Reviewer's report

Title: Health-Related Characteristics and Preferred Methods of Receiving Health Education according to Dominant Language among Latinos Aged 25 to 64 in a Large Northern California Health Plan

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Reviewer: Karen Hosper

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General
This paper presents how language proficiency is related to several health outcomes and preferred methods of receiving health education. I believe the paper has a number of serious limitations that make it hard to generalize these results. The numbers for bilingual and Spanish-dominant were relatively small, only insured respondents were included, all data is self-reported (consequences for overweight in particular) and they were all part of a health plan population in Northern California. In addition, the age range of the sample is very broad (25-64) and socio-economic factors are not fully taken into account as well as generational status. However, the paper has some interesting information on differences in internet access and use between the language groups.

Here follow suggestions and comments to improve the paper:

Major

1. Table 4: this table shows only data adjusted for age. I would suggest the author presents here the analyses adjusted for age AND socioeconomic indicators, and not only education but also household income. The differences in household income were large between the Spanish/bilingual versus the English dominant group. It is therefore unclear whether the differences in health (and internet access etc) are really due to differences in language proficiency.

2. Table 5: the data on preferred methods for obtaining health education might be strongly associated with age. I wonder why did the authors not include these measures in table 6 were they adjust for age. And of course also here, it is important to adjust for socioeconomic measures as well. So again, it is question is it language or can the differences be explained by socioeconomic indicators?

3. No information is given on country of birth of the respondents: is the sample mainly first generation (born abroad) or is there also a large group second generation? It is strange that this is not mentioned within the method and/or result section while in the introduction the author discusses how health outcomes differ between generations. It would also be nice to see how country of birth and language are associated. There should be information on this within table 1 (characteristics).
4. It is unclear how exactly the participants were recognized as Spanish dominant, bilingual or English dominant. This could be described more precisely within the method section. This applies in particular to the Spanish dominant: how were they selected? Is it possible that there were bilinguals in this group as well?

5. The number of tables (6) could be reduced. Now we see first percentages and than odds ratio’s, but I believe that the adjusted data is more important in this case. I suggest the authors reduce it to one table with characteristics and two tables with odds ratio’s (adjusted for age and ses indicators).

Minor

6. It was interesting to note that self-rated health and heartburn did not reflect on more objective measurements such as hypertension, diabetes and high cholesterol. This questions the validity of the global assessment of self-rated health among these groups. Probably differences in the interpretation of the questionnaire may play a role: some were in English and others were in Spanish, therefore the meaning attached to these may differ between the groups. This might be added to the limitation section.

7. Discussion section page 11: “Spanish-dominant and bilingual Latinos were also significantly less likely than English-dominant counterparts to believe that health risk factors such as (...) had a large impact on health, partly due to low level of formal education (..).“. The analyses on this were not adjusted for educational level or at least this result is not mentioned within the result section. So it is unclear on what this conclusion is based. As mentioned before, it would be nice to just show how the associations change after adjustment for education (and household income).

8. Methods: some participants were assisted with filling in the questionnaire by phone. There is no mentioning about whether it was hard to reach people by phone. In our own research we have difficulties with reaching migrant populations by phone because often they have only sell phone numbers which change often or the number is not available. Than we choose for home-visits and do an oral interview at the participants home. Was lack of phone-numbers (or incorrect numbers) a reason for excluding participants from the sample? In that case the sample might be biased.

Discretionary

9. Self reported data on weight and height are not reliable in particular among migrant populations. This could mentioned as an important limitation on the data on weight and height.

10. Data on physical activity is very limited: only exercise was included during leisure time while these populations might get more exercise during other activities such as home work or activity at work. In addition, the kind of exercises
that were mentioned sound very “Western” such as tennis and golf. More ethnic specific activities could be included in future surveys.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**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.