Reviewer's report

Title: Season of birth is different in Inuit suicide victims born into Traditional than into Modern Lifestyle. A register study from Greenland.

Version: 3 Date: 5 February 2015

Reviewer: CK Law

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Reviewer report for the revised draft of manuscript “Season of birth is different in Inuit suicide victims born into Traditional than into Modern.”

When compared with the previous draft, the manuscript has been greatly improved, which clearly clarified the background of research, research question and the sub-headings help me to understand the content of research more easily.

Major Compulsory Revisions

Yet, as an academic writing, the authors should be aware of not emphasizing the association of light and nutrition intake on birth seasonal pattern unless they can provide ample evidence to substantiate their linkage. This gives the audience a false expectation on the primary purpose of study, which would pose a poor impression on the study.

In terms of study design, the authors compared the season of birth of suicide deceased between the two cohorts (traditional-lifestyle: 1903-50 vs. modern-lifestyle: 1960-80) during the 40-year period 1968 – 2007. Apparently, the comparison is not appropriate as the findings can also be influenced by age, rather by cohort, here. If I am correct, the study traced the suicide pattern for persons (traditional-lifestyle) from aged 18-53 years to 58-93 years while those from the modern-lifestyle cohort at their age of 0-8 years to 27-47 years. So, the birth seasonal pattern can be a feature of older adult suicide, but not a cohort difference in terms of lifestyle.

To define Inuit ethnicity, the authors used country of birth and assumed those born in Greenland were ethnic Inuit. As a closed population before the Second World War, I think this assumption would remain valid for traditional-lifestyle cohort but may not hold for the modern-lifestyle cohort, if there are more ethnic Danes settled in Greenland (17% of population born in Denmark in the 1970s) and had their second generation after Greenland became a part of Denmark in 1953. Is there any information to indicate the deceased ethnicity in Greenland? If not, this can be another possible factor in explaining why the birth seasonal pattern disappeared among the Modern-lifestyle cohort.

In Line 172, I also found the inclusion criteria of suicide are not complete in the analysis. As refer to ICD-10, intentional self-poisoning should be ranged from
X60-X69. Yet, it was reported X60-X65 in the revised draft. In fact, X66-X69 refers to gaseous poisoning (like charcoal burning, car exhaust, coal gas poisoning). Why did the authors exclude these external causes in the analysis? Similarly, X75 (Intentional self-harm by explosive material), X76 (Intentional self-harm by smoke, fire and flames), X77 (Intentional self-harm by steam, hot vapors and hot objects), X79 (Intentional self-harm by blunt object), X81 (Intentional self-harm by jumping or lying in front of moving object), X82 (Intentional self-harm by crashing of motor vehicle) and X83 (Intentional self-harm by other specified means) were not included. Please explain.

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests