthcare staff should seek to avoid.

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The relationship between elderly suicide rates, population density and room density

A recent cross-national study reported that elderly suicide rates in both sexes were significantly negatively correlated with household size and the percentage of extended households and positively correlated with the percentage of single-person households (Shah, 2009). Speculative explanations for these findings were based on cultural factors, including (i) a mismatch between the traditional dependence of elderly relatives on their children for emotional and financial support and their children's ability to provide this support (Yip *et al.*, 1998, 2000; Liu *et al.*, 2006); (ii) the unmet traditional expectation of the elderly person being able to live with their children or grandchildren (Yip *et al.*, 2000; Liu *et al.*, 2006); (iii) the effect on the elderly of their children's negative attitudes (Yip *et al.*, 2000); (iv) the migration of children to urban areas or to other countries (Yip and Tan, 1998; Yip *et al.*, 2000); and, (v) the number of available caregivers, household size and family size (Kua *et al.*, 2003). Countries with larger household sizes and a greater number of extended households potentially have a greater number of people available within the household and within close geographical proximity who can contribute positively to these cultural issues, and this may ultimately lead to a reduction in elderly suicide rates – the “emotional proximity” explanation. However, there may also be other explanations for

these findings (Shah, 2009). Having more people in a household implies that there are more people to identify suicidal ideation and support the suicidal individual in seeking appropriate help. Also, in larger households elderly people are likely to be alone for shorter periods of time, which would reduce the opportunity to implement any suicidal plans. Both these possibilities form part of the “geographical proximity” explanation.

If “emotional proximity” is important then elderly suicide rates should decline not only with larger household size but also with a greater density of people per household room, but not with greater general population density. If “geographical proximity” is important then elderly suicide rates should decline not only with larger household size but also with greater general population density and greater density of people per household room. Therefore, a study with two components was conducted: (i) an examination of the relationship between elderly suicide rates and data on household size from a different source than that used in an earlier study (Shah, 2009); and (ii) the relationship between elderly suicide rates and general population density and density of people per household room.

Data on elderly suicide rates for both sexes in two age-bands – 65–74 years and 75+ years – were ascertained from the World Health Organization website (www.who.int/whosis/mort/table1.cfm). The median (range) of the latest available year for this data from different countries was 2000 (1985–2003). Data on the average number of people living in a household, density of people per room and general population density were ascertained from

the following United Nations websites: household size – www.unstats.un.org/unsd/demographic/sconcerns/housing/housing2.htm (median year for these data from different countries was 1991); density per room – www.unstats.un.org/unsd/demographic/products/socind/housing.htm; and general population density – www.unstats.un.org/unsd/demographic/products/dyb/dyb2006/Table03.pdf. Spearman's correlation coefficient (ρ) was used to examine the relationship between elderly suicide rates and the household size, the general population density and the density of the number of people per room.

There were significant negative correlations between the average number of people living in a household and suicide rates in males aged 65–74 years ($\rho = -0.39$, $P = 0.006$), males aged 75+ years ($\rho = -0.46$, $P = 0.001$), females aged 65–74 years ($\rho = -0.53$, $P < 0.00001$) and females aged 75+ years ($\rho = -0.51$, $P < 0.00001$) for 47 countries. There were no significant correlations between elderly suicide rates and general population density (data for 78 countries) and the density of people per household room (data for 36 countries).

The negative correlation between elderly suicide rates and household size confirms the findings of a recent study (Shah, 2009), which used a different data source for household size. However, the negative findings do not allow further clarification of the relative contribution of emotional and geographical proximity explanations to elderly suicide rates. The negative findings may be the result of the well-described methodological issues in ecological studies of elderly suicides (Shah, 2009). The emotional and geographical proximity explanations are both likely to contribute simultaneously to elderly suicides rather than be “either/or” explanations.

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Comparison of rates of suicide methods used by the elderly in England and Wales

Because suicide rates have traditionally increased with age (Shah and De, 1998; Shah, 2007), the observed reduction in suicide rates among older people may be an important contributor to the U.K. government's target to reduce suicide rates in the general population by at least one-sixth of the 1996 baseline by 2010 (Department of Health, 1999). Previous studies have observed that suicide rates in older people have declined in both sexes over the 12-year period (1985–1996) and 24-year

Conflict of interest

None.

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period (1979–2002) in England and Wales (Hoxey and Shah, 2000; Shah *et al.*, 2001), although the rates are still considerably higher than those among younger adults. It is believed that a better understanding of the methods used by older people for suicide may lead to the development of targeted preventative strategies, which are expected to meet the challenge of sustaining this observed decline in suicide rates among older people over time in England and Wales (Lindesay, 1991; Dennis and Lindesay, 1995).

Traditionally, elderly men use more violent methods of suicide, including hanging, strangulation and suffocation, shotgun and larger firearm discharge, and sharp objects (Shah and De, 1998; Harwood