Reviewer’s report

Title: Melatonin and health: an umbrella review of health outcomes and biological mechanisms of action

Version: 0 Date: 05 Sep 2017

Reviewer: Jacob Rosenberg

Reviewer’s report:

Comments to authors:

Abbreviations:

You defined the abbreviation (SR) twice in the abstract. First on line 5, p2, and then again in line 20, p2. On line 10 and 20, you do not use the abbreviation you defined previously in the abstract. This seems unnecessarily confusing to the reader. Again on p12, line 19, you do not use the SR-abbreviation.

For narrative reviews, you define an abbreviation for it in the abstract (p2, line 22). This abbreviation is not used in the entirety of the article, yet you still list it in the abbreviations list on p17.

Meta-analyses: In your abstract, you use the words "meta-analyses" twice, same as you did for narrative reviews, yet for meta-analyses, you didn't abbreviate it. In the article, you define the abbreviation on p6, line 18-20, yet you do not utilize your abbreviation on p7, line 12 and 51, as well as on p10, line 54.

Concerning your list of abbreviations, I would suggest putting the abbreviations in alphabetical order, based on the abbreviation itself. The order of, especially, MD, MLT and MA seems off.

I would suggest either sticking to using the abbreviations, or getting rid of them all-together. They seem unnecessary for the overall meaning of the article.

Confusion about narrative reviews:

I find myself a bit confused as to whether you include narrative reviews in your analysis or not. On p5, line 30, you mention that you include both systematic and narrative literature reviews. Yet, just two lines prior to that (p5, line 24), you only mention reviewing reference lists for further potentially relevant systematic reviews?

Again, under results (p8, lines 12-25) you neglect to mention narrative reviews, you only mention the systematic reviews, which have presented their data narratively. Then, on p14, line
In the discussion, you mention included narrative reviews, which were not mentioned in the results?

In the abstract, p2, line 4, you state that the aim of the article is "to critically evaluate the evidence from systematic reviews", yet under the methods, you mention that also narrative reviews are included (p2, line 22). Then, in the article under background (p4, line 29), you mention that both narrative and systematic reviews are to be evaluated.

I am a bit confused as to whether you have included narrative reviews, and have neglected to include them in your "snow-ball" search and results, or if you have defined "narrative reviews" as "systematic reviews that present their data narratively"?

Chronological order of tables and figures introduced:

I am a bit confused as to why the order of tables and figures mentioned in the article, are not in a chronological order?

On p8, line 15, you present Table 1. Then, on p9, line 7, the next table presented is Table 4. Not until p10, line 51 are Table 2 and 3 presented.

Figures: Figure 1 is presented on p8, line 15. Figure 3 is presented as the next, on p9, line 7. Finally, on p15, line 30 is Figure 2 presented.

Other comments to tables and figures:

Abbreviations in table-names: Why abbreviate melatonin in the name of Table 2 and 3, but not Table 1? Why abbreviate melatonin but not meta-analyses in the name of table 2 and 3?

Why abbreviate melatonin in the text for figure 1, but not systematic reviews or meta-analyses in figure 2? Why abbreviate systematic reviews in figure 3, but not figure 2?

Furthermore, why is the text for Table 1 all capitalized letters, when no other figures or tables have all capitalized letters?

Why write "Table 2 Footnote" and "Table 3 Footnote" but just "Footnote" under table 1?

Final comment:

I am confused as to the parentheses on p8, line 58: "... ranging from (a-v) acute coronary syndrome to various cancers,..."). Is it an abbreviation of atrio-ventricular? In this case, it needs to be mentioned under abbreviations. If it's a range, then the range should be defined.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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