Reviewer's report

Title: Dealing with Missing Data in a Multi-question Depression Scale: A Comparison of Imputation Methods

Version: 2 Date: 16 October 2006

Reviewer: Kosuke Imai

Reviewer's report:

The authors responded to all but two of my comments. I am somewhat disappointed because these two comments are the only ones that require the authors to make some major changes. I still believe that these two points deserve careful consideration on the part of the authors and will significantly improve their manuscript. It is often too tempting to say any major change is "out of scope." Below, I comment on these two points. I hope that the authors will take another round of serious revision by incorporating my suggestions.

point 3. I encourage the authors to think harder about theoretical issues that motivate this simulation exercise. I am not suggesting that you have to write JASA paper with many proofs. Rather, I would like to know what general implications one should take from the authors' particular simulation exercises. Under what conditions, should we expect the authors' conclusions to hold or not to hold? Without this guidance, readers must wonder whether the authors' simulation results are even relevant to the data they are analyzing. Again, I do not expect any rigorous formal proofs. However, at minimum some theoretically-informed arguments are necessary in order to apply these specific simulation results they obtained to other studies.

point 5. I think that the creator of multiple imputation will be disappointed if the main advantage of MI is not examined at all! The main reason Don has been advocating multiple imputation over single imputation is to take into account for the imputation uncertainty. Examining the validity of the uncertainty estimates can be easily done by calculating the coverage probability.

What next?: Accept after minor essential revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No