Reviewer’s report

Title: A comparison of licensed and un-licensed artisanal and small-scale gold miners (ASGM) in terms of socio-demographics, work profiles, and injury rates

Version: 1 Date: 08 Dec 2016

Reviewer: Rodney Ehrlich

Reviewer's report:

This is a useful report because so little is known about health and safety in the artisanal/small mining sector. This study covers gold mining in Ghana, and points to the need for further research on both injury and ill-health experience in these populations in different countries.

My comments are minor.

1. ASGM is an awkward acronym, especially when used to qualify the noun "mining"or "miner", and one that will not be easily recognised by a general readership. I suggest a way be found of spelling artisinal and small scale out in full. The "G" and "M" are clear from the context of the paper.

2. The distinction between artisanal and small scale mining should be made clear in the introduction, as well as the process of licensing sites in Ghana. There is a further reference to "regulated or large-scale operations". These distinctions should all be made in the Introduction.

3. The sentences on p.4, lines 97-100, were difficult to understand. What are "unusual power relations" etc.? The point(s) should be made more simply in a couple of explanatory sentences.

4. P. 4, line 81: "may" rather than "can".

5. Tables 1 and 2. I do not think it necessary to provide both mean (SD) and median (IQR) summary measures. Depending on the underlying distributions, which the authors can test, one should be sufficient. Statistical tests for differences in age, gender and months worked should then be done, since inferences are drawn in the Discussion (p.13. line 266, and pp. 14-15, lines 310-311). There do not seem to be any differences by age and gender.

6. Table 3: % sign should be included in column headings. A footnote should be appended describing the meaning of the p-value (e.g. "chi-squared test for any difference between strata").
7. Tables 4 and 5 contain redundant descriptive text in the cells. The rows and columns should be appropriately labelled and the cells restricted to numbers. The rate ratios need 95% confidence intervals.

8. P. 12, lines 244-245: ".rather than any preexisting marked differences in the.. (miners)". The Introduction should include a statement about any prior expectations about the differences between licensed and unlicensed mine workers.

9. P. 13, lines 269-272. There is no one involved in burning activity in licensed mines, and only (?2) people in unlicensed mines, which makes it a rare activity. The last sentence should reflect this more accurately.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

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?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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