

LEARNING CHECK

A social psychologist is interested in studying how offensive people find certain types of profanity to be based on the ethnicity of the person who uttered the profanity. She conducts an experiment in which participants interacted with either a White male, Black male, or Asian male who utters either an ethnically derogatory slur or a nonethnic curse word. Participants were asked how offensive they found the profanity (ethnically derogatory or nonethnic curse word), using a 1 (*not at all offensive*) to 4 (*extremely offensive*) response range. Here are the results of this experiment:

A two-way ANOVA on offensiveness suggested no main effect of ethnicity of the person cursing, $F(2, 149) = 1.30, p = .276, \eta^2 = .016$, and no main effect of type of curse word, $F(1, 149) = 0.19, p = .662, \eta^2 = .001$. However, there was an interaction between ethnicity of the person cursing and type of curse word, $F(2, 149) = 4.33, p = .015, \eta^2 = .054$. Participants found a White male making an ethnically derogatory slur ($M = 2.77, SD = 0.31$) to be more offensive than a White male making a nonethnic slur ($M = 2.48, SD = 0.32$), $t(45) = 3.06, p = .004, d = 0.90$. However, participants perceived a Black male making an ethnically derogatory slur ($M = 2.65, SD = 0.40$) to be as offensive as a Black male making a nonethnic slur ($M = 2.44, SD = 0.36$), $t(47) = -1.86, d = -0.54$. In addition, participants perceived an Asian male making an ethnically derogatory slur ($M = 2.50, SD = 0.47$) to be as offensive as an Asian male making a nonethnic slur ($M = 2.49, SD = 0.49$), $t(46) = .05, p = .971, d = 0.01$.

1. What is the factorial notation for this experiment?

A: 3×2

2. What are the names of the factors in this experiment? How many levels does each factor have?

A: The ethnicity of the person cursing has three levels (White, Black, or Asian), and the type of curse word has two levels (ethnically derogatory or nonethnic curse word)

3. What is the dependent variable?

A: How offensive the type of curse word was perceived to be, operationally defined using a 1 (*not at all offensive*) to 4 (*extremely offensive*) response range

4. How were the degrees of freedom for the interaction calculated?

A: The $df_{\text{between-groups}}$ was 2 for ethnicity of the person cursing, and the $df_{\text{between-groups}}$ was 1 for the type of curse word. To get the $df_{\text{interaction}}$, we multiply together the df s for the factors. That gives us $2 \times 1 = 2$.

5. How much variability in the dependent variable is accounted for by the interaction?

A: Examining the eta squared (η^2) for the interaction, we see it is .054. So, 5.4% of the variability in offensiveness of the curse word was accounted for by the interaction between our two factors.

6. Use the means provided and make a line graph of the interaction. Plot the levels of the ethnicity of the person cursing on the x-axis.