

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 referral to juvenile court) 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: RRIs for Referrals to Juvenile Court (2012 Missouri Data)

1. Divide the number of referrals of white youth by the white population.

$$\frac{\text{White Referrals}}{\text{White Population}} = \frac{28,229}{430,243} = 0.066 = 6.6\% \text{ (Rate)}$$

2. Divide the numbers of referrals of Black and Hispanic youth by the Black and Hispanic populations.

$$\frac{\text{Black Referrals}}{\text{Black Population}} = \frac{11,836}{84,162} = 0.14 = 14\% \text{ (Rate)}$$

$$\frac{\text{Hispanic Referrals}}{\text{Hispanic Population}} = \frac{536}{28,113} = 0.0191 = 1.91\% \text{ (Rate)}$$

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

$$\frac{\text{Black Rate}}{\text{White Rate}} = \frac{0.14}{0.066} = \mathbf{2.14} \text{ (Relative Rate Index or RRI)}$$

$$\frac{\text{Hispanic Rate}}{\text{White Rate}} = \frac{0.0191}{0.066} = \mathbf{0.29} \text{ (Relative Rate Index or RRI)}$$

Black youth were **slightly over 2 times** more likely to be referred to juvenile court than White youth.

Hispanic youth were **about half** as likely to be referred to juvenile court as White youth.