Reviewer's report

Title: Tooth-size discrepancy and arch form: is there a link?

Version: 2  Date: 23 December 2014

Reviewer: Leslie Will

Reviewer's report:

According to the questions, this manuscript has a well-defined question.

The methods are appropriate, but need clarification:

Which contact points were digitized? You state that the most facial aspect of the 13 proximal contact points were digitized, and it seems that these were used for the identification of the arch form. But you do not state whether these points were used for the tooth size analysis, or whether different ones were used. For an accurate tooth size analysis, the true mesial and distal contact points need to be digitized and it was not clear whether this was done. In addition, you state that the 'greatest interproximal distance' was used in the tooth size analysis; this should be phrased as the greatest mesiodistal width.

The discussion was well-balanced, but the conclusion needs to be revised. Conclusion #1 states that the arch form types are distributed equally, but then you say that the most frequent form was ovoid. Both of these statements can't be true! Perhaps you can say that no one arch form was statistically significantly more frequent than the other, but there were more ovoid forms than tapered and square.

In general, the writing was good and clear, the limitations were discussed, and the data and figures seem accurate and sound.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests