

# Review of: "Hospital's Thermo-neutral Zone for Patient Safety and Climate Change Sustainability"

Luciano Massetti<sup>1</sup>

<sup>1</sup> Italian National Research Council

**Potential competing interests:** No potential competing interests to declare.

Dear authors, I tried to review your manuscript, "Thermal Comfort Temperature Evaluation in Hospital Wards for Patient Safety and Climate Change Sustainability," and I have some comments about it that I believe should be clarified before publication.

First of all, I would like to make it clear that I am not sure I have fully understood this work. Mayhap it is due to the fact that I am not a native English speaker, and I apologize if some comments are not appropriate.

1. The objectives stated in the abstract (a field study) and in the introduction (a methodological review) are different. In my opinion, this manuscript does not address a review; therefore, I suggest revising the objectives stated in the various parts of the manuscript and making them consistent.
2. Moreover, it is not clear if the study aims to model temperature indoors and outdoors of the hospital. I suggest stating this clearly in the objectives. It seems that the authors model outdoor temperature, which in the case that the conditioning systems fail, causes the rise of indoor temperature, affecting patient and hospital staff health. I wonder if the authors considered the possibility to monitor both indoor and outdoor temperatures and found the relationship between them.
3. I believe that the description of the methodology should be improved with essential elements that will help the reader to understand the relevance of the study. I suggest to clarify at least the following information:
  - a. Are the authors using a multiple regression model? Please specify.
  - b. How many sites were monitored? I would suggest to mark them on the map of Figure 1 and provide a table with the values of each parameter (e.g., LAI, G ..... ) used in the model for each site.
4. Regarding the results, I have some difficulties in understanding table 2. What does "slope" represent? Is this the only variable considered in the model, and how do all the other variables contribute or not to the model? Do the scores  $\alpha$ ,  $R^2$ , and SE refer to which model: to slope  $b$  only or to a model with all the other variables? In this last case, I suggest to indicate in the table which variables contribute significantly to the model with an \* indicating a significance level  $\alpha < 0.05$ . I would recommend indicating the formula of the model that has been used to draw figure 3.
5. In the section regarding thermal comfort, the authors evaluate the influence of thermal variables on mean well-being. Questions arise: how is mean well-being defined and evaluated in this study, and which type of test has been used to assess the influence.

6. I suggest to define how the authors calculated the mean comfort temperature.
7. In my opinion, it is not clear how the approach should be implemented in other situations.