Author’s response to reviews

Title: Relationships between Dental Hygienists’ Work Environment and Patient Safety Culture

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Reviewer 1

Thank you very much for your review. The modifications are as follows:

1) 1st paragraph: The first two sentences need references.
   --- Added reference.

2) 2nd paragraph: The first paragraph needs rewording: "that is a culture of considering safety patient as having the foremost importance during all procedures at health" is not good English and totally unclear.
   --- The sentence has been modified as follows: This refers to considering patient safety as of the highest importance during all procedures in health and medical sites.

3) You state: "Research regarding this culture is consistently growing" please add some more references: you may want to consider the following references
   --- The reference you gave us is the literature related to patient safety accidents. I added a reference to patient safety culture.

4) 3rd paragraph: I am not sure that I agree with needle sticks being the most important hazard for dental patients.
   --- I added the reference you gave me. (In dentistry, adverse events include pain, infection, hard tissue damage, and nerve injury. 88% were found to cause temporary, moderate to severe harm to the patient.)

5) #15 has the incorrect authors for this article. It should be Bailey, Tickle, etc. Also, please add the year of the article (2015)
   --- #15 I modified it (Bailey E, Tickle M, Campbell S, O'Malley L: Systematic review of patient safety.
interventions in dentistry. BMC Oral Health 2015, 28(Suppl 15):152-162.)

Reviewer 2
Thank you very much for your review. The modifications are as follows:

1) page 3 : Please clarify what the percentages mean in this section: ‘work experience was divided into 1-2 years (50% or less), 3-8 years (50-60%), and more than 9 years (60% or more)’
--- I modified the sentence with the meaning of %.
(The results of a domestic research on the rate of adherence to safety care work by work experience show under 50% for those with 1-2 years of clinical experience, 50-60% for those with 3-8 years of experience, and 60% for those with more than 9 years of experience [26]. Therefore, the work experience of dental hygienists was categorized into 1-2 years, 3-8 years, and 9 years for the analyses in our study [26].)

2) page 5 : Can you say something more about this? What do the actual data on frequencies of reports look like? I suspect this perception/rating of reporting likelihood does not hold true? It is generally accepted in some health care settings/countries that dental clinics e.g. general service actually underreport events, for example needle stick injuries? Also would dentists agree on reporting ? (e.g. in the UK we know nurses report far higher rates than doctors)?
--- The sentence has been modified as follows:
Frequency of events reported was higher in clinic-level (2.81 ±0.06) institutions compared to hospital-level (2.51±0.07) institutions. However, in the case of the Patient Safety Act in Korea [4], safety accidents in hospitals with more than 200 beds and general hospitals with more than 100 beds are self-reported and hospital staff have the tendency to avoid exposing the accidents in the hospital externally [35]. Therefore, it is difficult to completely trust the information that was reported in many ways.

3) Did you consider multivariate analysis rather than just a series of ANOVAs/ t tests? It looks like it would be interested to model safety culture scores according to the various other variables collected on environment to see what the independent predictors are.
--- Through this study, we performed a multiple regression analysis to examine the impact that patient safety culture has on work environment. While two areas of “type of hospital” and “number of patients per day per dental hygienist” showed significant differences from patient safety culture (p<0.05), however, the R2 value of 0.053 was limited in its ability to explain the impact. Thus, this was not presented as a part of the results.

4) page 5 : "Workers at clinic-level institutions showed higher scores on five sub-areas, except for patient safety policy across hospital units": Were clinic workers asked the questions about hospital policy? how would they know? or were the questions amended? how would they answer e.g. questions about transfer between units?
---I described the Limitation:
Therefore, there may be limitations in obtaining accurate results because there may be differences in the method of managing the hospital depending on its size with regards to some items, including patient safety policies. Development of specific tools to assess dental medical professionals’ patient safety culture depending on the method of managing the hospital and its size is necessary.

5) Typos: page 5 The results also show that dental hygienists' work environment is closely relates to patient safety.
---The sentence has been modified as follows:
The results also show that the work environment of the dental hygienist is closely related to patient safety.

6) Typos: page 6 The lack of tools to examine dental medical professionals' patient safety culture led us to use an assessment survey.
7) Typos: page 6 Moreover, not all areas of patient safety culture items were excluded.[- is this included?]

---6)7) The sentence has been modified as follows:
Moreover, not all areas of patient safety culture could be analyzed because values that were low in reliability among patient safety culture items were excluded. The lack of tools to examine the patient safety culture of dental institution despite most dental treatments being outpatient and focused on surgical treatments has made us use this assessment survey originally developed for patient safety culture in hospitals in which inpatient treatments are the primary focus.