

例 9.10

$H_0: \mu_1 = \mu_2 = \mu_3, n = 5 + 6 + 6 = 17$

$$SST = \sum_{i=1}^k \sum_{j=1}^{n_i} y_{ij}^2 - \frac{T^2}{n} = 39.159 - 33.264 = 5.895$$

$$SSR = \sum_{i=1}^k \left(\frac{T_i^2}{n_i} \right) - \frac{T^2}{n} = 37.893 - 33.264 = 4.609$$

$$SSE = SST - SSR = 1.286$$

變異來源	平方和	自由度	均方	F檢定值
減肥藥	$SSR = 4.609$	$3 - 1 = 2$	$MSTR = \frac{4.609}{2} = 2.3045$	$\frac{2.3045}{0.172} = 25.65$
隨機誤差	$SSE = 1.286$	$17 - 3 = 14$	$MSE = 0.172$	
總和	$SST = 5.895$	$17 - 1 = 16$		

$$F = 25.65 > F_{0.05}(2, 14) = 3.74 \quad \text{有差異}$$

例 9.12

$$m = \left(\frac{2}{\alpha} \right) = 3, F_{0.05}(3-1, 17-3) = 3.74$$

$$S = \sqrt{MSE} = \sqrt{0.072} = 0.303, \sqrt{(k-1)F} = \sqrt{3 \times 3.74} = 2.73$$

$$\mu_2 - \mu_1: (1.53 - 0.63) \pm 2.73 \times 0.303 \times \sqrt{\frac{1}{5} + \frac{1}{5}} = (0.379, 1.401), \text{不包 } 0$$

$$\mu_3 - \mu_2: (1.91 - 1.53) \pm 2.73 \times 0.303 \times \sqrt{\frac{1}{5} + \frac{1}{5}} = (-0.099, 0.852), \text{包 } 0$$

$$\mu_3 - \mu_1: (1.91 - 0.63) \pm 2.73 \times 0.303 \times \sqrt{\frac{1}{5} + \frac{1}{5}} = (0.779, 1.781), \text{不包 } 0$$

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