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Race and Hiring

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Your class just performed a modified version of the famous race/resumé study* conducted by researchers at the University of Chicago. You will now conduct a **two-sample z-test for proportions** with the resulting data.

*Bertrand, Marianne and Sendhil Mullainathan. "Are Emily And Greg More Employable Than Lakisha And Jamal? A Field Experiment On Labor Market Discrimination," American Economic Review, 2004, v94(4,Sep), 991-1013. https://www.nber.org/papers/w9873

Surprise! The resumé you evaluated was fake. You just took part in an experiment. Each resumé the class evaluated was completely identical except for one component: the first name of the applicant. Half of the class got "Emily Jones," and the rest got "Lakisha Jones." According to birth certificate records, the name "Emily" is almost exclusively given to white children. The name "Lakisha" is almost exclusively given to black children.

Fill in the following based on data from your whole class:

Number of callbacks for Emily: _____ Number of callbacks for Lakisha: _____

Sample size for Emily group: _____ Sample size for Lakisha group: _____

Callback proportion for Emily: _____ Callback proportion for Lakisha: _____

1. Without performing any further calculations, do you think the difference in callback proportions between the Emily and Lakisha resumés is significant? Why or why not?

2. Is there convincing evidence of a difference in callback rates, based on the name alone?

STATE: Parameter: Statistic:

Hypotheses: Significance level:

PLAN: Name of procedure:

Check conditions:

DO: Mean: Picture:

Standard deviation:

General Formula:

Specific Formula:

Work:

Test statistic:

P-value:

CONCLUDE:

3. In the original study, the researchers sent resumés with commonly-white or commonly-black names (randomly assigned) to firms in Boston and Chicago. In total, 246 out of 2445 commonly-white named resumés received a callback and 164 out of 2445 commonly-black named resumés received a callback. Is this evidence more convincing or less convincing of racial bias than the data from our class experiment? Explain. Don't perform another full test!

Tests About a Difference in Proportions

Important ideas:

Check Your Understanding

To study the long-term effects of preschool programs for poor children, researchers designed an experiment. They recruited 123 children who had never attended preschool from low-income families in Michigan. Researchers randomly assigned 62 of the children to attend preschool (paid for by the study budget) and the other 61 to serve as a control group who would not go to preschool. One response variable of interest was the need for social services as adults. Over a 10-year period, 38 children in the preschool group and 49 in the control group have needed social services.

Do these data provide convincing evidence that preschool reduces the later need for social services for children like the ones in this study? Justify your answer.