Reviewer’s report

Title: Estimated 8-year cumulative incidence of diabetes mellitus among Sami and non-Sami inhabitants of Northern Norway - The SAMINOR Study

Version: 1 Date: 16 Apr 2019

Reviewer: Marit Eika Jorgensen

Reviewer's report:

The revised paper is much improved, and most comments have been adequately addressed. I have though still a few comments:

1. Background: The information on diabetes prevalence in SAMINOR 1 & 2 as an argument for the incidence study at hand is still somehow misleading due to the differences in sampling and diagnostic methods. I suggest that you simply add a sentence at p. 4 something like: …define diabetes cases (10). "However, due to the different population samples and diagnostic methods applied, it is not possible to disentangle whether the higher diabetes prevalence in SAMINOR 2 among Sami participants reflects a higher incidence of diabetes over the last decade". A study from the SAMINOR 1….

2. Table 3: I still recommend that this broad age-categorization is not employed. It is well established that T2D incidence almost doubles per 10 y, and an age span from 53-71 y can easily reflect a difference in T2D prevalence from 5 - 20 % from the youngest to the oldest persons, and any observed ethnic difference may simply reflect age-differences. According to STROBE criteria for epidemiological research, categorization of continuous information should be avoided. As such, table 3 adds little information, and I suggest that you give the information in the text instead. Any interaction between ethnic group and age could easily be tested and reported as well.

3. Sex stratification: I agree that relevant information should (almost) always be presented for men and women separately, but when you stratify all subsequent analyses you should be aware that you assume a sex-interaction not only with ethnicity on diabetes risk but with all included information. I doubt that your data support such an interaction.

4. The steps preceding the multiple regression analysis is still not clear. A typical approach would be to base the confounder analysis on a biological likely association or on findings from univariate (or semi-univariate) analyses, or a combination of these approaches. Therefore it is not clear why WHtR and education (besides age and ethnicity) are included. Alcohol intake, marital status, income and physical activity measures associate with ethnicity in this study (and many other epidemiological studies) and could be included as well. Furthermore, the principles underlying the stepwise model should be described in the 'statistical analysis' section, not only the specific variables.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
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Yes

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