Reviewer's report

Title: Cognitive Testing of Physical Activity and Acculturation Questions in Recent and Long-Term Latino Immigrants in the US

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Reviewer: Hector Balcazar

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Major Compulsary Revisions

This is an important study with valuable information that can be applicable to the development of survey questions that address language and residence time in the US for Hispanics. However, there are several issues that need to be addressed that undermines the potential of the story behind the paper.

The paper lacks clarity. The purpose of the study is confusing. The main purpose of the study should be presented clearly and early in the document.

The methods section also lacks clarity. Several weaknesses are noted. First, on page 10 the description of acculturation studies should be moved to the introduction. Second, The definition presented on page 12 at the end of recruitment, talks about groups based on low acculturation/Spanish, high acculturation/Spanish and high acculturation/English. These definitions of acculturation are not based on any acculturation index. These are based on residence status (less than five years living in the US or more). This categorization of acculturation based on residence is not described in the methods section. Third, the analytic approach lacks specificity and clarity. For example, it is not clear how Willis (7) definitions were used to identify the problems. How these definitions are used to build Table 4 results is also not clear. Furthermore, the steps presented in Table 2 are not clearly matched with the steps presented in the narrative section beginning on page 15. How are these steps related to the Willis reference is not clear for problem identification.

In the coding step there is another definition based on the scheme introduced by Willis et al (9). What is the difference between Willis (7) and Willis (9) for building these approaches and definitions. The authors are making many assumptions about their analytical strategy that the reader may not understand.

The authors also describe the Q-bank codes which many readers may not be familiar with.

On page 18 of results, the authors describe p values that need to be interpreted with caution, however there is no mention in the methods section about the statistical test performed for a given analysis.

The results should be re-organized to present the quantitative data first and then
the qualitative data. Table 4 is a difficult table to understand.

**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.