

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 X_2 + \varepsilon; \quad \varepsilon \stackrel{iid}{\sim} N(0, \sigma^2)$$

where $Y = \text{caval}$

$X_1 = \text{ipsa}$

$X_2 = \text{svi} = \begin{cases} 1 & \text{if svi} = \text{"Yes"} \\ 0 & \text{if svi} = \text{"No"} \end{cases}$

when svi is No, ie $X_2 = 0$

$$Y = \beta_0 + \beta_1 X_1 \quad \begin{array}{l} \text{base model} \\ \text{for reference group} \end{array}$$

when svi is Yes, ie $X_2 = 1$

$$Y_s = \beta_0 + \beta_1 X_1 + \beta_2 \cdot 1 + \beta_3 X_1 \cdot 1$$

$$= \underbrace{(\beta_0 + \beta_2)}_{\text{modified intercept}} + \underbrace{(\beta_1 + \beta_3)}_{\text{modified slope}} X_1$$

	SS	df	MS
Residual	56.496	93	0.607