Reviewer's report

Title: Risk factors for pulmonary tuberculosis in Croatia: a matched case-control study

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Reviewer: Guy Harling

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This paper provides descriptive data on correlates of TB disease in Croatia using a population-based sampling frame for generating controls to match to controls. The study seems straightforward, the analysis well executed and the authors make some efforts to link their findings back to existing literature.

Minor Essential Revisions:

1. The authors should have this manuscript reviewed by a native English speaker. The standard of English used is generally good, but grammatical errors are noticeable and sometimes make comprehension difficult. In similar vein, the use of European-style commas and English-style decimal points is inconsistent.

2. As the authors note, this study appears to be the first to look prospectively at risk factors associated with Croatia. This is interesting, but have there been any other studies in Eastern Europe and/or the Former Soviet Union? The authors mention variation in risk factors across Europe in the Introduction, but it would be of interest to this reader to see the findings of the study compared to risk factors seen elsewhere.

3. More generally, the Introduction and Discussion does not help place the findings in the broader context of TB research in middle-income countries worldwide. Given the framing of the article as an insight into a middle-income, middling-prevalence setting, it would be of great interest to the reader to understand how Croatia is similar or different to similar settings, and to richer/poorer or higher/lower incidence settings.

4. Introduction. The introduction seems very brief. What information exists on risk factors in middle-income countries with reasonably high TB burdens (e.g. Brazil, Peru, China, Russia, other Eastern European countries)? How does it differ from developed or developing countries? My goal here is to understand what we might expect to see in the Croatian analyses, so as to better interpret the study’s findings.

5. Results. The inclusion of many odds ratios and CIs appears to be largely repetition of information provided in the Tables, and additionally makes reading the Results difficult. I would recommend removing the statistics which are already provided elsewhere.
6. p11, first paragraph. The authors seem surprised that having a parent born in Bosnia Herzegovina is a risk factor. However, this variable is likely to be strongly associated with being born there oneself (a bivariate risk factor in their analysis), and thus to having been exposed to infected persons. I would also suggest that the authors refrain from suggesting nationality-based genetic susceptibility without evidence, given the large number of other risk factors (as noted in their analysis) that might explain the differential risk in Bosnia Herzegovina.

7. p11, second paragraph. The authors note the association between low socioeconomic status to TB, and then note that crowding may be a mediator for this effect. However in this study crowding is negatively associated with TB. Can the authors explain this finding?

8. p12, third paragraph. Could the authors provide some idea of the prevalence of LTBI in the population – is the prevalence high enough that even low levels of immunosuppressed patients may make this an important population to focus on for TB prevention?

9. Conclusion. The framing of the conclusion – that TB is more than a social disease – is an interesting approach, but does not seem well-connected to the rest of the paper. Are the authors trying to separate TB in Croatia from that in the rest of the EU and/or high-burden, poorer countries? If so, this might be worth saying explicitly here.

10. Figure 1. The title to this figure does not appear to clearly define the content, but rather to be describing the main finding. A more neutral title, e.g. “Reasons for exclusion of individuals from the control group”, might be more appropriate.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:

I declare that I have no competing interests