Reviewer's report:

Title: Sociodemographic gradients in breast and cervical cancer screening in Korea: Korean National Cancer Screening Survey (KNCSS) 2005-2009

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Reviewer: Laura L Marlow

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This paper presents data from a very large population based survey in Korea. The article offers a recent snapshot of sociodemographic correlates of breast and cervical cancer screening. Although generally well written, there are parts where the English is poor and this makes it difficult to understand what the authors are trying to say. I would advise that the paper is edited by a native English speaker to help improve the quality of the language.

Background (Minor Essential Revisions)

The background section would benefit from some restructuring and additional detail. In particular I think it would read more clearly if the first and second paragraphs were swapped around.

Paragraph 1:
Line 2, the authors say ‘with a premium below 50%’, it is not clear what this means and should be more clearly defined.
Line 4, the authors need to define the abbreviation NHI.
Is there an upper age limit for breast and cervical screening in Korea?

Paragraph 2, line 1, the authors say that “cancer screening rates in Korea … have increased steadily” Since when?

Paragraph 3, line 9, the authors say “morbidity and death rates have not been reduced” Do they mean specifically in the group of women with low socio economic status? This should be made clear.

Measures (Major Compulsory Revisions)

You need to discuss how women were asked about their reasons for not having screening and how this was coded (open, closed etc), this is discussed in the results but not the methods.

Results (Major Compulsory Revisions)

There is no response rate provided, this is vital information and necessary for the reader to interpret hot representative the survey is of the general population.

There is one long sentence at the end of the second paragraph … “After adjustment for age and sociodemographic factors …compared to having had none”. This is difficult to follow and should be rewritten.
Discussion (Major Compulsory Revisions)

Paragraph 1, the authors should re-write this paragraph to clarify the findings, at the moment it is difficult to determine which analyses they are referring to.

Paragraph 4, the authors mention that “the increase in the participation rate for the cancer screening programme might have resulted from increased knowledge and awareness of cancer in the target population due to health education” Have there been any health education initiatives in Korea that would lead them to believe this is the case?

Paragraph 5, there are many other reasons for low perceived risk of breast and cervical cancer besides perceptions of “good health or an absence of symptoms” e.g. no experience of cancer among friends and family, misperceptions about the causes of cancer, not feeling at risk of cervical cancer because of sexual experience. The authors should include other suggestions or rephrase so that it is clear the examples they have given are not exhaustive.

End of paragraph 6, The authors say “… breast and cervical screening rates are still low … indicating that Korean women are not yet aware of the importance of breast and cervical screening” There are many reasons why women may not have screening and the authors suggestion that this is simply because of poor knowledge trivializes the situation. A more appropriate interpretation of the implications should be included.

Health insurance was the strongest predictor of screening in all analyses presented in this paper, but this is not mentioned in the discussion. I thought it was particularly interesting that health insurance would play such a role even though screening is offered free for most of the women who are on low incomes and would not have insurance. The authors should include an interpretation of what they think about these findings.

Limitations: The analyses focus on women who have ever had screening, so a woman of 50 who has had just one screen at age 30 but never been for screening again would be catagorised in the same way as someone who religiously goes for every screening invitation. This is a major limitation and could explain why some of the study findings are inconsistent with previous research. The authors should in the very least acknowledge this in the limitations.

Tables and figures (Discretionary Revisions)

In table 2, columns 1 and 2 which provide the sample numbers are not necessary because this information is all available in table 1. This is also the case for the first column in table 3. The numbers in table 3, column 2 (no. in sample: ever both/ever some) do not match the equivalent numbers in table 1?

Can figures 1 and 2 be combined. It would be useful to see this data in the same figure in order to make comparisons about reasons for not having the 2 types of screening.
Level of interest: An article whose findings are important to those with closely related research interests

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