

most deprived fifth, although the 2001 standardised mortality ratio was not significantly higher for men than for women in the highest fifth.

### Comment

The number of suicides increased for young adults in a 20 year period when the number among older adults declined. The rise in standardised mortality ratios was larger for young men (72.43%) than young women (19.04%). The suicide gap between the most and least deprived areas widened more for young women; there were over six times as many deaths in the most compared with the least deprived fifth in 1999-2001 (152 *v* 24). For young men the rates rose in every fifth, with a particularly large and significant rise in the most deprived fifth.

Recent media and political attention has focused on rising suicide rates among young men. The relative rise in suicides among young people in poor areas in Scotland, however, has increased during the 1990s and warrants more attention. While suicide polarisation is greater for young women, partly because of declines in the numbers in less deprived areas, the suicide rate in the most deprived fifth is particularly high for young men.

The Scottish Executive aims to reduce the number of suicides by 20% between 2003 and 2013.<sup>4</sup> One "priority risk group" is defined geographically as "people in isolated or rural communities." Those in the most deprived areas are not prioritised, although the executive acknowledges that efforts are needed to help vulnerable people in society and address inequalities. Various factors that influence suicide, such as drug

### What is already known on this topic

Suicide is more common in Scotland than in the rest of the United Kingdom, and rates have been rising, particularly among young men

### What this study adds

There is a growing social polarisation of suicide among young people in the most deprived parts of Scotland.

misuse, divorce, and unemployment are more common in deprived areas.<sup>5</sup> Our results suggest that these areas should be targeted among the "priority risk groups" in the future.

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## Suicide among Russians in Estonia: database study before and after independence

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Migration has been reported as an important risk factor for suicide. Immigrants have a higher risk than exists in their countries of origin and than among the native population of their new country.<sup>1-2</sup> According to the 1934 population census, before the second world war native Estonians constituted 88.1% of the total population of Estonia. By 1989, however, because of geopolitical changes related to the incorporation of Estonia into the Soviet Union, the Russian minority had grown to about 30%. We examined how the radically changed sociopolitical status of the Russian minority after the dissolution of the Soviet Union was reflected in their suicide rates.

### Methods and results

We compared suicide rates of Russians in Estonia, Estonians in Estonia, and inhabitants of Russia from before (1983-90) and after the dissolution of the Soviet Union during Estonian independence (1991-8). We collected data from the World Health Organization

reports on age adjusted suicide rates for the Russian Federation. We derived data on the population in Estonia by nationality from the Estonian Statistical Office. The nationality of those who committed suicide was specified on the death certificates.

According to the 1989 census, Estonian-Russians include Russians (78.7%), Ukrainians (8.1%), Belorussians (4.7%), and others (8.5%). We termed inhabitants of Russia "Russians" in the study. In the Russian Federation 82.6% of inhabitants were native Russians.

Means of age adjusted suicide rates were high for the three nationalities during 1983-90 (table). The rates of suicide were lower among Russians in Estonia than Estonians ( $P=0.061$ ). During the transition period (1991-8), suicide rates increased for all three nationalities (by 39.2% for Russians in Estonia, 25.9% for Russians in Russia, and 17.1% for Estonians) (table). Thus, the Estonian Russians had a significantly higher

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suicide rate than Estonians ( $P = 0.005$ ) and Russians in Russia ( $P = 0.032$ ). Of the total numbers of suicides during both periods studied, 80% were in men.

## Comment

During the Soviet era Russians had the lowest suicide rate in Estonia, which might have been due to their privileged status. Russian immigrants in Estonia had privileges in salaries and housing, and their needs received greater attention than local populations in Estonia and in Russia. There was no need for integration and acculturation, and Russians maintained their sense of ethnic identity and confidence in belonging to a privileged class.

After Estonian independence in 1991, Estonian Russians had to adapt themselves to new conditions, study Estonian as an official language, and apply for citizenship. The loss of privileged position and ideals, many years after immigration, may have caused stress leading to suicidal behaviours<sup>2</sup> and suicide rates significantly higher than for Estonians in Estonia and Russians in Russia.

During 1995–8, stabilisation and adaptation processes began in Estonian society. Convergence of the Russian and Estonian suicide rates in Estonia in 1998 could be interpreted as an adaptation to sociopolitical

Mean age adjusted suicide rates per 100 000 and paired samples  $t$  tests by nationality in two time periods for Estonia and Russia

	1983–90	1991–8
Estonians in Estonia	29.2* (26.4 to 32.0)	34.2* (30.4 to 38.0)
Russians in Estonia	27.8* (24.4 to 31.1)	38.7* (34.0 to 43.3)
Russians in Russia	29.0* (24.3 to 33.7)	36.5* (32.1 to 40.8)
Paired samples test:		
Estonians in Estonia/Russians in Estonia	1.44† (–0.09 to 2.98) $t=2.22$ , $P=0.061$	–4.48† (–7.14 to –1.82) $t=-3.99$ , $P=0.005$
Russians in Russia/Russians in Estonia	1.22† (–0.49 to 2.94) $t=1.69$ , $P=0.135$	–2.22† (–4.18 to –0.25) $t=2.67$ , $P=0.032$

\*Mean suicide rate.

†Mean difference.

changes and efforts of the Estonian government to integrate the Russian minority.<sup>3</sup>

The statistics on suicides in the former Soviet Union are valid and reliable.<sup>4–5</sup> Then the procedure for reporting and registration was uniform and remained the same in the Russian Federation and also in Estonia. The present study is limited, however, because of the relatively small number of suicides in Estonia.

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## What is already known on this topic

Migration is an important risk factor for suicide, and immigrants have a higher risk of suicide than exists in their country of origin and in the native population of the new country

## What this study adds

During the Soviet period the suicide rate among the Russian minority in Estonia was lower than the rate in native Estonians

When Russians changed from a privileged to a non-privileged minority in independent Estonia, the suicide rate in the Russian minority in Estonia became significantly higher than in native Estonians and in Russians in Russia

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