Reviewer's report

Title: Seasonal variations in suicides: exploring the reasons of suicide epidemics in Lithuania

Version: 1 Date: 15 November 2005

Reviewer: Stefan Fruehwald

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Minor Compulsory Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Gender differences and seasonal distribution was tested with Chi-squared test. However, it seems more adequate to use a harmonic time series model or to use spectral analyses to detect seasonality of suicides. This report used chi-square tests, which has been criticized recently: The determination of seasonality should rely not only on differences in suicide occurrence among seasons or months, but principally on the detection of a circannual rhythm (or derivatives thereof).

I was not totally clear about the rationale of the calculations of seasonality of suicide methods. In my opinion, the finding of the peaks and troughs in hanging merely reflects that the figures in hanging are big enough compared to cutting, jumping, poisoning, shooting. I suggest to reduce the figures (edit out both or present the results in suicide methods in 1 figure).

The authors divided the studied decade in two 5-year-periods and calculated percentages for seasons and months. My question is why the authors did not study a period even longer instead. As they mention, the decade studied was characterized by fundamental political and economical changes in Lithuania, which may be a reason for the extremely high suicide rate. If possible, they could compare the decade studied with the decade before (1983-1992), when Lithuanian society was confronted with less fundamental changes. I would like to read whether the suicide rate was increasing and whether seasonality of suicides was increasing or decreasing in the second decade.

The explanations for seasonality discussed by the authors lack at least a few words about biological hypotheses. Biological findings focus on the association with circannual changes in biological functions, mainly those linked to dysfunctional 5-HT activity, which are not even mentioned in this paper. These should be added. Sociological considerations are more broadly and better discussed.

The literature lacks a number of interesting papers on this subject published within the last years.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes

Declaration of competing interests:

I declare that I have no competing interests.