Reviewer’s report

Title: Season of Birth vary in Inuit Suicide Victims born into traditional but not into modern Lifestyle. A Register Study from Greenland.

Version: 2 Date: 20 November 2014

Reviewer: CK Law

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The study conducted by Björkstén and Bjerregaard aims to assess whether season of birth differed between suicide victims born into an old or into a modern lifestyle. Their analysis found that those born in March-June in the Traditional Lifestyle were less likely to commit suicide than those born at other periods of the year while the seasonal differences had disappeared for those born in the Modern Lifestyle.

Major Compulsory Revision

The original purpose of this study is interesting, which aim to study whether season of birth would influence the risk of suicide. However, the overall structure of the manuscript fails to make a strong argument why season of birth should have played an important role in suicidal risk. Should it be accounted by Astrology? Or by other nurturing factors during the early stage of one’s life? Yet, the introduction section wrote a lot on season of “death by suicide”. I think confused and wonder whether the authors like to study the season of birth or the season of death. I think the authors should think about it carefully and give a relevant literature review to justify their study.

Also, the study aims to examine whether there is a cohort difference in the birth-season pattern of suicide. I wonder if the rate was already age-standardized. Numerous studies have shown age is one of the most prominent socio-demographic factors in affecting suicide rate. So, this factor has to be removed through standardization before any relevant comparisons are carried out.

In line 158, it is noted that monthly birth data were available only for 1901-30. This indicates those born after 1931 (1931-1980) has no relevant data on birth of month (50 years). Subject to the missing information, the authors need to justify why the analysis remain relevant and scientifically sound?

In Table 3, it shows the suicide rate by month for the two birth cohort. How did the authors estimate the suicide rate? It seems the “suicide rate” only reported that proportion of live born died by suicide, but not the risk of suicide. Otherwise, it should be reported as “suicides per 100,000 persons (person-years)”, not “per 1000 births.

Finally, in line 289, it is mentioned that “Since there were very few suicides until
the 1970s, we believe that unrecorded suicides in the Traditional lifestyle cohort would only affect the results marginally”. How can the authors justify the very few suicides before 1970s were attributable to the lower risk of suicide during that period of time, but not the undeveloped registration system on vital events in Greenland before 1953 (when Greenland remained a colony of Denmark)?

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

**Quality of written English:** Not suitable for publication unless extensively edited

**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