

Outlined below are the algorithmic steps for Example 2 in Tu et al. (2007).

Algorithmic steps:

Step 1. Assuming a logistic MAR model, test the missing completely at random (MCAR) assumption (SAS sample program: "Logistic Model Code.sas").

Step 2. If the null hypothesis is rejected, then proceed the analysis under the missing at random assumption and estimate correlations by applying the bivariate monotone missing data pattern (BMMDP) and using the IPW estimators:

when $U \neq V$,

$$\pi_{ixytt} = \begin{cases} \prod_{k=2}^t p_{ik1} & \text{if } s = t \\ (p_{it1} + p_{it2}) \prod_{k=2}^{t-1} p_{ik1} & \text{if } s < t \\ (p_{is1} + p_{is3}) \prod_{k=2}^{s-1} p_{ik1} & \text{if } s > t \end{cases}$$

when $U = V$,

$$\pi_{ixst} = (p_{it1} + p_{it3}) \prod_{k=2}^{t-1} p_{ik1}, \quad \pi_{iyst} = (p_{it1} + p_{it2}) \prod_{k=2}^{t-1} p_{ik1}, \quad s \leq t.$$

where p_{is1} is defined in (20).

Otherwise, MCAR is plausible and as a result, $\pi_{iuvst} = E(R_{ius}R_{ivt})$, which are estimated by sample moments of the form: $\frac{1}{n} \sum_{i=1}^n R_{ius}R_{ivt}$.

Step 3. Estimate the product-moment correlations and asymptotic standard deviations using the results in Proposition 2 (SAS sample program: "Correlation Code.sas").