Author's response to reviews

Title: Exposure to artificial UV indoor tanning radiation in France: a population based study

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Author's response to reviews: see over
Dear Editor

Further to the reviews about the manuscript MS: 2453174548250067, please find below the point-by-point cover letter detailing your responses and the exact changes made to the manuscript.

Reviewer: Lill Tove Nilsen

Discretionary revisions

- It would be useful for possible health interventions to know whether those being under 18 years old and using sunbeds, use them at public places or at home.

  *We add in results section the following sentence: “Among people aged under 18 years old (n=3), all of them used sunbed especially in tanning centres.”*

- In the Results, “Knowledge and popular misconceptions relative to cancer risks …”, first paragraph: The results show that people who have used sunbeds felt they were better informed on the risks of cancer than people who haven’t had tanning sessions. It is worth mentioning here that the European standard for cosmetic sunbeds, EN 60 335-2-27, states that information regarding risks of sunbed use shall be part of the users instruction. Reference: European Committee for Electrotechnical Standardisation, Household and similar electrical appliances – Safety. Part 2-27: Particular requirements for appliances for skin exposure to ultraviolet and infrared radiation, EN 60335-2-27, 2010, Brussels: CENELEC, 2010.

  *We add in the discussion section the following sentence: “Moreover, European standard for cosmetic sunbeds, EN 60 335-2-27, states that information regarding risks of sunbed use shall be part of the users instruction [corresponding reference]. These results suggest public health policies efforts in this way.”*

- In the Results, “Knowledge and popular misconceptions relative to cancer risks …”, third paragraph: It would be interesting to see if those agreeing most to the statement, were the “regular users” or “any users”. I would think it is the regular users, since repeated use is the only way to obtain skin thickening and increased pigmentation and thereby some increased protection. It would be interesting to find out whether these users base their belief on experience that sunbed use works before a sunny vacation, or if they just use it as an excuse for their sunbed use.

  *We had in this paragraph the sentence: “Finally, there was no significant difference between sunbed regular users (more than 10 times) (48.9% agreed with this statement) compared with 61.0% among sunbed the occasional users (fewer than 3 times a year).”*

- It would be useful to include something about the limitations of this study, such as: o if the refusal rate of 40% could influence your results, o and that the paper is limited to characterize the
users and does not include data on physical exposure to artificial UV (UV intensity combined with exposure time) – as the title may indicate also this dimension.

We had in the discussion the following paragraph: “A number of limitations of this study should be noted. First, we had a refusal rate of 40%. This rate, which is current in recent French general population surveys, could be differential regarding to some sunbed use characteristics, and in this case could influence our results. However, we expect this bias is limited because the person surveyed was randomly selected and we can assume that this refusal response was randomly distributed in the population. Second, this study characterizes only the beliefs and practices about tanning bed use, but we did not include data on physical exposure to artificial UV (UV intensity combined with exposure time).”

Minor Essential Revisions - issues not for publications

- Abstract, middle of third paragraph: Delete “a” and insert “the” in the sentence “Moreover, more than one a third of the users reported …”

This correction was done.

- Introduction:

  o Fourth paragraph: Use the English terms for skin cancers: basal cell carcinoma, squamous cell carcinoma and melanoma.

  This correction was done.

  o Last paragraph: Delete “in” in the sentence “Some local studies … in France, but in never in a population-based study”.

  This correction was done.

- Methods:

  o Second paragraph:

    # What is “red and orange lists”? It is not common expressions outside France. Please clarify or rewrite.

    We clarified this expression writing that they correspond to ex-directory phone lists.

    # I assume it shall be “15 to 85 years old” here, even though it is used “15 to 75 years old” in the rest of the paper, but please check it out.

    This correction was done. It was “15 to 75 years old”

  o Third paragraph:
# I am not familiar with using the words “wedged” and “wedging of margins” in this context. I suggest using other words.

We replaced the words “wedged” and “wedging of margins” by the following paragraph: “The data were weighted by the number of eligible individuals and phone lines in a household and were also adjusted for 2008 French population structure (available from the National Institute of Statistics and Economic Studies) according to age, gender, educational level, geographical region, urbanization level and phone equipment”.

# Why ask for “diploma” and “phone equipment”? What do you mean by “diploma”?

We meant by diploma, the education level, and we did this modification in all the MS.

- Results:

  o Second paragraph and several other places: Avoid the phrases as “UV use” and “used UV radiation”, as it is the appliance that gives UV radiation. You may use “use of indoor tanning equipment” or “sunbed use”.

  We replaced the terms “UV use” and “used UV radiation” by “use of indoor tanning equipment” or “sunbed use” in all the MS.

  o “Places of exposure to UVs”: Title and in the paragraph – avoid the word “UVs”. “UVs” is not a common term.

  We replaced in the title and in the paragraph the word “UV’s” by “indoor tanning”

  o “Determining factors of artificial UV exposure”, first paragraph:

    # Please check the use of the word “consummation unit”. I am not sure if this is the correct word to use.

    We used the term “household” instead of “consummation unit”

    # Replace the word “bigger” with “larger” in “... where women are much bigger consumers ...”.

    This correction was done.

    # Replace “associated to” with “associated with” in the sentence “This practice seems associated to ...”.

    This correction was done.

    # Replace “euro” with “Euro”.


This correction was done.

# I think it is better to replace “knowing” with “know” in the last sentence.
This correction was done.

- Discussion:

  o First paragraph, second last sentence: I suggest deleting “Furthermore” as I think that is better English.
  This correction was done.

  o Third paragraph and second sentence: I suggest replacing “use tanning sessions” with “use tanning beds”.
  This correction was done.

  o Second last paragraph: How can you use a reference to something you, as authors, recommend? I suggest either deleting the reference or rewriting to include something like: “..., as suggested by Gordon et al. (year of publication)”.
  We deleted the reference.

  o Last paragraph: I did not understand the meaning of the last part “... and further health promotion studies should consider these skin cancer risk factor.”
  # First, I think you should put it as a new sentence.
  # Next, you must correct the use of “these ... factor” to either “this factor” or “these factors”.
  # Last, but most important, you must clarify what you mean with this sentence; what skin cancer risk factor or factors should be considered?
  We modified the whole sentence by the following sentence: “A systematic review of intervention efforts to reduce indoor tanning was conducted and the authors [21] concluded that there was very limited research on indoor tanning interventions. Further studies should produce evidence based knowledge about the reduction to sunbed use exposure.”
- Conclusion:

  o First paragraph: I suggest rewriting the last two sentences to focus on concluding your work. “In particular, it will be interesting to follow the age of first use, as/since the 2006 IARC meta-analysis showed that ... [4].”

  We rewrote our last sentences: “Therefore, exposure to artificial UV radiation is truly a public health menace and challenge put before authorities [22]. Hence, it is important to create a system to provide targeted information to users and prevent the risks associated sunbed use and the risks of the sun and tanning booths in particular. Furthermore, European and national regulations controlling the artificial tanning sector should be enhanced.”

  o Second last sentence: I suggest rewriting to only focus on UV radiation from sun and sunbeds. People in general are not exposed to UV radiation in other situations. “… risks associated with UV radiation from the sun and tanning booths.”

  We rewrote the sentence: “the risks associated sunbed use and the risks of the sun and tanning booths in particular”

- Reference: Use year of publication for all references. It is missing for several references. 

  This correction was done.

- Table 2:

  o Table title: correct the number n to 3359.

  o Table heading: correct to “CI” instead of “IC” (confidence interval)

  o Explain meaning of “UC” in a footnote, used in “Incomes by UC”. Should it even be “CU”? And include Euros behind the numbers to the left.

  o Replace the heading to an English phrase in “Sentiment d’information ...”

  All these corrections were done.
Reviewer: MAHE Emmanuel

No major revision.

Minor essential revisions

- Author have to say that the results have been previously published in the French journal "Buillettin Epidemiologique Hebdomadaire"

  We added in the section the following section: “Some results have been previously published in French in the French journal "Bulletin Epidemiologique Hebdomadaire"


  We added the two references in the discussion section and discussed them: “In addition, we should highlight the existence of artificial UV use in a population below the age of 18 years, though this practice is forbidden as reported in a recent French study [19].” And “Therefore, exposure to artificial UV radiation is truly a public health menace and challenge put before authorities [22].”