

Thank you for allowing me to participate in the review process of this study.

The present study analyses the prevalence of false beliefs or psychological myths in Psychology undergraduate students at two Spanish universities. In addition, it analyses how variables such as academic year or familiarity with scientific knowledge media could modulate the prevalence of these false beliefs.

I believe that the study addresses a very important and topical issue. Myths or false beliefs about academic or professional content are a problem in the scientific/academic advancement of scientific areas, so knowing the prevalence of these false beliefs and the variables that could help us to combat them is an interesting contribution to the scientific community.

The paper shows a well-organised theoretical background, and I believe that it helps both the novice and the more experienced reader to contextualise and justify the present study. It also clearly addresses potential methodological problems. The analysis of biases in the use of the tool is very illuminating.

In the following, I will present some factors that I think the authors could consider in order to try to bring more quality or clarity to the study presented:

- In the introduction when the type of university (face-to-face or non-face-to-face) is proposed as an influential factor in the prevalence of myths, there is an allusion to a possible difference associated with student profiles, but perhaps this would need further explanation. Is there evidence of differential characteristics of each type of teaching? Are these different student profiles an inference or is there evidence of these possible differences?
- Given that a self-report scale is used, have the authors estimated the size for this type of study? The authors could consider what Hair et al. (2010) proposed.
- Since there is a very abnormal distribution of the sex variable, perhaps it should be ruled out that this variable introduces a bias in the results. There are precedents?
- Was the presentation of the items randomised? This could avoid order and fatigue biases.
- Previous studies in addition to including reverse items also included items reflecting true concepts. This would allow data on knowledge/unknown knowledge of true ideas and the same for myths. Have the authors considered this?
- Regarding the psychometric characteristics of the instrument used, the internal consistency or reliability is presented. Usually, this type of studies do not provide data on the validity (construct or convergent) of the scale used, which is very common when self-report scales are used. Do the authors know of previous studies where the validity of the scale is analysed?
- Consider the scale. If the level of myth prevalence is calculated by summing the total of the items, high scores would indicate high prevalence of myth at the total level. If we look at the scale, level 3 would indicate "I don't know". This could indicate either not knowing or passivity in response, but would still add 3 points to the prevalence

total. Could this be giving an inflated total score? What if responses 3 contributed 0 points to the prevalence?

- Following this approach, perhaps it would be interesting to do a topological analysis of the responses as a function of the different variables. The authors could then analyse differential patterns in the frequency of responses 1 and 2 as "myth detection", 4 and 5 as "myth support" and 3 as "don't know". This would perhaps allow analysis of response patterns that might be obscured by averaging the results.
- The effect found across courses has a clear explanation (e.g., the training received), but the university effect seems to me to be more ambiguous. Although the university effect is evident, would the authors be able to propose hypotheses about the cause of this effect (e.g., training programme)?
- Something that surprises me is that although there is a lower prevalence at the UAM on-site university, there is also a significantly lower percentage of students who indicate that they are familiar with popular science media. This data seems to me to be contrary.
- Would it be interesting to analyse the possible interaction effect of familiarity X University, in view of the different distribution for the familiarity response between universities?
- Figure 1 shows items 1 to 20 but the title indicates 1 to 19.

Best,

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