Reviewer's report

Title: Multiple Imputation of Missing Covariates with Non-Linear Effects and Interactions: an Evaluation of Statistical Methods

Version: 2 Date: 9 February 2012

Reviewer: Chiu-Hsieh (Paul) Hsu

Reviewer's report:

I appreciate the authors conducted additional simulations to answer my previous comments. Based on the additional simulation results in the cover letter, it will be worthwhile looking into whether the missing probability is almost one for some X. If not, one would expect the bias for PMM should decrease with N unless there is no one to one relationship between X and Y. If there is no one to one relationship between Y and X, I can see that treating $X^2$ as just another variable in performing imputation has some advantage over PMM.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests.