Reviewer's report

Title: A factorial randomized controlled trial to evaluate the effect of micronutrients supplementation and regular aerobic exercise on maternal endothelium-dependent vasodilatation and oxidative stress of newborn

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Reviewer: David Moher

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I thank the authors for responding to my most recent questions. I have now read the protocol again and still have questions:

• The protocol – Page 4, Study design, is described as double blind. Yet, later on in the description, Page 11, the authors state “...it is not possible to blind the participating women.”. How is the trial double blind? If the research assistants are the only personnel blinded, is this not a single blind trial?

• In response to my previous review – trying to understand the rationale for the inclusion of a placebo in the control group – the authors indicate their desire to keep the micronutrient supplementation ‘hidden’ - I would call this procedure a ‘double dummy’, whereby investigators might be giving different number of injections, for example. Perhaps intervention A has 2 needles and intervention B has 3 needles. An investigator might add a third ‘placebo’ needle to intervention A to maintain the participant blind. This would be truly the case for a double blind trial. In the micronutrient protocol the authors state that it is impossible to blind the participants. Further clarification about the double dummy procedure is required.

• On page 8, part of the analytic plan, the authors state “Multiple imputation, compared to other case deletion strategies…… for missing data. Can the authors provide a reference for this statement.

• On Page 10, Randomization, the authors have provided the actual block randomization scheme “50 blocks with 8 women each”. Has the trial finished? If the trial is still ongoing the blocking scheme should not be included with the protocol description that is being considered for publication.

• Also on Page 10, Randomization, the authors state “This procedure assured a complete blinding”. This is part of the randomization procedure and not the blinding. The authors are describing how they have attempted to achieve “allocation concealment”, part of the randomization procedure: part 1 – sequence generation, part 2 – allocation concealment (see attached paper by Schulz).

• On page 11, the authors describe issues pertaining to blinding. This needs to be a separate heading – Blinding - and not included within the Randomization heading.