of SMR. For example, there were 84 suicides yielding an SMR of 13.6, signifying that suicide was 13.6 times more common among the cohort of patients with anorexia nervosa than generally expected. Similarly, the SMR for deaths due to respiratory disease was 11.5. But the SMR for anorexia nervosa as a cause of death was said to be 650.0 and it is this figure which leads the authors to conclude the death rate in their sample was astonishingly high.

So it would be if it had clinical and statistical validity. The authors' errors arise from estimating the SMR for a subgroup (n=39) of the original cohort using the fraction:

$$\frac{\text{observed number of deaths}}{\text{number of expected deaths}}$$

The numerator is given as 39 patients in whom anorexia nervosa was the main cause of death on the death certificate. It is the denominator which is elusive in its estimated value. It is given as 0.1 but the authors' own data suggest this is an approximation for 0.06, a very low figure which results in an inflated value for the SMR (650) in this ambiguous subgroup of anorexia nervosa. We suggest that when an underlying cause of death (e.g. suicide, respiratory infection) was not identified, the certifier of the death entered anorexia nervosa on recognising a cachectic state, especially as malnutrition does not feature in the list of 'underlying' causes.

These objections do not apply to the first calculation of the SMR in the full cohort of patients with anorexia nervosa whose value was found to be 6.2, by no means an astonishing death rate.

1 Papadopoulos FC, Ekbom A, Brandt L, Ekselius L. Excess mortality, causes of death and prognostic factors in anorexia nervosa. *Br J Psychiatry* 2009; **194**: 10–7.

2 Ramsay R, Ward A, Treasure J, Russell GF. Compulsory treatment in anorexia nervosa. Short-term benefits and long-term mortality. *Br J Psychiatry* 1999; **175**: 147–53.

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Authors' reply: Professor Russell and Dr Ward raise the issue of the suspected erroneously inflated value for SMR (650) for the subgroup of women in whom anorexia nervosa was stated as the underlying cause of death on the death certificate in our paper.[1] The expected number of deaths for this subgroup was indeed 0.06 (denominator) as they point out and it was presented with its one decimal approximation (0.1). Russell & Ward further suggest that the certifiers of the death would be prone to enter anorexia nervosa on the death certificate when a specific underlying cause of death could not be identified but a cachectic state was evident. We agree that this could be true, but we do not believe that such 'misclassification' would be problematic if those women had an active anorexia nervosa at the time of death. On the contrary, it would be worrisome if women with other diagnoses that lead to cachectic states (other than anorexia nervosa) were misclassified as anorexia nervosa on death certificates, but our inclusion criteria were specifically selected in order to reduce this possibility. In addition, we believe that the estimation of the SMR value for this specific subgroup of patients does not confer more information than what common sense dictates, namely that those with a lifetime diagnosis of anorexia have a much higher risk of dying from it.

Overall, women with anorexia nervosa in our cohort had a sixfold increased mortality compared with the general population.

This excess mortality in anorexia nervosa is two to three times higher when compared with the excess mortality observed in mental disorders in general[2] and more specifically in schizophrenia,[3] bipolar and unipolar disorder.[4] Moreover, we would like to point out that we were most astonished by the persistence of this unfavourable outcome throughout the lifetime, with high SMRs for both natural and unnatural causes of death even 20 years or more after the first admission for anorexia nervosa.

1 Papadopoulos FC, Ekbom A, Brandt L, Ekselius L. Excess mortality, causes of death and prognostic factors in anorexia nervosa. *Br J Psychiatry* 2009; **194**: 10–7.

2 Valenti M, Necozione S, Busellu G, Borrelli G, Lepore AR, Madonna R, et al. Mortality in psychiatric hospital patients: a cohort analysis of prognostic factors. *Int J Epidemiol* 1997; **26**: 1227–35.

3 Saha S, Chant D, McGrath J. A systematic review of mortality in schizophrenia: is the differential mortality gap worsening over time? *Arch Gen Psychiatry* 2007; **64**: 1123–31.

4 Osby U, Brandt L, Correia N, Ekbom A, Sparén P. Excess mortality in bipolar and unipolar disorder in Sweden. *Arch Gen Psychiatry* 2001; **58**: 844–50.

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Suicide rates in people of South Asian origin in England and Wales

A notable finding in McKenzie *et al*'s study[1] of suicide rates in people of South Asian origin is that the high relative rates in younger Asian women reported in previous research studies are found in the 1993–98 data-set but not that for 1999–2003, which shows high relative rates for Asian women over 65. In discussing their results, the investigators acknowledge potential problems with the study's methodology, including the numerator (how well the SANGRA name recognition algorithm ascertains individuals of South Asian origin in more recent samples) and denominator (the validity of a linear interpolation of numbers over their period). However, perhaps cautions are required with respect to the overall robustness of the SANGRA algorithm and the issue of numerator/denominator compatibility: the numerator uses an operational definition of ethnicity (derived from name information) and the denominator is based on self-assignment by individuals to census categories.

These matters are brought into focus in the derivation of denominators. The investigators use the counts for the 1991 categories 'Bangladeshi', 'Indian', 'Pakistani' and 2001 categories 'Asian or Asian British: Bangladeshi, Indian, Pakistani'. They also include the 2001 category 'White and Asian' (numbering around 190 000 in the census) on the grounds that people in it '. . . could be identified by SANGRA if any of their names were of South Asian origin'. We have no systematic data on how offspring of these inter-ethnic unions are named, although qualitative research has revealed the complexity of the process.[2] Inclusion of the 'White and Asian' category also introduces heterogeneity into the South Asian collectivity. Evidence from the Office of National Statistics (ONS) Longitudinal Study for members having a 1991 and 2001 ethnic group showed that half (49.0%) of the 993 'White and Asian' persons identified as 'White' in 1991 and just 9.5% identified as one of the three South Asian groups.[3] Similarly, in recent research half in the 'White and Asian' group prioritised 'White' when asked to name just one ethnic group that contributes most strongly to their identity. Our collective