

## Model for repeated measurements of a dichotomous outcome

If a dichotomous outcome has been measured at regular intervals across time for individuals and also over individuals, data for analysis with HLM may be set up as follows.

Suppose that there are four measurements per individual of characteristic BV, denoted by BV1, BV2, BV3 and BV4 respectively, and that information on another characteristic X is also available. Four dummy variables, corresponding to the BV variables are created, as shown below.

Person	BV	D1	D2	D3	D4	X
1	BV1	1	0	0	0	100
1	BV2	0	1	0	0	101
1	BV3	0	0	1	0	103
1	BV4	0	0	0	1	102
2	BV1	1	0	0	0	110
2	BV2	0	1	0	0	111
2	BV3	0	0	1	0	113
2	BV4	0	0	0	1	102

Once the data set is created, the variable BV is specified as the outcome. D1 to D4 and X are specified as level-1 predictors and D1 to D4 are allowed to vary randomly at level-2.