Reviewer's report

Title: Bright Light Treatment of Depression for Older Adults ISRCTN55452501

Version: 1 Date: 1 July 2005

Reviewer: Bjørn Bjorvatn

Reviewer's report:

General
This is a potentially interesting and important paper examining the effects of bright light treatment on depressive mood in older adults. It is done in a natural setting (at home), and 81 volunteers participated, making it a fairly large study. It is strengthened by an appropriate baseline circadian assessment, and thus giving light at the presumed best time of day. Melatonin assays also strengthen the paper. Both subjective and objective data were gathered. The research group is well-known and has contributed significantly to this area of research. Although the results are negative, publication may be important. However, the paper needs major revision.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
The major problem with the present paper is the lack of a proper discussion of the results. There are lengthy introduction-, methods- and results-sections, but the discussion is surprisingly brief. The reader wonders why the bright light had no effects on mood, circadian rhythm etc, and the authors need to elaborate on this. Other studies have shown positive effects, and a discussion about differences in design etc is needed. In this study, participants were diagnosed with depression and were currently under treatment, either with antidepressants or psychotherapy. No information is given regarding how long they have been depressed, or how long they have been under treatment. A better description of the depression is thus needed. Bright light has clear effects on SAD, and the authors need to better clarify whether these participants also suffered from SAD. Was SPAQ used, or are there any data on symptoms summer/winter? Bright light may be effective especially during the winter months, and I wish the authors were able to differentiate between those treated during the summer and those during the winter. One may of course wonder if the effects of bright light may be minor in San Diego, being so far south, whereas the effects may be clearer in the more northern latitudes. One may also speculate that 4 weeks of treatment may be a short time considering these patients are old and probably suffer from chronic treatment-resistant non-SAD depression. The introduction of wake treatment prior to bright light is not mentioned in the discussion. This was done to improve antidepressant effects, but did not have any effects in the older patients. Why? All these issues have to be discussed. In the paper the authors write that they excluded patients that were outdoors so much that light treatment had little to add, but they fail to specify what the limit was. This needs to be specified.
No sleep data (sleep length, sleep onset latency, sleep efficiency, etc) are presented. This is a major weakness. Bright light may change sleep, and actigraphy data are collected. I strongly advise for including sleep data in the paper.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. The authors included a control group of healthy volunteers. I do not understand why this was done, and will suggest that these data are removed. They do not add important information.
2. Abstract, conclusion: last sentence needs to be deleted. The study shows no differences between bright or red light, so this sentence is confusing.
4. Intro: studies with dementia: consider adding papers published by Fetveit et al. on bright lights effect on sleep disturbances in demented nursing home residents.
5. Methods: The referee finds the description of the melatonin assays (more than four pages) too extensive.
6. Results: The authors state: Among all 81 subjects there was a trend. P-values are above 0.1, indicating no trend. I suggest deleting this sentence. The data indicate no difference between patients taking or not taking antidepressants!
7. Results: Under mood improvement: the wake therapy data are shown in table 3, not 4.
8. Results: adverse reactions: The SAFTEE data are shown combining dim and bright light. This is confusing. This is a study examining the difference between dim and bright light, and these data should be presented separately. All combined data should be deleted.
9. Results: Again, I suggest removing the data on the healthy controls.
10. Remove the case report. It seems inappropriate here.
11. Discussion: Again, I find the discussion very brief (only 1.5 pages) and incomplete. Please elaborate on the findings and discuss the results in relation to other studies on the effects of bright light.
12. Conclusions: It seems inappropriate to suddenly introduce in the conclusion that evening light was more effective. According to the data, no effect or difference was present. Please correct. Also, a clinically significant overall mood improvement of 16% in GDS scores suggests a possible value in further study, is inappropriate. Although disappointing and surprising, this study showed no effect of bright light, and does not warrant such a suggestion of further studies, especially not in the conclusion.
13. Conclusions: last paragraph about green light: Please remove.
14. The tables are in general not very clear. They are for instance lacking explanations of the abbreviations. In table 5: do not use combined bright and dim light. The purpose of the paper is to compare these two treatments. Table 7: is this necessary? Table 9: remove, as it compares depressed with healthy controls, and not bright versus dim light.

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

Yes to first question: I am a consultant for a Norwegian company selling bright light boxes. No to all the other questions.