



SDI Review Form 1.6

Journal Name:	Journal of Advances in Medical and Pharmaceutical Sciences
Manuscript Number:	2015_JAMPS_16185
Title of the Manuscript:	Detection of and adjustment for multiple unmeasured confounding variables in logistic regression by Bayesian structural equation modeling
Type of the Article	Method Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Compulsory REVISION comments	This study compared the bias magnitude between logistic regression and Bayesian structural equation modeling (SEM) in a small sample. This study is a very novel study examining the application of Bayesian SEM in epidemiology. The bias calculations is only possible where a “fake” data is generated (known effect of parameters)- as done in this study. However, it would be ideal to use a real data for such example and compare the predictive ability of these two alternative approaches. I think, there is a need for a paragraph in the discussion to describe more about the requirements of the data and the relation between epidemiological variables (confounding, etc.) that would actually make the size of the calculated biases so large . In fact, when the epidemiologist are better off using Bayesian SEM rather than logistic regression . In this new paragraph , also, expand on the sentence mentioned in the introduction (line 47) “more complicated task with strong confounding, realistically large error components for an observational study and a small sample with multiple sources of confounding” What do you mean by large error? Small sample? How small?	“Fake” data were recognized as a limitation of the study in discussion. However, it was thought better to focus on a variety of issues related to the Bayesian SEM method suggested in the paper as it was a new proposition and has to be explained in more detail under ideal conditions of knowing the true parameters. Real data examples are planned for future applications. A paragraph was added (lines 166-178) to address these issues. Large error was defined as a large percentage of the total outcome variation (40%) on continuous (logit) scale. This has now been clarified on lines 156-158.



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<u>Minor</u> REVISION comments	In line 35, “Statistical term for such effect is heteroscedasticity, also known as 35 “effect modification” in epidemiology.”—This is not completely correct as heteroscedasticity and effect modifications are used differently in epidemiology. Please provide reference (or change the sentence) Line 38, 39, provide reference for “analysis in multi-level modeling, the era of “big data” expanded this approach to considerably less controlled environments than experimental or case-control settings”	The sentence was changed by removing the part on “effect modification” in order to avoid confusion. The sentence has been expanded and new references [11-14] have been provided.
<u>Optional/General</u> comments		