Delgado-Requejo, N. J., Castillo Ramos, J. C., & Cerda Sánchez, L. C. (2023). Psychometric properties of the Stress Coping Scale Brief-COPE 28 in a Peruvian population. *Interacciones, 9*, e333. <u>https://dx.doi.org/10.24016/2023.v9.333</u>

#### LETTER TO REVIEWERS

Reviewer B: Recommendation: Accept shipment

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Pertinence: High Novelty: Moderated Presentation and writing: High

**Comments for authors:** Be as accurate as possible when making your comments. List each recommendation so that it is easy for authors to respond appropriately to each one. Indicate in a timely manner where changes should be made (i.e., paragraph 2 of the method section).

It is suggested in the Discussion to refer to some socio-cultural hypothesis that could explain why the observed strategies are less in this population.

**RPTA.** What was suggested in the discussion section was included.

Reviewer E: Recommendation: Required Reviews

Pertinence: Moderated Novelty: Moderated Presentation and writing: Moderated

**Comments for authors:** Be as accurate as possible when making your comments. List each recommendation so that it is easy for authors to respond appropriately to each one. Indicate in a timely manner where changes should be made (i.e., paragraph 2 of the method section). SUMMARY:

**1.** The abstract should be structured in background, methods, results and conclusions.

**RPTA:** In the summary section, the Background section was added and restructured according to the reviewer's recommendation.

**Background.**The highly stressful events that we are currently experiencing demand great cognitive and emotional effort and affect the mental health of the population; in this sense, coping with stress provides evidence of how people resort to their resources to face or avoid stressful events, which needs validated and reliable instruments to measure it accurately; therefore, the objective was to determine the psychometric properties of reliability and validity of the BRIEF COPE 28, Spanish version.

### 2. The keyword should be Mesh terms.

**RPTA**: According to the search in the descriptors MESH and DESC the following terms were included: Coping behaviors, coping skills, coping, coping strategies, coping styles and psychometric properties. *This responds to the reviewer's suggestion.* 

## **METHODS:**

3. In the Participants subsection. This information should be in the results section: "It was made up of 530 people, 60% men and 40% women, of which 76.4% have higher education, 20% secondary and primary studies. Likewise, 59.4% come from Metropolitan Lima, 21% from Piura and the remaining 20% from the regions of Cajamarca and La Libertad; The ages range from 18 to 65." Authors should include information on inclusion and exclusion criteria.

**RPTA**: This section is maintained in the Participants Section, since, according to the format of the journal, all the articles describe the sample in this section and based on this precedent we maintain the position of the description of the sample is maintained in the PARTICIPANTS section.

On the other hand, the inclusion and exclusion criteria were added:

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The inclusion criteria considered men and women who voluntarily agreed to participate in the study and who have physical and mental health conditions preserved at the time of answering the questionnaires. People who did not agree to participate in the study and those who did not fill out the questionnaire were excluded.

4. In the Participants subsection. Authors should add information on whether they have statistical power for their analysis. I recommend using the criteria of CFI and RSMEA. (<u>https://wnarifin.github.io/ssc\_web.html</u>).

**RPTA:** The first paragraph of the Participants Subsection included the following:

The initial calculation of the sample was performed using the Sample Size Calculator (web) and the criterion of CFI = .95 and RSMEA= 0.05 was considered, together with the 28 items and four factors of the instrument, significance level .05 and a statistical power of 80% (Kim, 2005). For this reason, to obtain a CFI=.95 requires a minimum sample of 289 people; similarly, to obtain an RSMEA=0.05 a minimum of 97 participants is needed. In this line...

5. Authors should include the name of the ethics committee reviewing the protocol and the approved code in the procedural section of the text. This is mandatory, as it is a primary data collection.

**RPTA:** The scientific article did not go through an ethics committee nor does it have an approval code, since the process of writing and collecting data was done as part of the course **"Writing scientific articles"** of the Master's Degree in Psychology with Mention in Clinical and Health Psychology of the Universidad Nacional Mayor de San Marcos. This course was taught by Dr. LIDA MARLENE FERNANDEZ MONGE.

6. In the Statistical Analysis subsection. Authors should expand in this section. (1) Which estimator was used (WLSMV, MRL)? Which matrix was used (polychoric, Pearson)? What was the maximum level of latent correlation between dimensions (>0.80)? Were correlations errors evaluated (did I recommend that they not be used)? Which R packages were used? What models were evaluated? What are the criteria for deleting items? What was the minimum number of items per dimension (in classical test theory it is 3 items per dimension)?

# **RPTA:** Regarding the reviewer's observation, the following information was included in the "Statistical analysis" section.

To establish the statistical power in the analysis, an initial sample was established through the Sample Size Calculator (web). The criteria that were established were a CFI = .95 and an RSMEA = 0.05, in addition to p<.05, a statistical power of 80%, all the items and factors of COPE 28. The result of this calculation yielded a minimum sample that was needed to carry out the statistical analysis.

Subsequently, confirmatory factor analysis was performed to find evidence of validity of COPE 28 through SPSS Software, version 26, SPSS AMOS 28 and R Studio version 4.2.2, using the statistical packages Psych, 4.2.3, Lavaan 0.6-16, SemPlot 4.2.3 and SemTools 0.5-6. A first analysis was to find the multivariate normality of the items, and since the assumption of normality was transgressed, the WLSMV estimates were used. In coping styles, two models were tested to obtain the greatest goodness adjustment, while in coping strategies four models were tested, considering the following indices CFI =.>.90; TLI=>.90; SRMR=<.08; RMSEA=<.05 (Brown, 2015). On the other hand, to analyze the correlation of the items, a polychoric matrix was used because the instrument has an ordinal response form (Domínguez, 2014), whose maximum correlation value between dimensions was .643 and to maintain the items with good factorial loads in the models, criterion >.30 was established

### **RESULTS:**

7. I recommend adding an analysis of invariance to the manuscript.

RPTA: Invariance analysis has not been included in this article because it is not the objective of this research. In addition, invariance is being worked on in another article that I am preparing with a larger sample and thereby make a deeper analysis of COPE 28.

8. The results section is cluttered. This information "For the evidence of validity of COPE 28, confirmatory factor analysis was performed through the WLSMV estimator of the lavaan 0.6 package. In coping styles, two models were tested to register the greatest agreeableness adjustment." **should be in the Statistical Analysis subsection.** 

**RPTA:** This information has already been moved to the "Statistical Analysis" section.

9. The results section is confusing. Table 3 shows a reduced version with 17 items. However, Table 4 shows 10 or more dimensions, but is it not clear if it is with a test of 17 or 28 items? Please explain.

10. The results section is confusing. Table 3 shows a reduced version with 17 items. However, Table 4 shows 10 or more dimensions, but it is not clear whether this is a 17-item or 28-item test. Please explain. Dimensions with less than 3 elements are not possible, because they are not stable.

### **RPTA:**

Regarding the consultation of points 9 and 10 of the reviewer, it should be clarified that COPE 28 is composed of 14 coping strategies (each strategy has 2 items). On the other hand, these strategies are grouped into 4 coping styles.

Based on this, Table 3 analyzes the **4** coping strategies, in which two models are tested. The first model includes all 28 items, but a good fit is not achieved, for this reason some items were eliminated, since they have a factorial weight below <.30. A second model with 17 items was then tested, which achieves a good fit in the TLI and CFI comparative indices, but not in the SRMR and RMSEA. For this reason, confirmatory factor analysis of the 4 coping styles is inconclusive.

Given this statistical instability of coping styles, COPE 28 **coping strategies** were worked on . Here 4 models were tested. The first model incorporated the 14 coping strategies (2 items per strategy), that is, we worked with the 28 items, but did not achieve a good fit. Then a model was tested with 13 strategies and 26 items, which does have an acceptable fit according to the theoretical postulates (Brown, 2015). Likewise, the model of 12 coping strategies (24 items) presents a better fit than the previous one. The model was also tested with 10 strategies (20 items), which considerably improved the goodness adjustments in the TLI=.96 and CFI=95.

Regarding the elements that must compose each dimension, which according to classical theory is 3 items or more. In this case, the original structure of COPE 28 is 14 coping strategies and each of them is composed of two items. It should be noted that this is one of the great practical and theoretical weaknesses of this instrument, which continues to be the target of criticism in the scientific litertura. However, several studies find good internal structure with different strategies, for example, Garcia, et al. (2018) found good internal structure with the 14 original factors, Nunes et al. (2021) in a Portuguese sample also found the same. We also found other studies with 8 coping strategies (Richard's et al., 2021) and with 6 factors or coping strategies (Amoyal et al., 2016).

11. It is not clear whether the strategy based on lower factor loads... The authors say "For this reason, items 3,4,5,7,8,11,12,13,19,21 and 26 (see Table 5) with low factorial loads were eliminated and a second model was tested, which retains the 4 styles, but with 17 items". What was the minimum load (>0?30, >0.40, >0.50)? Aren't we losing valuable information at the article level, just because we're looking for better goodness-of-fit indexes?

RPTA: The factor loads considered were >.30. The items that were removed had factor loads lower than .30. This debugging helped to find a good fit of the model and also improved the reliability of the instrument. For this reason, we consider that we are not losing information, but rather we are achieving that the results are based on statistical analysis.

13. It's not clear to me why the authors decided that the model with 10 styles was the best. The differences between the style models 13, 12 and 10 were very similar according to the authors' cut: "CFI =.>.90; TLI=>.90; SRMR=<.08; RMSEA=<.05 (Brown, 2015)". I don't know if it makes sense to think of so many styles given that the number of items is reduced... Wouldn't it be better to focus on the four dimensions with enough elements to measure a stable construction? In this case, I think less is more.

RPTA: The decision to consider the model with 10 coping strategies was that the adjustment indices TLI=95 and CFI=96 is within the parameters of an excellent fit (Brown, 2015), likewise the SRMR=.056 and the RMSEA=.069 are below .08. These indicators led us to consider it as the best model. However, also the models with 13 and 12 factors have good fit, but for the purposes of the study it was decided by the model with higher adjustment indexes.

14. The manuscript has many tables; I recommend joining tables 3 and 4. RPTA: On the recommendation of the reviewer, Table 3 and 4 are being joined

15. I do not know what elements make up each style (12,13,14 styles), so I recommend including them in the supplementary material along with the R script to ensure the replicability of the study.

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RPTA: To answer this concern, the strategies and items that make up each model analyzed were added to Table No. 5.

I also attach the SPSS database and the R Studio template.

GENERAL:

16. Authors should check the wording and style of English. For example: "Regarding the psychometric properties of the Chilean adaptation of COPE, 28, an internal structure of 14 factors was found." Use ", 28", is not clear.

RPTA: Regarding the reviewer's doubt, when talking about 14 factors, reference is made to the 14 coping strategies that COPE 28 has.

In addition, the wording and style of English has been corrected.