

Solution to Q 6 in the exercise

$$\bar{X}_T = \frac{3.773 \times 256 + 3.909 \times 395 + 3.930 \times 572 + 4.4 \times 55 + 4.011 \times 187}{1465} = 3.92$$

$$SS_{Between} = (3.773 - 3.92)^2 \times 256 + (3.909 - 3.92)^2 \times 395 + (3.93 - 3.92)^2 \times 572 + (4.4 - 3.92)^2 \times 55 + (4.011 - 3.92)^2 \times 187$$

$$SS_{Between} = 19.9$$

	Sum of square	Df	MSS	F	P	Eta-square
Between	19.9	5 – 1 =4	4.975	4.012	<.01	1.08%
Within	1,811.96	1,465 – 5 = 1,460	1.24			
Total	1,831.86					

Knowing type of community reduces errors in estimating the value of liking of rap music by 1.08%.