Review of: "Assessing students' attitudes and perceptions towards statistical literacy in a university system in a developing African country"

Masoud Roudbari[1]

1 Iran University of Medical Sciences

Potential competing interests: No potential competing interests to declare.

The article is about the perceptions and attitudes of students regarding the statistical knowledge in an African University. The manuscript presents a new vision of statistics, and its most significant results apply to other universities and non-statistics students all over the world, especially in developed countries. It would have been better if a statistician had collaborated on the article. I have published some papers that are similar to the current manuscript, and if the author asks, I can send them. Although it is a good manuscript, it needs lots of revising as follows:

Abstract

1. It is not structured.

Methods

1. How was the sample size calculated?

2. Are the questions reliable and valid?

3. What is the sampling method? Why did the authors choose 7 students from each school, especially when the sizes of the schools are different?

4. The school names need to be introduced in the method section.

5. Was the study approved by an ethical committee?

6. In the data analysis section, what does it mean? (…. were done on the data with a cut off point of $P<0.05$)

7. In the data analysis section (last paragraph), the Pearson correlation is not a statistical test, but it is a measure of the relationship between two variables, and it is possible to test it with zero to check the relationship between two variables in the population.

Results

1. Discussion should be separated from result section, and all discussion needs to be added under a new heading of discussion.

2. All the percentages should have one decimal place everywhere.
3. Report all p-values for the Chi-square test.
4. The result of the chi-square test determines that the proportions of samples in different schools are not the same, so the skewness of enrollment is incorrect.
5. The (SAT-36) abbreviation is not introduced in the text.
6. What do the authors mean by the first row of Table 1 (Factor1>0.80)?
7. The position of Table 7 should be at the bottom of the paragraph which is related to the Regression analysis.
8. In Table 7, non-significant variables should be removed from the table. Also, the adjusted R^2 shows that most of the Regression models have no goodness of fit to the data.
9. What are the response variables in the different Regression analyses?
10. The article is very long and makes the readers tired and confused. I recommend separating it into two manuscripts.
11. In the (effort in Statistics) section, R=0.639 and R^2=0.4, so the model has not fit to the data. Most of the models are like this model.
12. The titles of most tables need revising.
13. In the 3.2.4 section, R=0.291 and R^2=0.08 introduce a poor model not fit to the data. The interpretation needs revising as well.
14. The description of Table 4 needs to be checked.
15. The last paragraph of the 3.2.5 section needs revising (R=0.16, shows that the Regression model is poor).
16. The mean, SD, and …. in Table 5 need more explanation. Also, the applied test is unknown.
17. In section 3.3, how did the authors calculate the mean (Table 6)? This needs to be introduced in the method section.

18 . There are many unsuitable topics in the manuscript

19. The results are too long with many tables.