Reviewer's report

Title: Injury Rates and Injury Risk Factors Among Federal Bureau of Investigation New Agent Trainees

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Reviewer: Ludmila Cosio-Lima

Reviewer's report:

The manuscript: Injury Rates and Injury Risk Factors Among Federal Bureau of Investigation New Agent Trainees by Joseph J Knapik, Tyson Grier, Anita Spiess, David I Swedler, Keith G Hauret, Bria Graham, James Yoder and Bruce H Jones as a Research article

The question posed by the authors is well defined and the methods used are appropriate and well described in this research article. The data is sound and the authors of the manuscript adhere to the relevant standards for reporting and data deposition.

In general, the discussion and conclusions is well balanced and adequately supported by the data. The authors stated clearly the limitations of the work. Additionally they clearly acknowledge any work upon which they are building, both published and unpublished and the title and abstract accurately convey what has been found.

I have a few comments for the improvement of this manuscript and my recommendation for the authors is of discretionary revisions.

- Discretionary Revisions

In the Discussion section, under Univariate Analysis of Injury Risk Factors, paragraph 5, sentence that starts with "However"...the product-moment correlations between age and all... that sentence does not make sense, typo?

Discussion section, paragraph 8

The authors mention that there was little association was found between current cigarette smoking and injury risk among the men or women. Did those questionnaires asked about cigar or pipe smoking?

Discussion section, paragraphs 11, 12

This paragraph is somewhat contradictory; I think the authors should discuss the findings in women too. According to the data," the age smoked first cigarette, and smoked 100 cigarettes" variables appear to show higher risk in females. Also, the age range for men and women (6-17yrs) is too wide as far as developmental stages. How many agents started smoking before the age of 17?

Are there enough numbers to separate into 6-11 yrs, 12-16yrs, 17-25yrs, and
older than 26yrs?

Table 1.
I would suggest separating injury types by gender and body parts. In the table under traumatic bone fractures, where these for sure traumatic or overuse stress fractures?

Table 2.
The data would be much interesting if you present it in this table separated in males and females
Do you have any information on physical training activities associated with these injuries(i.e. running, calisthenics? I did not see them mentioned in the text. 

Table 5
As I mentioned earlier, according to this table, it seems like women do have a small risk of injury depending on the age they smoked. Could you expand your discussion on women in the document?

Table 6
Multivariate analyses results suggest differences in injured body parts: knee in males vs back in females…expand…
The results of your data under the females menstrual history suggests that there is a higher risk in women who did not use birth control pills in the past 12 months. I think this would be worth discussing in your discussion section. Also, I am curious of what type of injury, where these fractures?

Based on my assessment of the validity of the manuscript, I advise that this manuscript should be accepted after discretionary revisions

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

Quality of written English: Acceptable

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' below