Author's response to reviews

Title: Cardiovascular risk factors differ between rural and urban Sweden. The 2009 Northern Sweden MONICA cohort

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To the Editor

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Cardiovascular risk factors differ between rural and urban Sweden.

The 2009 Northern Sweden MONICA cohort Martin Lindroth, Robert Lundqvist, Mikael Lilja and Mats Eliasson

We are grateful for the points raised by the reviewers and comment upon them below. Changes in the manuscript are highlighted with bold text.

Thereby we hope that this paper will be found suitable to publish in BMC Public Health.

Best wishes

Mats Eliasson

Reviewer 1: Saman Khalesi

Reviewer's report:
Minor Essential Revisions:
1) In the abstract the authors mentioned that the aim of the study is to "investigate the risk factors in urban and rural populations in northern Sweden", whereas in the 'Background and aim' it is stated "Our aim was to determine if the difference between rural and urban populations persists in the latest data from MONICA 2009, taking differences in age, gender and education level into account". While the comparison made between the 1999 MONICA report and the 2009 study is interesting, it needs to be clear that the aim of the study is to investigate the risk factors (of cardiovascular disease) or to compare the results of this study with the previous one. If both, need to be stated in the abstract.

Reply: We were somewhat ambiguous in our aims as pointed out. This has now been clarified in the last sentence of the Introduction as we did not have the intention to compare with the 1999 study: Our aim was to describe and analyse differences between rural and urban populations in the 2009 MONICA population study, taking differences in age, gender and education level into account.

2) While the confident interval is reported for the odds ratios in table 3, the mean values of CVD risk factors at table 1 lack measure of variability (SD or SE). It is highly recommended that in comparative population studies the measure of variability is mentioned for mean.

Reply: Standard deviations have been added in Table 1

Reviewer 2 Ana Olga Mocumbi

Reviewer's report:
Comment on the possible problems in the conclusion considering that only 70% of the expected number of individuals participated.

**Reply:** This is truly an important drawback of this, and many other population studies. We have added some data on non-responders in the Methods section and a paragraph on possible bias under Strengths and limitations.

**Referee no 3. Feng Ning**

**Reviewer's report:**
The result part is too long to include in this work, suggesting to make the part more concise.

**Reply:** The Result section now consists of 721 words and three tables. We do not find this as any remarkable length considering the many important cardiovascular risk factors that are presented. We prefer not to cut any of this out without more explicit advice on which parts that could be omitted without loss of previously not described findings.