Reviewer's report

Title: Prevalence and factors related to dental caries among pre-school children of Saddar Town, Karachi, Pakistan: A cross-sectional study

Version: 3 Date: 12 August 2012

Reviewer: Donald Chi

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Major Compulsory Revisions

1. What is the outcome measure? This needs to be defined clearly – is it dmfs (0 vs. 1 or more), or untreated decay (no/yes), or something else? On page 9, where the authors report the OR associated with plain milk, the outcome appears to be “resisting dental caries” whereas one sentence later the outcome is dental decay acquisition. The answer is relevant to my primary concern regarding the inappropriate use of odds ratios. Unless the outcome is rare (rule of thumb <10-15%), the appropriate measure of risk would be risk ratios.

2. As reported the odds ratios are confusing. The authors need to be consistent. For instance, the odds ratios associated with toothpaste (1.509) and toothpowder (0.409) are in opposite directions but both are claimed to “protective” against caries on page 8.

3. Children were randomly selected from eight clusters. However, the authors do not appear to have adjusted for clustering in the regression models.

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

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests'.