García, P., & Valdés, D. (2023). Validation of the Cognitive Fusion Scale in Cuban adults with anxiety symptoms. *Interacciones, 9*, e361. https://doi.org/10.24016/2023.v9.361

LETTER TO REVIEWERS

Reviewer A:
Recommendation: Revisions Required

Relevance: Moderated
Novelty: Moderated
Presentation and writing: Low or very low

Comments for authors:
METHODS
1. The number of participants is limited to the number of items you wish to evaluate.
2. The authors point out:
"The application sample consisted of 106 people, with a predominance of women (77, 72.6%). The mean age of the participants was 38.9, median 37.0 (SD = 9.55), ranging from 25 to 55 years of age.
In terms of educational level, the following frequencies were obtained: 52 (49.1%) with intermediate technical education, 26 (24.5%) with university studies, 24 people with intermediate education (22.6%), two with pre-university studies (1.9%) and two people with basic secondary education (1.9%).
Regarding marital status, 40 women were single (37.7%), 27 were married (25.5%), 17 men were single (16.0%), 11 were married (10.4%), 7 were accompanied (6.6%), three were divorced (2.8%) and one was accompanied (0.9%).
In terms of occupational status, there is a predominance of employment in different sectors of society, education, public transport, health, economy, industry, for a total of 57 workers (53.7%), although 32 self-employed workers (30.2%) and 17 housewives (16.0%) stand out.
Regarding personal pathological history (PPH), 78 persons (73.6%) did not report PPH, 15 presented HA (14.2%), while 13 (12.2%) presented other underlying pathologies.
Of the IDARE scores obtained, 99 people scored high anxiety as a state (93.4%) and 7 people scored medium anxiety as a state (6.6%). The mean IDARE (state) score was 49.8 (SD = 3.39), median 49, with a minimum score of 43 and maximum score of 58."
However, all this could have been in a single table.

RESULTS
3. In the results section, many paragraphs can be converted to tables to reduce the amount of text.
4. It's unclear what a specific sample size is for each analysis. Please include the sample size used in each table.
5. It's unclear what the sample size is for EFA and CFA. I recommend using subtitles for each analysis step and explaining the sample size in each case.
6. It is not clear to me whether the same participants were used for the EFA and the CFA. The recommendation is that half of the sample should have an EFA and the other half should have a CFA. Please check this.
7. The authors note: "Confirmatory Factor Analysis (CFA) was then performed. The estimation method used was MLR -Maximum Likelihood Robust- and, since the variables are ordinal, the polychoric matrix was used, since it is more appropriate for this type of data (Elosua & Egaña, 2020). To assess the goodness of fit of the model, different indices were examined: chi-square (X2), comparative fit index (CFI), Bollen incremental fit index (IFI), standardized root mean square residual (SRMR) and root mean square error of approximation (RMSEA)." However, this information should be included in the methods section. It is recommended that all information relating to the analyses be included in the methods section and only the results of the study in the results section.

DISCUSSION
8. It is recommended that the authors improve the wording of the discussion section. Several different paragraphs follow similar ideas, it is recommended to use a full stop. It is also recommended that a proofreader can check the wording.
9. Authors should add limitations and strengths.

García, P., & Valdés, D. (2023). Validation of the Cognitive Fusion Scale in Cuban adults with anxiety symptoms. *Interacciones, 9*, e361. https://doi.org/10.24016/2023.v9.361

The study is very interesting, but the authors do not have the statistical power to carry out the proposed analyses. Assuming that the CFA should have average factor loadings of 0.7 and a power of 80%, 147 people are needed only for CFA. See statistical power at https://wnarifin.github.io/ssc_web.html
It is suggested that the authors increase the sample size and resubmit the study.

García, P., & Valdés, D. (2023). Validation of the Cognitive Fusion Scale in Cuban adults with anxiety symptoms. *Interacciones, 9*, e361. https://doi.org/10.24016/2023.v9.361

RESPONSE LETTER

1) **Comment of the referee:** The number of participants is limited to the number of items you wish to evaluate.

Response: We are grateful for your comment. In page 6, we explain that: "To conduct an initial test of the test in Cuban adults, a pilot study was carried out, whose **sample size was based on the suggestion of considering at least five subjects per item** to adequately evaluate the psychometric properties of a measurement instrument (Babbie, 2000). The sample was intentional and non-probabilistic."

However, the sample for the application phase was intentional and non-probabilistic, and didn´t follow the Babbie's criteria. Instead we use a snowball sampling with patients that hold the clinical screening parameters. Hence, we finally involved 106 patients that attend to Health Center of Cerro municipality, Havana, Cuba.

That's why we modified the last paragraph on page 6 in the following way:

The sample for the application phase was intentional and non-probabilistic. Inclusion criteria were considered to be adults attending the Health Center who agreed to participate in the study, who did not have a diagnosis of anxiety according to ICD-11 (World Health Organization, 2022) and who obtained medium or high values of anxiety as a state, according to the IDARE (state) (González Llaneza, 2007) **carried out in the initial interview (clinical screening)**. Adults under psychopharmacological treatment or with psychiatric diagnoses were excluded.

2) **Comment of the referee:** The reviewer recommend to write on table format the paragraph 1-6 on page 7.

Response: We are grateful with the comment of reviewer. We decided to present this information in paragraph other similar papers did it that way, and also because in our opinion this is a better way to understand the information due to the diversity of statistics used (mean, SD, and percents).

3) **Comment of the referee:** The authors point out:

"The application sample consisted of 106 people, with a predominance of women (77, 72.6%). The mean age of the participants was 38.9, median 37.0 (SD = 9.55), ranging from 25 to 55 years of age.

In terms of educational level, the following frequencies were obtained: 52 (49.1%) with intermediate technical education, 26 (24.5%) with university studies, 24 people with intermediate education (22.6%), two with pre-university studies (1.9%) and two people with basic secondary education (1.9%).
Regarding marital status, 40 women were single (37.7%), 27 were married (25.5%), 17 men were single (16.0%), 11 were married (10.4%), 7 were accompanied (6.6%), three were divorced (2.8%) and one was accompanied (0.9%).

In terms of occupational status, there is a predominance of employment in different sectors of society, education, public transport, health, economy, industry, for a total of 57 workers (53.7%), although 32 self-employed workers (30.2%) and 17 housewives (16.0%) stand out.
Regarding personal pathological history (PPH), 78 persons (73.6%) did not report PPH, 15 presented HA (14.2%), while 13 (12.2%) presented other underlying pathologies.
Of the IDARE scores obtained, 99 people scored high anxiety as a state (93.4%) and 7 people scored medium anxiety as a state (6.6%). The mean IDARE (state) score was 49.8 (SD = 3.39), median 49, with a minimum score of 43 and maximum score of 58."
However, all this could have been in a single table.

Response: We are grateful with the comment of reviewer. We decided to present this information in paragraph other similar papers did it that way, and also because in our opinion this is a better way to understand the information due to the diversity of statistics used (mean, SD, and percents).

4) **Comment of the referee:** In the results section, many paragraphs can be converted to tables to reduce the amount of text.

5) **Comment of the referee:** It's unclear what the sample size is for EFA and CFA. I recommend using

subtitles for each analysis step and explaining the sample size in each case.

Response: We agree whit the referee. We add to subtitles of Table 3 and Figure 1 the sample size, i.e., N = 106.

6) **Comment of the referee:** It is not clear to me whether the same participants were used for the EFA and the CFA. The recommendation is that half of the sample should have an EFA and the other half should have a CFA. Please check this.

Response: We appreciate your comment on this aspect. Lorenzo-Seva (2022) explain that "Using the same sample for both EFA and CFA, is obviously an **undesirable practice**: if the same sample is analyzed using two different methodological approaches, and the outcomes lead to different conclusions, the problem is in the methodological approaches themselves, not in the sample data. If two samples are needed to compute an EFA followed by a CFA, researchers could plan to collect data at two different moments, in two different places, or with two different media. However, **all this could introduce biases that lead to non- comparable samples**."

Other authors (Muñiz, 2018) state that, in large samples, we could split the sample in halves to train the EFA model, and then check it with a CFA. In our research, the sample size is relatively small (N = 106). This is due to the necessary clinical screening use in the sampling method. That´s why we considered that the splitting size is not enough for EFA model estimation, and we decided to use the same sample for both analysis. Also, it is not feasible in short time to collect more data of patients that attend to Health Center of Cerro municipality, Havana, Cuba, because this process needs to filter the patients, have their informed consent and they have to present anxiety symptoms (inclusion/exclusion sampling criteria).

7) **Comment of the referee:** The authors note: "Confirmatory Factor Analysis (CFA) was then performed. The estimation method used was MLR -Maximum Likelihood Robust- and, since the variables are ordinal, the polychoric matrix was used, since it is more appropriate for this type of data (Elosua & Egaña, 2020). To assess the goodness of fit of the model, different indices were examined: chi-square (X2), comparative fit index (CFI), Bollen incremental fit index (IFI), standardized root mean square residual (SRMR) and root mean square error of approximation (RMSEA)." However, this information should be included in the methods section. It is recommended that all information relating to the analyses be included in the methods section and only the results of the study in the results section.

Response: We are glad you pointed it out. We rewrite the paragraph 3 on page 11 as: "The Confirmatory Factor Analysis (CFA) was performed (Freiberg Hoffmann et al., 2013; Geerlings et al., 2014). The estimation method used was MLR -Maximum Likelihood Robust- and, since the variables are ordinal, the polychoric matrix was used, since it is more appropriate for this type of data (Elosua & Egaña, 2020). To assess the goodness of fit of the model, different indices were examined: chi-square (X^2), comparative fit index (*CFI*), Bollen incremental fit index (*IFI*), standardized root mean square residual (*SRMR*) and root mean square error of approximation (*RMSEA*)."

8) **Comment of the referee:** It is recommended that the authors improve the wording of the discussion section. Several different paragraphs follow similar ideas, it is recommended to use a full stop. It is also recommended that a proofreader can check the wording.

Response: We revised the manuscript and a proofreader made corrections to enhance the wording of the paper. The modifications are highlighted on the document.

9) **Comment of the referee:** Authors should add limitations and strengths.

Response: The main limitation is that our sample is not representative. We would address this aspect in further research. This fact implies that we cannot derive standardized scores for the Cognitive Fusion Scale on Cuban population. Another drawback is that we didn´t perform convergent/divergent validation, for example, using scales for rumination, or experiential avoidance, because those scales aren't adapted to Cuban cultural context. This aspect will be address in further research.

On the other hand, according to our best knowledge, this research is the first adaptation of the Cognitive Fusion Scale on Cuban context. We performed a context validity with clinical psychology and linguistics experts, pilot study and application phase. We analyze the correlation

of this scale with IDARE test, as an external validity. After this research, the firstauthor is using the CFS in his psychological practice on the Health Center, together with others psychological tests. We add this limitations and strengths and the end of the discussion.

10) **Comment of the referee:** The study is very interesting, but the authors do not have the statistical power to carry out the proposed analyses. Assuming that the CFA should have average factor loadings of 0.7 and a power of 80%, 147 people are needed only for CFA. Seestatistical power at https://wnarifin.github.io/ssc_web.html

It is suggested that the authors increase the sample size and resubmit the study.

Response: We want to thanks to the referee for this comment. We considered this statistical power issue at the very beginning of the research. But, we can´t reach the number of patients require for this statistical power. This is due to our sampling strategy, explained above. We use the page: https://wnarifin.github.io/ssc_web.html, and estimated that for N = 105, we have a statistical power of 60%.We recognize this as a limitation of this research, which would be address in further research.

References

Lorenzo-Seva, U. (2022). SOLOMON: a method for splitting a sample into equivalent subsamples in factor analysis. *Behavior Research Methods*, *54*(6), 2665–2677. https://doi.org/10.3758/s13428-021-01750-y

Muñiz, J. (2018). *Introducción a la Psicometría: Teoría clásica y TRI*. Ediciones Pirámide.