Reviewer’s report

Title: Demographic, health-related, and work-related factors associated with body mass index and body fat percentage among workers at six Connecticut manufacturing companies across different age groups: A cohort study.

Version: 2 Date: 23 June 2015

Reviewer: Eshan Fernando

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Overall Garza and colleagues investigate an interesting and important relationship between work and markers of obesity. Incorporating BMI and BFP add an additional level of information allowing the authors to further investigate this relationship.

Major Compulsory Issues
1. Full inclusion and exclusion criteria should be included in a supplementary appendix. For example, what was the cut-off for employee turnover rate cut-off.
2. The validity of the MSK pain questionnaire in the survey is unclear. Can additional references be provided validating this?

Minor Compulsory Issues
1. Within the background, line 85, please provide a specific reference for the statement “with almost 70% of American adults at an unhealthy weight status”. For example, CDC data, census data. Also is this based purely on weight or is it using measures such as BMI and BFP.
2. Line 95-97: “The factors most strongly associated with obesity may differ for different groups of individuals such as those who work in different industries or who are in different age categories.” Within this sentence there is excessive use of the word different and differ.
3. Is there a reason why 33 months were selected for BMI and BFP or is this simply a mean. Was there a targeted timeframe (ie 36 months initially)?
4. Although including MSK related pain as a potential maker of limiting physical activity, there are other chronic health conditions such as cerebrovascular disease and lung disease, sleep apnea that are not assessed in this study. This can potentially lead to increased sedentary life and can impact obesity/body fat. As a result, this is a weakness in this study.
5. Combining adults who had children but did not have primary healthcare responsibilities with adults without children under 18 may not be appropriate as there is still significant responsibilities involved.
6. Could the decrease in BMI seen in age 55 be due to loss of muscle mass given the lack of significant difference in BFP by age?
7. Line 303 - was interested in changing weight - please proofread article for grammatical mistakes and tense. Also, please try to avoid repetitive use of the words in the same sentence where appropriate.

Discretionary Issues
1. In order for readers to quickly assess the population, it maybe useful to include average BMI within the result section,
2. It is unclear if “e.g.” is needed in line 92 and 93 when citing references. Consider removing.
3. An additional paragraph in the introduction and/or conclusion stating the relationship between obesity and health outcomes would add greater depth and relevance to the paper
4. Line 306 -When discussing high stress and the impact with baseline BFP perhaps use the statement "associated with a trend towards high baseline BFP although not statistically significant".
5. Perhaps a summary table outlining which factors impacted BMI and BFP in each group would provide a nice outline and easy to view information summarizing key findings in the study (ie list factors that did impact BMI in each age group without factors that did not).
6. Regarding the statements begin in line 384, have their been studies looking at obesity in manufacturing or "blue collar" workers? It would be useful to relate to include these studies in the conclusion. If studies such as these do not exist, this would further emphasize the significance of this paper.
7. Due to the nature of the study, causality cannot be established. As such, although there maybe an association, the true clinical impact is unclear. Adding a paragraph with respect to future directions or research gaps would be beneficial.

Level of interest: An article of importance in its field

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