

Exercise

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4. The *New York Times* (January 8, 2003, page A12) reported the following data on death sentencing and race, from a study in Maryland: ²

	Death Sentence	No Death Sentence
Black Victim	14	641
White Victim	62	594

Analyze the data using the tools from this chapter. Interpret the results. Explain why, based only on this information, you can't make causal conclusions. (The authors of the study did use much more information in their full report.)

```
## H0: Death Sentence and Victims Colour are independent

## H1: Death Sentence and Victims Colour are dependent. Null hypothesis is rejected

## To test the hypothesis we need to calculate p-value, which is a measure of the evidence
## against H0. The smaller the p-value, the stronger the evidence against H0.

## Pearsons X2 test statistic for independence is

## Death Sentencing and Race:

##      [,1] [,2]
## [1,]   14 641
## [2,]   62 594

## Expected counts

##      [,1] [,2]
## [1,] 37.97101 617.029
## [2,] 38.02899 617.971

## U statistic: 32.103709343626

## p-value 1.5e-08

## significance= 0.05 p_value= 1.5e-08

## [1] "Dependent: Null hypothesis is rejected"
```