Reviewer's report

Title: Migrant Health in Italy: a better health status difficult to maintain. Country of origin and assimilation effects studied from the Italian Risk Factor Surveillance data.

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Reviewer: Hajo Zeeb

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Review POHM 18 00066

This manuscript presents an analysis of a large surveillance dataset from Italy, with a focus on migrants and risk factors and particularly aiming to study differences with respect to country of origin and to risk (or behaviour) convergence related to duration of stay, or "assimilation" as termed by the authors. The manuscript employs a unique data source, and provides new insight into migration health in Italy, however results largely confirm what is known globally, i.e. variation in health status with often better profiles for migrants, and ongoing risk convergence with increasing duration of stay.

Major comments

The authors do not differentiate between migrant health and refugee health. Longstanding migrants may have different entitlement as well as different health care experiences and different health problems as compared to current refugees, and this needs to be accounted for, or, if not true in Italy, clearly described. The statistical methods are not very described. Results do not allow to investigate sex-related differences

Specific comments:

P4 L9: substantial variation..between health status? Please revise, probably you want to express that there are variations depending on the health outcome under consideration

P4 L12: massive crisis - what are the characteristics you are alluding to? Where is the evidence for a "massive crisis", and whom does it affect. My perspective would be to refrain from dramatising terminology unless there is substantial and constructive reason to use it.

P4 L19: wording: … relevant to better address public health interventions? Is it not rather that such specific knowledge may be useful to design and implement better-targeted interventions?

Methods:
The limitation to those speaking Italian is understandable but represents a particular challenge in migrant studies: is there any information how many interviews could not be done due to language restrictions? In the discussion, otherwise some info could be incorporated on the percentage of migrants not speaking Italian (from other sources)

P8 Statistical methods: the ordering should be different, starting from saying how descriptive analyses and standardisation was done moving to any modelling (regarding which outcomes?) and the indicating what was used as indicating statistical significance.

Later, [p.11], conditional regression is mentioned: why is this approach used, is there a matched design? The methods section needs to be expanded to include all statistical approaches, with sufficient explanation. Also, the term relative OR is introduced on p.11, this again is not clear and needs to be revised. The explanation given in the results belongs to the methods section.

Please also indicate what happens with missing data in PASSI and in your analysis?

Results

P8 L17 First sentence is hard to understand - what does substantially mirroring mean? Is the Italian comparison population also taken from PASSI respondents, or from national statistics (as it seems)? I think that it would be good to have the demographics of Italians in PASSI as well, as participation always plays a role

P10 there are no real differences in education status in table 1, only perhaps in those with university degree. Restate the findings.

Results for table 2: for clarity I suggest to put those variables where higher OR indicates better health or risk factor below each other, i.e. good health status and cervical cancer screening, followed by the other vars. This reduces possible confusion.

P 12 authors state that the country of origin has a major influence on health behaviour and attitudes. This statement should be reviewed as it may well be factors associated with origin, including cultural values, dietary habits, health concepts, etc, and country is not much more than a proxy for this conglomerate. This is discussed a few paragraphs later in some detail. However, much of the comments in the results section along belong to the discussion.

Table 3: the data should be stratified by sex, and not standardized for sex, as there are possibly substantial prevalence differences by sex that cannot be seen here (and not in table 2). This is an essential change required.

P 12 I am wondering why no regression analysis including length of stay was done for some core outcomes. The authors reserve this for future analyses, however, it seems this could still be part of the current analysis.
Discussion:

The general direction of the discussion is clear and substantiated by the findings, highlighting advantages among migrants, while acknowledging convergence. Less clear is the relationship to health promotion activities; for example, the authors report about the increase in screening uptake and reduced socio-economic differences for cervical cancer screening, however the reference relates to colon cancer screening and not to health promotion but to another survey evaluation. Therefore, the conclusion does not fit to the core contents of the paper and needs to be rephrased.

Please reconsider the argument as well with regard to maintenance and strengthening of existing health resources among migrants. While it may be true that migrants contribute to overall better health indicators in a population, the picture must be balanced by particular health care and preventive needs (including language services etc.) as well as the necessity to consider the particular demographics of the group as a whole and subgroups from different countries or ethnic background.

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