Reviewer's report

**Title:** Validity of a brief Stages of Change instrument relevant to the physical activity goal of achieving 10,000 steps per day

**Version:** 1  **Date:** 6 July 2015

**Reviewer:** Ash Routen

**Reviewer's report:**

**General comments**

This is a very well written and clear manuscript that examines the validity of a step count goal related stage of change instrument in a middle aged Australian population. The study is well conceptualised and conducted. There are a few comments that require addressing, see specific comments below.

**Minor essential revisions**

**Abstract**

Line 9: Remove ‘to the’ after according.

**Background**

It is not clear from the introduction why intention and self-efficacy are important to validating this instrument. Please include a short sentence on how they relate to the TM.

**Results**

Please could you provide some detail on the accelerometer wear i.e. mean number of days and hours worn, how many (n,%) returned valid data etc.

Figure 1: It would be useful if significant differences in variables between stage groups were highlighted with an asterisk over the top of the corresponding bars.

Table 1: Change Energy Fatigue to read Energy fatigue.

Table 1 and 2: Change waist girth to read waist circumference.

**Discussion**

A limitation to note is that this is a middle aged sample, and the validity of this instrument is unknown in younger adult populations.

**References**

Shorten journal name in reference 10 to be consistent with others.

**Discretionary Revisions**

**Background**
Page 1, Line 8: It would be useful to clarify if their use alone (i.e. simply viewing steps is enough to prompt change) or if review showed pedometer + self-monitoring etc. was required.

Results

Page 2, Line 18: I find it confusing that participants in the maintenance stage could significantly differ from preparation and contemplation groups on accelerometer measured steps day but not against the pre-contemplation group who take the least number of steps (and hence have the greatest difference in medians in comparison to the maintenance group). Is this correct? Assume related to low power?

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