

OPEN PEER REVIEW REPORT 1

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Title: Progress and prospect of intelligent rehabilitation in motor dysfunction

Reviewer's Name: Xia Shen

Reviewer's country: China

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COMMENTS TO AUTHORS

The author reviewed the progress and prospect of intelligent rehabilitation in motor dysfunction. It is an interesting theme. The author proposed a concept of close loop active rehabilitation system as intelligent rehabilitation and reviewed the current and potential techniques available for the intelligent rehabilitation. The article is content-rich and instructive for rehabilitation professionals. However, there are some problems in rationale, structure, depth of the review that needs to be addressed.

1. What is intelligent rehabilitation? What's the relationship with conventional rehabilitation? It is a supplement or complementary but not replace. The author pointed out a series of shortcoming of conventional rehabilitation, such as monotonous, passive, etc. which I think is not correct and not necessary mentioned as well. Please emphasize the goodness and importance of intelligent rehabilitation to rationalize the article.

2. What is intelligent rehabilitation? There is no generally accepted definition. But It should be a quite broad field. So how to organize the contents logically and closely related with the topic is very important. The author included neurophysiological examination and use of artificial intelligence in motor function assessment to review. These two parts seem not parallel but might intercorrelate with. In the review of rehabilitation training, the 2.1 is the most important conventional rehabilitation manner but not necessary be reviewed here parallel with other intelligent rehabilitation. I think the author should carefully define intelligent rehabilitation and revise the logicity of the contents.

3. The review lacked the depth, I think. For example, about neurophysiological examination, the author illustrated the application of many techniques in rehabilitation assessment, which I think most people already have the common sense. However, the author did not further expound the advanced findings or application of these techniques in motor rehabilitation.

4. Others details:

1) Introduction line 54: "evidence supporting rehabilitation efficacy is limited". This state lack evidences, and I don't agree

2) Too many abbreviations.

3) Duplicate contents between introduction and discussion.