



School of Medicine, Human Anatomy, Histology and Movement Sciences Section

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Dear Reviewers,

Thank you for the comments concerning our manuscript titled “**Technological advancements in the analysis of human motion and posture management through digital devices**” By Federico Roggio, Silvia Ravalli, Grazia Maugeri, Antonino Bianco, Antonio Palma, Michelino Di Rosa and Giuseppe Musumeci. Now we are resubmitting our manuscript for your kind consideration for possible publication in *World Journal of Orthopedics*. All the corrections and changes are highlighted in yellow.

Point by point reply

Reviewer 1:

1) The manuscript is well written overall. This article will be better suited for a basic science, or biomechanics related journal. Its clinical implication is not strong.

Reply: Thank you for your valuable comment. We improved devices' clinical implications in section GAIT ANALYSIS IN PREVENTION AND HEALTH PROMOTION

2) For the introduction section, I don't see the purpose of the paragraph about Covid-19 and physical activity level.

Reply: We really appreciate the reviewer's opinion, therefore, we removed it. Thank you.

3) It is described that “the optoelectronic stereophotogrammetric multi-camera capturing system is the gold standard for motion analysis”. The authors must provide strong reference for this statement.

Reply: We provided the references for this statement. Thank you.

4) How about other motion analysis systems such as those electromagnetic systems (such as Polhemus, Ascension)?

Reply: Thank you for this insight. We included description of these systems at the end of section FROM MARKER-BASED TO MARKERLESS MOTION ANALYSIS SYSTEMS



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Reviewer 2:

New posture analysis techniques are emerging. The evolutions of these methods aim to standardize measurements and provide manageable tools in clinical practice for the early diagnosis of musculoskeletal pathologies and to monitor daily improvements of each patient. Movement, gait, and posture analysis are increasingly crucial in the clinical setting and everyday life. This review aims to resume the currently used motion and posture analysis systems, clarify and suggest the appropriate approaches suitable for specific cases or contexts.

Reply: We sincerely thank the reviewer for the accurate reading of our manuscript.

Science editor: All the issues raised by the Scientific Editor have been addressed. Thank you.

Comments from editor are all valuable and very helpful for revising and improving the editing of our paper and for this reason we acknowledge the editor for the suggestions whereby the paper has improved considerably.

Thank you for your time and for considering our paper.

We look forward to hearing from you soon.

Yours Sincerely,

Giuseppe Musumeci (on behalf of all authors).