

## Procedures of generating a true clean data in simple mediation analysis.

### ABSTRACT

Simulation study is very important in model validation. It is invaluable and versatile tool especially in statistical problems and modeling where analytical technique is inadequate. In fitting to a model, problems will arise when there exists one or more high-leverage points in the data set. Due to the fact that the presence high-leverage points are commonly occurred in models fitting, we propose a new algorithm in mediation analysis which guarantees clean data set without any high-leverage points. The new proposed algorithm employs the newly proposed Modified Diagnostic-Robust Generalized Potentials. By incorporating ModDRGP in the proposed algorithm has rectified the problem of having high leverage points in the generated clean data set, especially for mediation models. We found that in 10000 simulation runs, only about 31.14% of the cleangenerated dataset were obtained by direct simulation. The results also reveal that as the sample size increases, the percentage of obtaining direct clean dataset decreases.

**Keyword:** Mediation analysis; Potentials; Monte Carlo.