

## Peer Review File

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### **Reviewer #1:**

**Comment 1:** Improving the quality of information is an important and frequently forgotten issue. The search strategy is clearly defined, but it would be relevant to discuss why these three search engines have been chosen and why others have been excluded.

**Reply 1:** Thank you very much for this comment. To address your concerns, we have made the following changes. We chose to use Google, Bing, and Yahoo, because they are the most common search engines. Based on the number of hits, we felt that the use of additional search engines would not add additional meaningful findings.

#### **Changes in text:**

- In page 2 line 33, we have added “the three most frequently used English search engines” to explain our decision to use search results on Google, Bing, and Yahoo.

**Comment 2:** It would also be appropriate to specify how many reviewers collected data.

**Reply 2:** A single study author reviewed the webpages and assessed their readability and quality. This information has been specified on page 3 lines 47 and 56.

#### **Changes in text:**

- On page 3 lines 48 and 56, we added, “a single reviewer (IF, one of the study authors) utilized ...”.
- We understand that the use of a single reviewer could be a potential limitation to our study. As a result, we have added some text to address this. Please see page 9 lines 183-186: “Another limitation of this study is having only one author evaluate the readability and the quality of information. To address this limitation, the reviewer used an automated calculator to calculate the readability of information.”

**Comment 3:** Figure 1 excluded "non-vasectomý related pages", but reference is made in the text to “non related pages”. Probably authors should refer to it in the same way. The same happens to Flesch Reading Ease Score, which is seems to be referred as Flesch Kincaid Readability Ease Score.

**Reply 3:** We have changed the in-text reference to the exclusion criteria to “non-vasectomy related pages” to match Figure 1. We have also reviewed our manuscript to ensure that the term “Flesch Reading Ease score” is used consistently throughout the manuscript.

#### **Changes in text:**

- In page 3 line 39, we have added the term non-vasectomy related pages.
- Flesch Reading Ease score is now used consistently in page 3, line 49; page 4 line 73; and page 5 line 85.

**Comment 4:** The alpha level should be reported in Statistical analysis.

**Reply 4:** Thank you for this comment. We have added the alpha level set as 0.05 in the statistical analysis portion in page 4 line 74.

**Changes in text:** See above.

**Comment 5:** It would be attractive to add the mean score of GFI and SMOG

**Reply 5:** Thank you for this comment. We have added the mean scores to the text.

**Changes in text:** Please see page 5 line 89.

**Comment 6:** And in page 6 line 134 “Ninety percent of the webpages scored either “poor” or “fair”.” information is duplicated, it could be removed.

**Reply 6:** We appreciate this comment. Based on the reviewer’s suggestion, we will remove line 118-120 from text.

**Changes in text:** Please see page 6, line 118-120.

**Comment 7:** Same happens in page 8 line 171 whith "that".

**Reply 7:** We apologize. We are unclear where in the text the reviewer is referring to and the comment that they are making. Could you please clarify this point if needed?

**Comment 8:** Figure 2 percentajes should be reviewed and table 2 may include n value, as done in table 1.

**Reply 8:** Thank you for this comment. We have reviewed the percentages and they are correct. However, we have redesigned Figure 2 to make it more reader friendly. We also added the n values in table 2 similar to table 1.

**Changes in text:**

- See Figure 2.
- See Table 2.

**Comment 9:** Finally, authors have shown that measurement tools are similar to each other, but it would be really interesting you recommend one based on your experience to facilitate the work of

future research. However, the publication of this manuscript after the proposed changes may contribute to the literature.

**Reply 9:** You bring up a very interesting point regarding which readability tool is the best one to use. We believe that the Flesch-Kincaid Grade Level may be a better tool compared to the other three used in our manuscript. The term “grade level” makes this tool easier to understand. Furthermore, it is more widely used compared to the GFI and SMOG. Lastly, compared to the Flesch Reading Ease score, the formula actually yields a grade level compared to a score that could be correlated with a grade level.

**Changes in text:** Please see page 9 lines 168-178 of our manuscript.

### **Reviewer #2:**

**Comment 1:** While I appreciate the effort that went into conducting this study, I do not feel it adds important information to current literature. It is well known that the web is full of incoherent biased data. I am not sure that reviewing top hits, necessarily proves that there aren't valid pieces of information out there. I am also not convinced that the authors' conclusions provide any tangible next steps.

**Reply 1:** We thank you for taking the time to read and critique our manuscript, and we agree that there is a relatively broad perception that patient-directed resources on the web can be biased, difficult to read, and of low quality. But we feel that the information revealed by our study adds some important insights into the problems of low-quality health information and low utilization of cryopreservation. Our paper adds unique information in two ways. First, we break down the source of online health information into academic, commercial, non-profit, and others, and we were able to show the unsatisfactory quality of information even by academic resources. There may be the perception in academia that our own resources are somehow superior to those provided by private companies and other non-academic sources. However, our study shows quite clearly that this is not the case. In a sense, this should serve as a call to arms, particularly in the academic community, to work to improve our resources, lest we lose the trust and the confidence of our patients. Secondly, we do suggest several proven strategies and particularly the FKGL tool that can help lower the complexity and improve on the quality of the text that is presented to the patients. We also identify several national organizations that take care of targeted patients that could benefit from implementing these strategies. While the findings of our study are generally consistent with what has already been found, we feel that some of the nuances of our study add to the literature and highlight opportunities for improvements that have not been previously demonstrated.