Author's response to reviews

Title: Dental sealant knowledge, opinion, values and practice of Spanish dentists

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Author's response to reviews: see over
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Editor
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Dear Sir or Madam:

Attached is our revised manuscript. We attempted to address all of the reviewers comments. We did this in two ways:

1. We provided explicit responses to each reviewer’s comments on separate pages following this letter.
2. We changed the manuscript to reflect our responses to each comment.

We hope this meets the explicit and implicit requests of the reviewers and the editor.

Finally, with regard to the use of English, two of the co-authors are native US language speakers, raised and educated in the US. We believe that the English use is correct.

Respectfully,

Laura San Martin, DDS, PhD
Reviewer’s Report 1:

1. General Comments:
General Comments: It is a very important study but the results based on the methodology used are conflicting and biased, although they are in line with the results of other studies in the literature. Another major problem of the study is the fact that besides the extensive analysis on knowledge, value, opinion and practice of Dentists we still don’t know how many of them use sealants after all and what is the correlation of the above parameters to the final outcome on using sealants or not.

Response:
A. Globally, sealants are underutilized. Our goal was to find out why. Based on the review of the best evidence-based literature, the manner to begin to understand a clinician’s behavior is through assessment of their knowledge, opinions, values, and practice. This is what we reported on. We did not propose to correlate KOVP with actual sealant use. That is a subsequent question.

B. We were not able to determine which sections of the manuscript the reviewer thought were “conflicting and biased”.

2. Major Compulsory Revisions:
The study has many problems (listed in the report and marked in the text) but the major problem is the methodology: 1) by selecting questions that in several cases are tricky and/or difficult for Dentists to know the correct answer 2) by grouping the questions in separate parts and assessing the total score of them as a mean with the other parameters instead of every question and 3) by scoring the answers in such a way that some of them as they are phrased make the respondent to answer as “strongly disagree” although the correct answer should have been at the opposite way. 4) Based on the above the total scores and the whole statistical analysis are biased.

Response: We were unable to locate a marked copy of the manuscript.
1. We specifically asked questions in a positive and negative frame to ensure internal validity.
2. We now provide in Table 1, individual and group outcomes as requested.
3. We validated the survey for clarity and pertinence twice: see Survey generation in the Methods section.
4. We used statistical analysis that are group and question specific as recommended in Andrew et al. Selecting Statistical Techniques for Social Science Data: A Guide for SAS users. 2007.

3. Minor Essential Revisions:
A. This is a very short section with insufficient evidence to support the rationale of the study and the methodology used. Where this KOVP system comes from and how it is used in such a study without being validated before? There must be a more
detailed review of the literature and some explanations must be given on the rational for selecting and grouping this type of questions in such a way.

Response: Knowledge, Attitudes, and Practice are the usual and traditional metrics for behavioral research. Systematic reviews and randomized and controlled trials (eg: both Greenhalgh et al 2004; Bonetti et al 2010) indicate that neither theories of behavior change nor knowledge nor attitudes predict practice. Instead, both indicate that values are better predictors. We therefore included values. We have now included this information in the Background section.

As mentioned earlier, we believe it is important to develop a new approach to assess various aspects which are relevant to the creation of an evidence-based method for sealant utilization.

B. Literature Search: I don’t see any added value on describing in so much detail the method of searching the literature and including two tables in the Method text (which I think must be removed as absolutely unnecessary). Especially when the selected papers are not so relevant to the information needed for the aims of this study. In particular, to what extend the information gathered from systematic reviews relevant to caries prevention, can give you any information in regard to sealant use by Dentists?... I propose the “Literature Search” section with the two tables to be removed and give some information on how you searched the literature and what criteria you used to select the most relevant papers for review, at the beginning of the “Survey Generation” section.

Response: Here we respectfully disagree with the reviewer. The key to developing a credible survey is by a comprehensive search of the literature. A reader or reviewer can use this search strategy to verify this statement. Search #1 was limited to systematic reviews of human randomized controlled trials. Search #2 was limited to surveys of on KAP regarding sealants. These statements are now included in the methods.

C. Survey: On the other hand, the method of asking dentists which questions might be more relevant to be asked in order to be asked it is considered very valuable. However, how it was decided which ones will be included and categorized in every section?

Response: Initial blinded allocation of questions into KOVP by two experts produced a 90.3% agreement (28 of 31 questions). The disagreement on three questions was then resolved through discussion by the experts. This is now included in the Methods section.

D. Generalizability #1: Is this sample really representative of the general population of dentists or of dentists mostly interested in community and pediatric dentistry?

Response: In Spain there is no pediatric dental specialty. We agree, the survey was a convenience sample (Survey Method). However, we believe that the sample does reflect
Andalusia’s practice pattern.

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<tr>
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<th>Survey</th>
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<tbody>
<tr>
<td>GP</td>
<td>88%</td>
<td>94%</td>
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<td>Public</td>
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E. Generalizability #2: Is this a sample including only dentists using sealants or not? What percentage of dentists use sealants based on their knowledge background?

Response: This is unknown, and was not our intent. Assessing sealant use will require surveys of clinical records.

F. Discussion: The discussion in three paragraphs to explain and discuss the findings of the study in relation to other studies in the literature, is too little devoted and several issues, with the most important being the methodology used, remain unanswered.

Response: We apologize for the brief discussion, but we did not find it necessary to extend our discussion as we consider it substantial and successful in achieving our initiative. Our goal was to compare the results with other similar studies worldwide and the results were in line with those found in reviewed literature.
Reviewer’s Report 2:

1. What was the total number of participants at the meeting?

Response: The total number of professionals attending the meeting was 184. The rest of the respondents were recruited by email.

2. What is the RR

Response: All the dentists who attended the course filled out our survey. Our response rate from the emails survey was 76%. These data are now reported in the results section of the revised version of the manuscript.

3. Was this a paper/pencil survey or touch screen or?

Response: During the meeting we distributed paper surveys. However emails were sent to those who were not attending the meeting in a Microsoft Word format. I have added this point to the methodology section for more clarification.

4. How did you get an equal distribution of respondents between the three Provinces?

Response: After collecting the initial surveys from the Annual Meeting, we sent surveys to dentists who work in the 3 provinces, to ensure an equal distribution.

5. This reviewer is not familiar with the way the literature search was illustrated in the manuscript. Authors may wish to eliminate and use words.

Response: The method and presentation of the search strategy is the method recommended by D. Richards et al. in Evidence-based Dentistry: Managing Information for Better Practice. 2008. (pg. 121).

6. Suggest authors edit Table 1 to read something like: Mean scores of survey questions. And add a row across the top indicating: SD -----------SA. Otherwise we do not know what the means stand for.

Response: As suggested, the table heading was corrected. Also, a new row across the top indicating the Likert scale was also added.
“Table 1. Distribution and mean ±Standard Deviation of scores for the questions”

Discretionary:

Discussion
1. In the first paragraph on page 11, 3 potential solutions are presented and the authors opt for number 3. I agree and you may if you have not already look up two articles by Ripa....they are old. But basically what he found was that students who were REQUIRED to be competent in applying sealants did use them in practice. Reimbursement is very important, but if you go through dental or dental school and only actually apply sealant material to one or two teeth you will not be very competent and therefore less likely to use them.

Further, other ways are to implement school-based sealant programs for appropriate ages along with a form of fluoride of course.

2. Please add a section on the limitations of your study....all studies even good ones have limitation.

3. Conclusions???????? I enjoyed reading your manuscript.

Responses:

1. Thank you very much for your comment.
2. We did elaborate on the limitations of our study in the conclusions section.
3. We added a conclusions section.

The major points that are added to the manuscript are:

Conclusions.

This survey has two limitations. The survey did not: 1. Determine the relationship of KOVP to actual sealant use. 2. Determine the relationship of traditional KAP with KOVP. However, these results suggest that, similar to other countries, Andalusian dentists who know that sealants are effective have neutral to favorable attitudes toward sealants; though, based on epidemiological studies, underuse sealants. This suggests that methods separate from knowledge enhancement will be required to change practice patterns aimed at improving children's oral health.