Peer-review Comments and Author Responses

Reviewer 1

1. Title and Abstract: The title and abstract were acknowledged for providing an informative summary of the study. No specific revisions were recommended.

Response: No revisions recommended. Addressed by solving the comment.

2. Introduction:
While recognized for providing the rationale, the introduction was suggested to be better summarized, particularly in the last three paragraphs.

Response: Addressed by condensing the contents of the introduction into four paragraphs, keeping its backbone and all the important considerations. Specifically taking into account the consideration that the last 3 paragraphs could become one paragraph.

3. Materials and Methods:
The materials and methods section were overall praised for clarity. However, some minor revisions were suggested:
- In the subsection "Diseases present in the MAR-Scale and the DBMA," the reviewer recommended addressing redundancy in disease evaluation information.

Response: Addressed by deleting the first two sentences due to redundancy with the previous paragraph that also mentions the diseases covered by the DBMA.

4. In the "statistics" subsection, the reviewer advised adding information about the software and version used for calculations.
Response: Addressed by adding both of the statistical packages that were used, Microsoft Excel 365 and STATA BE 18.

5. In the "statistics" subsection, please mention if there were potential biases and how you handled them. In the case no bias were expected, please specify it.
Response: Addressed by adding a subsection titled "Bias" where we explained that selection bias, Hawthorne effect, observer bias, and confounding effect were thought of, but we weren't able to control accordingly, therefore their effect might affect the study results.

6. Results:
The reviewer recommended the detailed description of results but suggested minor changes for better organization, especially regarding Table 1.
Response: Addressed by summarizing sections of Table 1 to make it less dense. Please clarify what happened to the patient in which burden was not measured:

7. "However, it is important to consider that one of the surveyed patients' burdens was not measured, leading to a sample size of 383 patients for burden and morbidity assessment."

Response: Addressed by adding the sentence: "This was due to them not suffering any of the 22 conditions inquired for in the DBMA questionnaire, hence being only assessed through the MAR-Scale".

7. Paragraph Organization:
The placement of a paragraph compiling sociodemographic characteristics was suggested to be the second one. We acknowledge this point and will reorder the paragraphs accordingly. Regarding the patient in whom the burden was not measured, clarification will be provided.

Response: Addressed by reorganizing the paragraphs of Table 1. Also, the reasons for which one of the patient's burdens was not measured, were provided.

8. Discussion:
The discussion section was noted to need improvement, particularly in avoiding the repetition of numerical results. Recommendations include adding specific references for studies mentioned and comparing results with those studies. The impact of positive relationships should also be discussed.

Response: Addressed by explaining the possibilities of the logistic ordinal regression, its implications, and its relation with other published data.

9. Here, you started by mentioning a study of 146 patients and then mentioned another study that used the same scale. At the end of this paragraph, you add only 1 reference. I suggest rewriting this paragraph and adding a specific reference for each mentioned study. Also, I suggest comparing your results with the information obtained from these 2 articles (without repeating the results). Did your results were similar or different compared to those articles?

Response: Addressed by rephrasing the paragraph, with an emphasis on comparison. The redaction of said paragraph made it seem as if two articles in literature were being compared, when in reality A-CaMo II's results were being contrasted with those in another paper. This was corrected.

10. In this paragraph, what is the impact of the positive relationship found between adherence and the burden? How are your results correlated with the published literature? I suggest taking this into account and elaborating on the idea. It is always a good idea to discuss the implications for practice and future research your manuscript will generate.

Response: Addressed by discussing the implications said results will have in the Dominican health system. As well as comparing the findings here to an abstract published by Mettler et al. in 2022. Although the full text could not be found, the information herein provided a contrast to the results found in A-CaMo II. These, as well as the reasons for them, were discussed in the paper. A concluding statement was added to this discussion, asking future researchers to explore said differences, focusing on those that might be caused due to differing health systems or diseases.

Reviewer 2

11. Abstract: The abstract should be reorganized, including the most important facets of each section in the manuscript. For instance, the methodology section does not contain any pertinent

information on the analysis performed throughout the test.

Response: Addressed by reorganizing the abstract so that each section contains information that appropriately represents everything that was done within each stage of the study. In particular, we have incorporated revealing information about the analysis carried out throughout the study within the methodology section.

12. *Introduction: The introduction is to expense. An introduction should contain 3 to 4 paragraphs exposing the backdrop, the problem, the gap of knowledge and the aim of the study to address such gap.*

Response: Addressed by synthesizing the introduction into fewer paragraphs and less volume of each of the paragraphs. However, because the study tries to compile three different aspects of a patient's status: disease burden, adherence to the pharmacological regimen, and morbidity status, it is best to explain and provide background to each dimension as a gap in the literature with each one of them and then using the response to provide for an individual research question for all 3 of them.

13. *Results: Table 1 and Table 4 could be better represented to allow an easier visual exploration of the results. Detailed information could be included as part of supplementary material.*

Response: For table 1, simplification measures were undertaken to improve its representation. The residence was adjusted to the four regions within the Dominican Republic, income brackets were condensed into four categories, and past medical history was simplified into dichotomous variables. Detailed information will be available in supplementary material. For Table 4, the main one or two main chronic illnesses (as per the results) per body system were included in the results section of the paper, totaling to 7: osteoarthritis, cancer, rheumatoid arthritis, cerebrovascular accident (CVA), depression or anxiety problems, heart failure and hypertension. As such, the table description was readjusted. The rest were kept in a supplementary table and discussed throughout. Table #1 and #4 will be re-uploaded in the requested format according to the corrections indicated.

14. *References on the article:*
References are not properly addressed in the introduction and discussion sections. Readers might not benefit from reading the full article name of a reference within a paragraph.

Response: Addressed by deleting the full-article name from the references used in the introduction and discussion sections.

15. *Discussions: The discussion might benefit from a more extensive literature review to contrast findings with available literature and explore the implications of the primary outcomes. These might not only focus on patient-level outcomes but also health policy, public health, patient education and others.*

Response: Addressed by performing a thorough search of the available and published literature concerning studies of burden, drug adherence, and morbidity. The findings of our search furthered

our limitations that there isn't much data to compare or agree upon on these three dimensions altogether.

16. As part of the conclusions, readers might prefer to understand the final message or teaching point from the article and the implications for the scientific community instead of a summary of the results that have already been presented before.

Response: Addressed by creating a paragraph with a final message regarding our experience during the study, and what the study means to us as researchers and to the scientific community of the Dominican Republic.

17. Grammar of the article: I would suggest to fully read the article and correct some syntax and grammar mistakes. Some paragraphs might benefit from a new structure as the main idea, supporting information and take-away message. These should be carefully organized in a formal sequence.

Response: Addressed by a thorough revision of the paper's grammar was made by several authors. Sentence and paragraph structure were changed accordingly, mostly to provide better clarity in the ideas and processes done.

Global response:
We thank both reviewers for the positive assessment and congratulate our intentions with this article. We followed the revisions carefully and made some changes in the draft, mostly regarding grammar. The comments and changes were written here and also on the marked version that was uploaded as a Word document. Also, the changes made to Table 1 and Table 4 were uploaded in 300 dpi format, while the original tables are attached in the supplementary appendix.

Sincerely,
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