Reviewer's report

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

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Reviewer: Lill Tove Nilsen

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Response to «Exposure to artificial UV radiation in France: a population based study”

By Dr. Lill Tove Nilsen, Norwegian Radiation Protection Authority

The paper gives a description of sunbed users in France, their knowledge and perception of risks associated with their use and determining factors for their use. The results will serve as a basis for determining prevention actions and later on to measure possible effects of such actions.

The results show that the number of sunbed users is smaller in France than in several other countries, but that also here many young people uses them and many start using sunbeds before the age of 18 years old despite it is forbidden. It shows that such work is important to reduce health burden, in particular the risk of skin cancer.

The paper is concise, well organized and, in general, well written. There are no major deficiencies that need corrections before being published. A few minor essential revisions are trusted to be performed, and I have some recommendations that could be included.

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.
- 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.

- 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.

- 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.

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 …”

- Introduction:

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

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

- Methods:

  o Second paragraph:

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

    # 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.

  o Third paragraph:

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

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

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

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.
# Replace the word “bigger” with “larger” in “… where women are much bigger consumers …”.
# Replace “associated to” with “associated with” in the sentence “This practice seems associated to …”.
# Replace “euro” with “Euro”.
# I think it is better to replace “knowing” with “know” in the last sentence.

- Discussion:
  o First paragraph, second last sentence: I suggest deleting “Furthermore” as I think that is better English.
  o Third paragraph and second sentence: I suggest replacing “use tanning sessions” with “use tanning beds”.
  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)”.
  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?

- 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].”
  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 from tanning booths.”

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

- 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 …”

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

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.