

Here is a note to clarify two key approaches that Mplus offers for handling missing data on observed covariates (x's).

1. Multiple imputation in Mplus allows the user to specify which x's are binary, ordinal, and continuous, avoiding the assumption that all x's are continuous-normal. This approach is in line with imputation in other software. I think you can find studies of how much difference it makes to treat say a binary x as categorical versus continuous. Mplus has a very rich set of options for multiple imputation - you can read about them at <http://www.statmodel.com/download/Imputations7.pdf>

2. Alternatively, the x's can be made part of the model and estimated by ML - the "FIML" approach. In Mplus this is simply done by mentioning the mean or variance parameters for the x's. Without further specifications, this treats the x's as continuous-normal and lets them be correlated. In large samples FIML should be expected to give similar results to those of multiple imputation treating the x's as continuous-normal. I think you can find studies that show the similarity of results from multiple imputation and FIML. Relating to your comment, note that multiple imputation would typically treat the x's as correlated as well.

Mplus deletes cases that have missing on the x's in line with regression analysis where the model is estimated conditioned on the observed x's. Their means, variances, and covariances are not model parameters. Bringing the x's into the model implies more assumptions such as normality for the x's than in the original analysis model, where no assumption is made for the distribution of the x's.