Review of: "Effect of Self-Movement on Visually Directed Throwing: Implications for Distance Perception"

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Potential competing interests: No potential competing interests to declare.

Introduction:

The hypotheses are not specifically clear. The authors just spelled out that they aim to investigate whether perceptual overestimation has a correlation with the action of throwing a ball to a basket but did not hypothesize anything about this correlation.

- What is the expected outcome regarding your experimental manipulation?
- Could the authors briefly explain the concept of perception of egocentric distance?
- Could you better explain the paradigm of indirect distance indication? Also, the authors should add a reference of this paradigm is need. It is a paradigm developed by Santillán

and Barraza (2019)?

General Methods:

Would be good to provide the number of the approved protocol in the local ethic committee.

Experiment 1

Methods:

- Provide a reference for this sentence: “Based on our previous experiments…(REFERENCE?)”.
- Please, clarify the compressive effect shown in Wagner (1995).

Participants

The authors said that the sample size exceeded the minimum requirement determined by the G-Power analysis. However, some information is needed.

- Which type of power analysis did you perform? A priori, a posteriori, a sensitive power analysis?
- And what effect size do you want to detect (small, medium, large)? Please provide de*f* value.
- What is the standard deviation of age mean? Please provide this information.

Procedure

- Could you detail the five conditions in which each participant was presented?
- How did you perform the analysis?
- What statistical test did you use?
- Could you please provide a figure of the task as you did for Experiment 2?

Results

- If I understand correctly, each participant performed both running and standing conditions. If so, why did you not use a two-way ANOVA?
- From what I see in your boxplot (Figure 2), you have some outliers. Is your data attended to the normality assumption? If not, you can use the corresponding non-parametric test.
- Please provide a brief discussion explaining the results of Experiment 1

Experiment 2

Procedure

- How long did it take the practice condition?

Minor: *p*-value should be in italic (e.g. $p < 0.001$), as well as the *F* from Anova.

Results

- As you Anova showed a significant effect of condition and height, as well as the interaction between them, you have to provide post-hoc t-tests to see which conditions significantly differ from each other (HR, HS, LR, and LS).
- Figure 3 must contain the stars (*) to signalize which condition significantly differs from the other.

Discussion

- Provide a brief Discussion for you Experiment 2.
- I think would be better to transform your Discussion section into a General Discussion in which you discussed both experiments and the goal of the study.
- The authors said that a possible explanation for the relationship between distance error and height could be a feature or data of the scene that participants relied on to estimate the distance. Could you provide some literature discussing this?
- What future works could investigate that your study did not?
- What are the limitations of the study?