Reviewer’s report

Title: "OPTImAL": an ontology for patient adherence modeling in physical activity domain

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Reviewer: Juan Antonio Lossio-Ventura

Reviewer's report:

This paper describes the construction of an ontology related to cardiovascular patient adherence to physical activities. This work is well detailed, clear, and organized. The motivation is very well explained too.

I have a few concerns:

- How many published studies did the authors use to develop the ontology?

- Why did not the authors take as seed the ontology proposed by Kostopoulos et al [21]? This ontology seeks to propose exercise plans for individual suffering heart diseases. So, could have this ontology been enriched with the other lacking aspects?

- Do not need to cite in every sentence, for instance, citation [21].

- Table 1, Bickmore & Schulman [21] is a wrong citation, it must be [19].

- Table 2, "Target users" may be rephrased as:

The primary target users are healthcare professionals working with cardiac patients, aiming to (User 1) recommend or (User 2) coach them on physical activity and exercise. Another group of target users (User 3) is professionals involved in the development of software solutions to support physical activity and exercise performance of patients. Target users:

User 1 - Cardiologist

User 2 - Cardiac rehabilitation program trainer

User 3 - Software developer or researcher working in the domain related to CVD patient adherence in physical activity domain.

- Section "Ontology individual" has a repetition of paragraphs.
In this study, we introduce OPTImAL, a reusable ontology model focusing on physical-activity-related adherence of patients with heart disease is proposed -> delete "is proposed".

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.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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