Author's response to reviews

Title: Disease profiles of detainees in the Canton of Vaud in Switzerland: Gender and age differences in substance abuse, mental health and chronic health conditions

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Author’s response to reviews: see over
Dear Editor,

In light of the second round of suggestions made by Dr Lamiece Hassan and the 3rd reviewer (member of the editorial board), we are pleased to submit a revised version of our manuscript “Disease profiles of detainees in the Canton of Vaud in Switzerland: Gender and age differences in substance abuse, mental health and chronic health conditions” as an original research article to BMC Public Health (No. 6222693661344185).

The revised version of the paper incorporates the last comments that the referees highlighted. Changes are highlighted in blue colour in the revised manuscript and please find below the point-by-point responses (in purple colour) to Minor and discretionary comments raised by reviewers.

**Revisions suggested by Dr Lamiece Hassan’s (LH) were made.**

**Minor Essential Revisions**

1. It is usual, unless otherwise stated, for p values to be set at 0.05. However, in the following examples p values that exceed 0.05 are reported as statistically significant associations. If these are not typos and are non-significant, then they should be removed from the lists.

   - The descriptive statistics in tables 3 and 4 were checked and non significant associations (i.e. those with p_value>0.05) were changed and “NS” stated instead of the p-value (in blue color). Sentences in the Results section related to Older adults were corrected accordingly.

   - Older adults, paragraph 1: “Notably, compared to 26 prisoners under 50, older adults were significantly less likely to misuse ...pharmaceuticals (p=0.09)”
- The association between Older adults and pharmaceuticals use was removed “and pharmaceuticals (p=0.09)” deleted (page 6, line 29;)

- Older adults, paragraph 4: "The association between being an older adult and suffering from a health condition was statistically significant for ...digestive problems (p=0.06)"
  - “almost statistically significant for digestive problems (0.058)” was added in page 6 line 40/41

2. Please also double check that the following ORs are statistically significant as the 95% values for the OR span 1 (this usually, though not always, indicates NS result):
   - (Chronic diseases related to origin in the study sample): "...those from the Middle East had a higher burden of ...but less frequently endocrine disorders (OR 0.41 95%CI 0.16-1.04). "
   - " Prisoners from Eastern Europe showed a higher prevalence of tuberculosis (OR 8.09 95%CI 0.98-66.34) than those from Western Europe."
  - The ORs were double checked as suggested by the reviewer and corrections were made when necessary. In particular the association between prisoners from Eastern Europe and higher prevalence of tuberculosis were removed since not correct. Thanks to the reviewer for this.
  - The association between prisoners from Africa and endocrine disorders mentioning that they were less likely to have such disorders was kept but the p_value was added (page 7 line 26)

**Discretionary Revisions**

The authors have helpfully added in counts to other areas of the results section, however they have not revised Table 2. Adding in counts (Ns) would enable readers to check percentage calculations or see if there are missing data. This may be an editorial decision, depending on the conventions of the journal.

- Counts (Ns) were added in Table 2. They are given in brackets after the percentage for the characteristics of the study sample (see table 2 column Prisoners in the Canton of Vaud). Thus the readers are able to check percentage calculations and see if there are missing data.
Comments made by the 3rd reviewer were also taken into account (given the answers of the first round of comments) in the revised manuscript.

Major Compulsory Revisions

1. Quality of the data
   Ok

2. point for psychiatric conditions…

   “Some prisoners” it is not enough, please report the right number. If you are not able to provide the number, please add this as a limitation of the study. Lines here below could be useful to justify that some prisoners did not have the opportunity to receive a psychiatric examination and can be inserted in the Limitation section.

   It is true that some prisoners did not have the opportunity to receive a psychiatric examination because their stay was short or because they were transferred to another prison in Switzerland (or they were deported to their country of origin). However, this was a very small proportion of the prisoners. It should also be noted that specific training for both nurses and penitentiary staff allows them to identify psychiatric needs efficiently. They are therefore able to set up an examination relatively quickly. More than 95% of new prisoners are seen by nurses, assuring good medical follow-up/management. Thus the percentage of inmates in need of a psychiatric examination who do not get the opportunity is very small indeed and has little impact on the data.

   • “Some prisoners” was précised and the number of prisoners having seen a psychiatrist was included in the method section (page 4 lines 42-44). Moreover, the lines in blue were included in the Limitation section (page 10 lines 11-24)

1) Minor essential revisions

   The authors state, “elderly prisoners were less likely than younger inmates to suffer from addictions”, but then state still in the Abstract that alcohol abuse disorder was more frequent – this should be rephrased.

   • In the abstract, the sentence dealing with addictions problems and elderly prisoners was rephrased and replaced by “compared to the entire prison population, the older inmates were less likely to misuse illegal drugs and to suffer from communicable infections but exhibited more problems with alcohol and a higher burden of chronic health conditions”. (see page 2 lines 20/21)

2) Discretionary revisions

   • As suggested by the reviewer, the notes dealing with the generalization of the data were included in the limitation section (see page 10 lines 11-24)

We do very much hope that the current version of the paper will satisfy the reviewers.

Yours sincerely,

Karine Moschetti