INDIRECT MISSINGNESS MECHANISMS IN A SELECTION MODEL

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Modeling longitudinal data with dropout by means of a selection model allows for different missingness mechanisms to be considered. MCAR - MAR - MNAR processes as introduced by Rubin (1976) and Little and Rubin (1987, Ch. 6), are accomplished through the parametrization of the dropout model $P(D = d|D \ge d) = \psi 0 + \psi_1 X + \psi_2 Y_{prev} + \psi_3 Y_{curr}$ (Diggle and Kenward 1994). However, due to the dependence of the measurements Y_{prev} and Y_{curr} in the longitudinal sequence and their plausible relation with the covariates X, an indirect MNAR mechanism may be invoked similar to well known multicollinearity issues. By means of simulation studies with several different settings, we will establish the impact of this indirect mechanism and as a solution we propose the use of residuals in modeling the missingness mechanism