Table X: Characteristics of simulated datasets.

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|  | **Scenario A** | **Scenario B** | **Scenario C** |
| Study Design | Within-subject  Treatment study | Between-subject  Observational Design | Single Subject AB Experimental Design |
| Outcome Type | Continuous | Ordinal | Binary |
| Sample Sizes | n = 20; n = 60 | n = 74; n = 148 | n = 1 |
| Between-subject variability | SD = 0.25; SD = 0.75 | SD = 0.25; SD = 0.75 | SD = 0.25; SD = 0.75 |
| Within-subject Variabilitiy | SD = 0.25; SD = 0.75 | Not applicable | SD = 0.25; SD = 0.75 |
| Hierarchical Data Structure | Three trials clustered by participant and time (pre/post) | Four trials clustered by participant | 30 treated and 30 untreated items clustered by session |
| Data Reduction Approach for Non-Hierarchical Dataset | Average of three trials for a participant at each time point | Maximum (worst) score across four trials for each participant | Proportion of correct responses for each condition (treated/untreated) and session |

*Caption*: Note that between-subject variability indicates item-level variability for scenario C, whereas scenarios A and B indicate variability between participants.