Reviewer’s report

Title: Income Level and Regional Policies, Underlying Factors Associated With Unwarranted Variations in Conservative Breast Cancer Surgery in Spain

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Reviewer: Carlos Reyes Ortiz

Reviewer’s report:


Major changes:
Authors need to make the following changes =see my comments into double brackets [[ ]]:
In Methods:
2] The “instruction level” understood as the percentage of graduates [[ from what –high school? College? ]] within the total population.

CS is more frequently used [always showing higher variation across healthcare areas than NCS] except in the group 70 years and older; among elder women the NCS utilization rate is clearly above the CS [table 1- [[it should be table 3?]]].

In results:
These differences in socio-economic variables were statistically significant when compared to line 45° [[this needs to be explained again in the graphics’ label that this is the comparison line; if it is above that line considered positive? And it is below that line considered negative?]] only in the case of CS.

The multilevel analysis for CS discarded the instruction [[ you mean educational? Try to be consistent, using the same names throughout the text and graphics]] level variable and only the economic level [[you mean income?]] was retained in the model.

In the Discussion:
Women living in areas with higher NCS rates will presumably have worse quality of life, physical image and satisfaction indicators than those living in areas with high CS rates [36-38] [[re-write this as a hypothesis to test in other studies but not as a consequence of this analysis since there are no data to support that statement]].

Other comments:
In table 3: these results 0.04 [0.01- to 0.08] - corresponding to <50 yrs CS and conc index educational level- and -0.02 [-0.05 to -0.002]-corresponding to < 50 yrs NCS conc index income- would also be significant.
Authors need to clarify the scales in figure 2 (are the numbers correct?. For example, x-axis it start at 0 and goes to 2 4 6 8 and 1 (is it 10?). Check for spelling/ typos.

**Level of interest:** An article of importance in its field

**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'