Reviewer's report

Title: Smart wearable body sensors for patient self-assessment and monitoring: a systematic review

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Reviewer: Paloma Bonato

Reviewer's report:

The content of the manuscript “Smart wearable body sensors for patient self-assessment and monitoring: a systematic review” is relevant, and fits the scope of Archives of Public Health. In general, it is well-written; however some sections lack clarity and cohesion, and the scientific contribution is not clear. See below some recommendations that could help to improve the clarity of the manuscript.

* Major Compulsory Revisions
The authors should consider rewrite the Introduction section. In general, this section was disconnected from the rest of manuscript, and the topics of the study were not clearly delimited. Even the main topic of the study, the “smart wearable body sensors” (SWS) was not clearly well-defined. Please, define clearly what kind of device can be considered as SWS.

* Minor Essential Revisions

**Introduction
In the first sentence of the second paragraph, the authors try to define: “wellness and fitness wearable device”. Is this synonym for SWS? If yes, the authors should consider the use of the same terms throughout the manuscript to facilitate the understanding. Is there other papers that review the use of SWS in medicine?

**Wearable body sensors
What is the relevance of pointing out the “three approaches for outpatient monitoring”? What is their relation to the SWS? It is not clear if SWS is a type of telemonitoring or “Quantifying self-hybrid models” (QSHM).

**Cardiopulmonary and Vascular Monitoring Different kinds of sensors are revised in this sub-section, however no clinical studies in which these sensors are tested with patients are discussed (as in the second paragraph of Glucose Home Monitoring Sub-section or in Neurological Function Monitoring Sub-section). Are there no studies with patients monitoring SWS use in Cardiopulmonary and Vascular area?

**Neurological Function Monitoring
In some cases the results of papers are discussed too deeply, even percentagens are cited. The purpose of citing others papers is to give examples of how SWS can be used or discuss the reliability of the SWS, but not discuss the main results of the paper.

Eg.: line 12 “This study showed that patients with CP related gait disorders had a 21.70 (36.06) % (…)"

line 23 “They also mention the the physical activity was very low, with 58% of the participants (…)"

*Discretionary Revisions

Maybe the authors could consider discussing both benefits and limitations of the sensors in each sub-section and then in the conclusion resume both sides and conclude if the use of SWS should be recommended or not to patients.

The discussion between carried item versus wearable item in the beginning of the Glucose home monitoring subsection is very interesting and should be more explored in the Introduction section.

**Level of interest:** An article of importance in its field

**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