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: 30 November 2014

Reviewer: Eduardo Chachamovich

Reviewer’s report:

Thank you for the opportunity to review this MS. It addresses a relevant topic, and is based on an unique dataset. Season of birth in suicide, as well as seasonal variation of deaths by suicide is an issue that is largely debated.

The MS uses a rare dataset that includes registry of suicides occurring before the modernization of the Greenland society. It brings relevant information that can be used by other authors working on suicide in different regions. Nevertheless, the MS fails to offer a clear research question (hypothesis), and as a consequence it becomes too broad and sometimes difficult to follow.

The dataset is presented in cohorts, but the rationale for the definition of them is often not clear. For instance, how were the cohort established (1903-1950, 1961-1980, etc)? This is critical for the interpretation of the results. Were there social or economical factors that could explain the differences in suicide rates? Were there changes in the health system, social support, or health policy that could explain those differences?

The way that the data is presented is not friendly for the reader. Tables should be combined into one, where the reader could see the similarities and differences across the cohorts.

Some specific points have to be addressed too:

Pg 1, 1st para: What is the link between astrology and the season variation? Many other factors, as explored later in the MS, could also be cited here.

Pg 1, last para, line 66: Is it a typo (age" suicide)?

Pg 2, line 91: Reference needed to support the statement of the last sentence. Other regions (north of Norway, Nunavut) are also extreme.

PG 5, line 148: Not clear why persons born after 1980 were excluded. Could them not be included, and then controlled for in the analysis?

Line 160: Unclear: it says total number of registered births during 1903-1950.

Line 166: Why March-June? It sounds like a definition based on the data, and not on a theoretical hypothesis.
Line 185: What about the rates before 1951?
Line 231: 2-3 fold. Please give the exact number.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
None