



SDI Review Form 1.6

Journal Name:	<u>British Journal of Education, Society & Behavioural Science</u>
Manuscript Number:	2014_BJESBS_11381
Title of the Manuscript:	An absolute deviation approach to assessing correlation
Type of the Article	Method Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<u>Compulsory</u> REVISION comments	Row 177-183. The new correlation coefficient, apparently, derives from an improbable mixing of absolute and square deviations. Many of the peculiarities of the Pearson correlation are lost. First, the bounds of the new index depend on the specific sample being considered. Second, the maximum of Ra_1 is not necessarily achieved in the case of a perfect linear relationship between y and x. When the sample is drawn from a bivariate Gaussian distribution we have: $Ra_1 = \text{sign}(b)\pi/2$ where b is the slope of the straight line which passes through the data. However, there is not a proof that this is a maximum for Ra_1. If the probability distribution is ignored the values of Ra_1 for perfect linear relationships are unknown. Row 245-251. This is a measure of positive fitting rather than correlation because negative values are precluded. If $y=a+bx$ then $Ra_2 = 1+b /(1+ b)$, which implies that $Ra_2=1$ if and only if $b \geq 0$. If $b=-1$ then $Ra_2=0$ even though a perfect (inverse) relationship exists between the two variables.	
<u>Minor</u> REVISION comments	Row 123-125. The absolute value notation is incorrect. Row 173-175. Contrary to what it is stated, the simplification can be easily applied to the Pearson correlation coefficient. Row 177-183. The simplification is wrong. The numerator is divided by n, but the denominator is divided by n^2. Row 206-207. This is not true in general. If all the absolute deviations fall in the $(0,1)$ interval, the mean deviation is larger than the standard deviation. Row 225-226. The distinction between additive/ multiplicative characteristics is not clear. Both the mean and the standard deviation belong to the family of the Minkowski metrics. Expressions of the new indices lack of the left term. The text refers to them as Ra_1 and Ra_2, but this seems an indirect and somewhat naive way to do.	



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<u>Optional/General</u> comments	This paper has two major drawbacks. The point of departure is correct: the absolute deviations can be validly substituted for the squares, but the use of the arithmetic means is inappropriate. In this context medians and co-medians should be used. Furthermore, there is confusion about measures of correlation and measures of fitting. I admit that the communication of scientific principles to non technical audience is considerably harder than communication within the area of expertise..	
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Note: Anonymous Reviewer