

PEER-REVIEW REPORT

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Title: Vitamin D deficiency, functional status and balance in older adults with osteoarthritis

Reviewer's code: 05872085

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: United States

Author's Country/Territory: Brazil

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Reviewer chosen by: Ya-Juan Ma

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input checked="" type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The study by Fernandes et al examines the relationship between Vitamin D deficiency, functional status, and balance using a cross-sectional study of older adults with osteoarthritis. Overall, it follows a coherent structure and encompasses essential components of a research study. However, I suggest a few changes as follows to improve the interpretability and readability of the manuscript. Abstract Objective: •

“deficiency” is missing after vitamin D • For consistency, I would suggest using “older adults” or “elderly” throughout the manuscript. Results: • the first sentence is not clear. It is not clear what is meant by “At the participants”... • please provide the % of moderate to severe cases in the group with normal vitamin D levels in parentheses with 56.6% (e.g. 56.5% vs xx.x%) • results should be presented in past tense Conclusion:

• should be written in a way that does not imply causation as this is a cross-sectional study Introduction • paragraph 2, overload of joint strength is not a risk factor for OA • paragraph 4, first sentence needs a reference • paragraph 4, second sentence: low levels of what? • Paragraph 5, second sentence need supporting references •

Paragraph 5, third sentence ends with Hussain et al • Paragraph 5, the sentence “Furthermore, there are no published reports concerning a possible association between vitamin D deficiency and functional status of individuals with OA” is not true. Please see:

<https://pubmed.ncbi.nlm.nih.gov/31453483/>
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4311532/> Materials and Methods •

Study design and population: second paragraph- rheumatoid arthritis is not a muscle disease but rather a musculoskeletal disorder Results • “there were more overweight (BMI average 28 ± 4.7) and lower smokers (34.3%) being these data shown in Table 1” is grammatically incorrect. • Table 1: Absolute is misspelled • Figures 1 and 2: suggest replacing the legends with x-axis labels Discussion • “Additionally, it was



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also noticed an association of vitamin D deficiency and postural balance” is grammatically incorrect • Need to include a section on limitations of the study which should highlight at the minimum the limitations of the study population, study design, and generalizability. Conclusion •The cross-sectional design of the study does not adequately allow to conclude “Additionally, it may be prudent to define the optimal dose of supplement for maximum effect with minimal side effects” • Reference 22 does not investigate the association of vitamin D levels with the severity of OA, so it is out of scope for the current study. Suggest removing it. Same for reference 24. Suggest including more studies that evaluated the relationship between vitamin D levels and OA severity. Overall •The manuscript needs to be revised using an English-speaking editor. There were many places where the meaning was not clear due to syntax errors.