

$$f_a \sim \mathcal{U}(0.1, 0.4), \quad a = 1, 2, \dots, 7$$

For $a = 1, 2, \dots, 7$

For each $i \in \mathcal{I}$

$$\mathbf{X}_{ia}^{\text{int}} \sim B^{-1}(\mathbf{Y}_{ia}^{\text{unif}}; n = 2, p = f_a)$$