

How to Calculate a Relative Rate Index (RRI)

For all race categories, divide the number of youth at the decision point of interest (such as arrest) by the number of youth at the previous decision point (in this case, youth population).

- Provides the rate at which a particular decision is made for a particular group of youth.

Next, divide the rate for the non-White group by the rate for the White group. The comparison of the two rates provides a relative rate index or RRI.

- Defines the rate for non-White groups in terms of the rate for the White group.

Example: SFY 2020 Relative Rate Indices (RRI) for the Arrests of Oklahoma Youth

Data Sources: JOLTS (Juvenile Online Tracking System) and OJJDP EZAPOJ Juvenile Population Data

1. Divide the number of arrests for white youth by the white population.

$$\frac{\text{White Arrests}}{\text{White Population}} = \frac{4,189}{251,314} = 0.0167 = 1.67\% \text{ (Rate)}$$

2. Divide the numbers of arrests for Black, Hispanic, and Native American youth by the Black, Hispanic, and Native American (NA) populations.

$$\frac{\text{Black Arrests}}{\text{Black Population}} = \frac{2,150}{43,115} = 0.0499 = 4.99\% \text{ (Rate)}$$

$$\frac{\text{Hispanic Arrests}}{\text{Hispanic Population}} = \frac{903}{68,756} = 0.0131 = 1.31\% \text{ (Rate)}$$

$$\frac{\text{NA Arrests}}{\text{NA Population}} = \frac{1,559}{52,462} = 0.0297 = 2.97\% \text{ (Rate)}$$

3. Divide the rates for Black, Hispanic, and Native American youth by the rate for White youth.

$$\frac{\text{Black Rate}}{\text{White Rate}} = \frac{0.0499}{0.0167} = \mathbf{2.99} \text{ (RRI)}$$

$$\frac{\text{Hispanic Rate}}{\text{White Rate}} = \frac{0.0131}{0.0167} = \mathbf{0.78} \text{ (RRI)}$$

$$\frac{\text{NA Rate}}{\text{White Rate}} = \frac{0.0297}{0.0167} = \mathbf{1.78} \text{ (RRI)}$$

Native American youth were arrested in SFY 2020 **1.78** times the rate of White youth. .

Black youth were arrested in SFY 2020 **2.99** times the rate of their white counterparts.