

# Relations of racial-ethnic diversity and trust to volunteering rates in the 50 American States

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Research with the 50 American states as analytical units examined the relations of state racial-ethnic diversity (RED) to state formal volunteering (FV) rates. Without and with the consideration of various statistical controls, higher RED was associated consistently with lower FV rates. This relation was maintained for White, non-White, male, female, married, unmarried, and age-group subpopulations. Importantly, trust of neighbours could fully account for each of these associations. It is speculated that trust fostered in areas of heightened homophily is the operative factor underlying the association between RED and FV rates, and that these state-level relations are grounded in corresponding individual-level relations. It also is suggested that where foundations for such interpersonal trust exist, there is greater opportunity for shared purpose, cooperation, and desire to engage in FV, which has the potential to enhance racial-ethnic social identities *and* promote the bonds of a more inclusive national identity.

Keywords: diversity; ethnic diversity; homophily; racial diversity; volunteering

In 2015, 24.9% of American adults engaged in formal volunteering (FV) through or for an organisation (US Bureau of Labor Statistics, 2016). These 62.6 million persons provided nearly 7.8 billion unpaid hours of service estimated to be worth 184 billion dollars (Warfield, 2016). However, 2015 had the lowest national volunteering rate in 15 years (Grimm & Dietz, 2018). Furthermore, the 50 states had dramatically different rates ranging from 39.3% in Utah to 18.3% in Florida (Americorps, 2021).

Because of the economic importance of FV (e.g., Warfield, 2016) and its significant role in enhancing democracy, social cohesion, and national identity (e.g., Craig et al., 2018; Hustinx, Cnaan, et al., 2010; Putnam, 2000, 2007), it is important from both a basic and an applied research perspective to determine the factors that relate to such state disparities in FV rates. The present research focuses on the potential role of racial-ethnic diversity (RED) as one such factor. As noted by Nesbit, Paarlberg, et al. (2020), RED “remains an underexplored topic in volunteering studies” (p. 919).

In 1980, the population of the USA was 80% White. By 2015, that percentage had fallen to 63% and it was projected to be less than 44% by 2060. In 2015, there were only four White minority states. By 2060, that number has been projected to increase to 22. In addition, 10 other states are projected to reach 40% minority by 2060 (Teixeira, Frey, et al., 2015). A major impetus for these profound demographic shifts was the passing in 1965 of the Immigration and Naturalization Act (also known as the Hart-Cellar Act) that removed race and ethnicity restrictions as criteria for immigration to the USA (Chishti, Hipsman, et al., 2015).

One consequence of increasing RED appears to be declining interest in FV (e.g., Knack, 2002; Musick & Wilson, 2008; Nesbit et al., 2020; Putnam, 2000; Rotolo & Wilson 2012). Support also has surfaced for a relation between RED and FV in a limited number of previous cross-sectional studies that have been conducted with states as the units of analysis. For example, Knack (2002), Musick and Wilson (2008), and Rotolo and Wilson (2012) found some evidence that greater degrees of state racial homogeneity were associated with lower state volunteering rates.

If RED indeed is associated with a lower tendency to volunteer, then several questions arise. For example, does reluctance to volunteer somehow result from the general animosity toward racial-ethnic outgroups created by the threat to majority status posed by a growing minority presence? Does RED reduce FV among minority groups as well as the majority group? Is formal volunteering among the members of the majority group related only to the population proportion of the majority group, or also to the degree of diversity among the other constituent racial-ethnic groups in the population? Do factors such as differences in gender, marital status, and age increase or diminish relations between RED and FV?

All such issues are worthy of empirical inquiry to further our understanding of the nature of the underlying dynamics of the relation of RED to FV. Eventually, such acquired knowledge also could prove beneficial in the development of programs to boost the rate of volunteering among both majority and minority group members. It has been argued that the crucial role of FV in the maintenance of a flourishing democracy, the development of social cohesion, and the bolstering of national identity should not be underestimated (e.g., Craig et al., 2018; Hustinx et al., 2010; Putnam, 2000, 2007). For example, Hustinx et al. (2010) noted that volunteering can be viewed as “an essential and exceptional form of social solidarity that binds society together” and “a fundamental expression of community belonging and group identity” that enhances the social integration of individuals (p. 417). FV is seen in the current work as both stemming from and contributing to community and societal integration.

Dynamics through which any association between higher RED and lower FV rates might arise and be maintained are not well understood. One perspective has focused on the homophily principle (e.g., Haun & Over, 2015; McPherson, Smith-Lovin, et al., 2001) which asserts that there is a preference and a propensity to associate and interact with *similar* others. In fact, Alesina and Ferrara (2000) have stated that because of this principle, persons prefer interaction with others “similar to themselves in terms of income, race, or ethnicity” (p. 850). Voluminous research over many decades has firmly established that humans prefer interactions with others they perceive as similar, and that such interactions are more likely to run smoothly and prove more rewarding because similar others are more

likely to share beliefs, attitudes, values, and behavioural tendencies. Such principles suggest that FV is less probable when RED is high because of restricted opportunities to be exposed to and to interact with *similar* others. This also is likely to result in lower social participation and decreased FV the smaller the relative size of a specific racial-ethnic group in a particular locale (Nesbit et al., 2020). Nevertheless, the observation of Musick and Wilson (2008) that “the effect of social heterogeneity has not received a lot of attention from social scientists seeking to understand why rates of volunteering vary from one community to another” (p. 327) remains largely valid.

Evidence also points to the potential role of trust as a key explanatory factor. For example, Putnam (2000) attributed an apparent decline in general community engagement of Americans partially to increasing RED and the ensuing reduction of trust. Others also have argued and shown that lower trust of others is associated with higher levels of RED (e.g., Hou & Wu, 2009; Nesbit et al., 2020). As well, there is evidence that higher FV levels can be attributed to greater trust (Miranti & Evans, 2019; Musick & Wilson, 2008; Nesbit et al., 2020; Putnam, 2007; Rotolo & Wilson, 2012; Uslaner & Brown, 2005). According to Putnam (2007), lower trust of others regardless of race is associated with higher levels of RED, and such inhibitions of trust tend to limit contact with others, fostering a general withdrawal from community life. Trust and interpersonal contact are inherent in most volunteering activities, so it is reasonable to expect that links between elevated RED and diminished trust is likely to lead to less FV.

Precisely why and how exposure to RED might lead to lower trust remains somewhat inconclusive and controversial. One view holds that trust is diminished through mere exposure to those who are racially and ethnically different (Dinesen, Schaeffer, et al., 2020). In accordance with the homophily principle, those who display such differences are assumed not to have similar beliefs, attitudes, values, and behavioural tendencies – characteristics that are conducive to trust. The outcome of such out-group perception is erosion of trust, of trust of “neighbours” broadly defined.

Dinesen et al. (2020) found in a meta-analysis that RED was negatively related to social trust, and that factors such as interethnic contact and socioeconomic status (SES) did not have much effect on that relation. Furthermore, *trust in neighbours* was most potent and was particularly so when ethnic diversity was assessed for “residential contexts” – a term referring broadly to aggregates “including not only neighbourhoods but also ... municipalities, metropolitan areas, regions, and countries” (p. 443), a list to which states also could have been added. As they later noted, “proximity to interethnic others is an important facilitating condition that accentuates the negative relationship between ethnic diversity and social trust” (p. 461).

The present research was foundationally informed by the geographical psychology perspective (e.g., Rentfrow, 2010, 2014; Rentfrow & Gosling, 2021; Rentfrow, Gosling, et al., 2008; Rentfrow & Jokela, 2016). The approach of geographical psychology adheres to the underlying assumption that a geographically defined region’s aggregate position on an individual difference variable reflects the central tendency of the region’s individuals on that variable and is associated with the prevalence in that region of the psychological and behavioural tendencies linked to that individual difference variable. As Rentfrow and Gosling (2021) note, the “geographical perspective can function as a bridge for connecting our understanding of the thoughts, feelings, and behaviours of individuals to the histories, values, and actions of populations” (p. 824). Research buttressed by such a view aligns firmly with the conclusion of Dinesen et al. (2020) that “theoretical and empirical work seeking to integrate the micro- and macro-level patterns in the relationship between ethnic diversity and social trust would indeed be valuable” (p. 461).

It should be noted that the current research was initiated and conducted with the spirit of Putnam (2007). He recognised the general lack of comfort with diversity in contemporary America but was acutely aware of both the threat and the promise of scientific research on the relation of diversity to social cohesion, stating that “it would be unfortunate if a politically correct progressivism were to deny the reality of the challenge to social solidarity posed by diversity” but “it would be equally unfortunate if an ahistorical and ethnocentric conservatism were to deny that addressing that challenge is both feasible and desirable” (p. 165).

## The present study

This is the first study to systematically assess the state-level relation of levels of RED to overall FV rates as well as White, non-White, male, female, married, unmarried, and age-related FV rates, although an earlier study by Rotolo and Wilson (2012) did examine the relation of RED to state secular, religious, and total FV rates. The general hypothesis of the present research is that higher state levels of RED are associated with lower state FV rates across the various categories. RED is conceptualized and gauged here in two ways: (1) the degree of balance in each state's population of Whites, Blacks, Hispanics, Asians, and Others, and (2) the percent of each state's population that is White. In addition, it is hypothesized that "trust of neighbours" can account for this potential association in whole or in part.

Planned analyses determined the relations between RED and FD rates without and with statistical controls. Several variables were considered as potential controls. Initial choice was based on available state-level evidence showing a relation to FV. For example, such evidence exists in McCann (2017) for SES, neuroticism, and indirectly for unemployment rate as a component of SES, and in Rotolo and Wilson (2012) for religiosity but apparently only regarding religious FV. Data also are tabulated in CNCS (2006) showing FV differences for Whites versus non-Whites, males versus females, married versus unmarried persons, six age groups across the life span from 16–65 and over. Conceivably, each of these variables also could be related to some extent to state RED levels, but this remained largely unknown until further analysis in the current study.

## METHODS

### Measures

**RED.** The percentages of the population in each state in 2004 Non-Hispanic White, Black, Hispanic, Asian, and Other were based on population data presented in Table 23 of the *Statistical Abstract of the United States* (US Census Bureau, 2006). The state numbers who were non-Hispanic White, Black, Hispanic, and Asian each were divided by total state population and multiplied by 100 to provide a percentage for each group in each state. The percentages for the "Other" category were calculated by summing the numbers for three other categories (i.e., American Indian, Alaska native; Native Hawaiian and Other Pacific Islander; Two or More Races), dividing the total by state population, and multiplying by 100. A composite index of RED referred to as Diversity 5 was formed in the following way. It was assumed that *balanced* diversity characterizes a population in which each racial group is equally represented. In the current context, that would be when the population was 20 percent for each of the five categories (i.e., non-Hispanic White, Black, Hispanic, Asian, and "Other"). Therefore, the absolute percentage points a racial category is from 20 percent indicates how far that category is from its hypothetical balanced diversity target. For each state, the sum of these five absolute percentages then was reversed through multiplication by -1 so that a higher score signifies greater RED. Finally, state values were converted to z scores to produce the Diversity 5 index for Study 1. State White population percent also served as an alternate RED index.

**Overall FV rate.** The percentage of the population in each state who formally volunteered was provided by the Corporation for National & Community Service (CNCS, 2006). This FV rate combines data from the years 2003 to 2005 and refers to the percentage of state population participating in any unpaid FV activities through or for any organization between September of one year and September of the next. Data are based on responses to the Civic Engagement and Volunteering Supplement of the Current Population Survey, which involves a nationwide survey of about 60,000 households carried out by the U.S. Census Bureau for the Bureau of Labor Statistics. Information is collected from adults aged 16 and older.

**White and non-White FV rate.** The CNCS (2006) report also provided state White and non-White volunteering percentages based on the combined years 2003 to 2005. A White versus non-White FV rate variable also was constructed by subtracting the non-White FV rate from the White FV rate in each state.

**Male and female FV rate.** Male and female FV rates for each state also were taken from the CNCS (2006) report. A female versus male FV rate variable also was constructed by subtracting the male FV rate from the female FV rate in each state.

**Married and unmarried FV rate.** CNCS (2006) also provided state married and unmarried FV rates for each state. A married versus unmarried difference FV rate variable also was constructed by subtracting the unmarried FV rate from the married FV rate in each state.

**Age group FV rates.** The CNCS (2006) report also included FV rates for each state according to six age groups: 16 to 24, 25 to 34, 35 to 44, 45 to 54, 55 to 64, and 65 and over. For the present study, nine age variables were created: (1) the FV rate for the age group in each state with the highest FV rate; (2) the FV rate for the age group in each state with the lowest FV rate; (3) the difference between the preceding two variables by subtracting the low FV rate from the high FV rate in each state; (4) the FV rate for those 16 to 24; (5) the FV rate for those 25 to 34; (6) the FV rate for those 35 to 44; (7) the FV rate for those 45 to 54; (8) the FV rate for those 55 to 64; and (9) the FV rate for those 65 and over.

**SES.** Two educational and two economic variables were combined to create an SES variable for 2004. For each state, the percent of the population 25 and over with at least high school graduation, the percent of the population 25 and over with at least an undergraduate degree, and the personal income per capita in current dollars were taken from Table 218 and Table 662 of the *Statistical Abstract of the United States* (U.S. Census Bureau, 2006). For each state, the percent of individuals living below the poverty line was taken from Table 690 of the *Statistical Abstract of the United States* (U.S. Census Bureau, 2007). After reversing the sign for the poverty line values, the four resulting variables were converted to z scores, summed, and the results standardized. The resulting SES composite had a Cronbach alpha of .87.

**Unemployment rate.** The annual unemployment rate for each state in 2003, 2004, and 2005 based on data compiled by the Bureau of Labor Statistics of the U.S. Department of Labor was provided by Infoplease (2020). The mean for each state over the three years served as the unemployment rate in the present study.

**Religiosity.** The percent in each state except Alaska and Hawaii who indicated no religious affiliation in Gallup polls conducted with 62,744 respondents in the period 2000 to 2004 were provided by Jones (2004). The mean of 9.1 for the other 48 states was substituted as a value for Alaska and Hawaii.

**Neuroticism.** Based on the responses of 619,397 residents to the 44-item Big Five Inventory (John & Srivastava, 1999) administered online between December of 1999 and January of 2005, Rentfrow et al. (2008) produced neuroticism z scores for each of the 50 states and the District of Columbia. Neuroticism had a test-retest correlation of .86 based on two temporal subsamples. It also had a mean inter-subsample correlation of .85 based on three random subsamples. State-level and individual-level factor structure for neuroticism showed a congruence coefficient of .95. In later research, Rentfrow, Gosling, et al. (2013) show that these state neuroticism scores also correlate highly ( $r = .88$ ) with those of a composite of five other surveys conducted during the period from 1999 to 2010. Such state personality scores have maintained temporal stability and shown consistent relations with various sociodemographic variables between 1999 and 2015 (Elleman, Condon, et al., 2018). These standardized state-level scores have been used successfully in various other studies (e.g., McCann 2019; Pesta et al., 2012; Rentfrow et al., 2009). McCann (2017) also found that these state-level neuroticism scores were robustly related to state FV rates.

**Trust.** The Social Capital Project (2018) provided the percent in each state “who trust most or all of their neighbors” based on responses in the 2013 Civic Engagement Supplement to the Current Population Survey, a joint effort of the US Census Bureau and the US Bureau of Labor Statistics. The codebook (Current Population Survey, 2013) states that the following question was asked: “We’d like to know how much you trust people in your neighborhood. Generally speaking, would you say that you can trust all the people, most of the people, some of the people, or none of the people in your

neighborhood?” Staff members of the U.S. Census Bureau conducted interviews with civilians 18 years and older in approximately 54,000 households from November 17 to 23, 2013.

### Analytic strategy

Pearson correlation and sequential multiple regression analysis were utilized to determine the nomothetic relations between RED and FV rates, and the potential of trust to account for any relations between RED and FV rates. In the first part of the main analysis, a multiple regression equation was computed for each of the following 15 FV rate criteria: overall, White, non-White, male, female, married, unmarried, highest FV age, lowest FV age, and each of the six age categories. In each regression equation, control variables were entered through forward stepwise selection on the first step, and Diversity 5 and White population percent were selected stepwise on the second step. With the overall FV rate as the criterion, the stepwise pool of control variables included SES, unemployment rate, religiosity, neuroticism, White minus non-White FV rate, female minus male FV rate, married minus unmarried FV rate, and highest minus lowest age category FV rate. For each of the other 14 FV rate criteria, the associated *difference* control variable was excluded from the pool. For example, the White minus non-White variable was not included as a control with the White or the non-White FV rate as the criterion, and the highest minus lowest age category FV rate variable was not included as a control with the high age or the age 16 to 24 FV rate as the criterion.

In the second part of the main analysis, multiple regression equations were used to determine relations between each of the 15 FV rate criteria and RED without and with the statistical control of trust. With each of the 15 FV rates in turn employed as the criterion and using Diversity 5 as the measure of RED, one regression equation was computed with only Diversity 5 as the predictor and a second regression equation was computed with trust forced to enter the equation before Diversity 5.

It is critical to note that the sample and the population are identical in in this study. Therefore, from a logical standpoint, *sample to population* inferential errors in the present research should not be a concern. Nevertheless, probability (*p*) values with two-tailed tests and an alpha level of .05 were used to draw conclusions and to reach decisions in the analytical procedures. They also are provided as “benchmarks” so that there are opportunities to make comparisons to hypothetical samples of the same size drawn randomly from a larger population. However, given the isometric nature of the sample and the population, it is apparent that confidence intervals would be entirely misleading and inappropriate in this context.

## RESULTS

Table 1 displays the means, standard deviations, and Pearson correlations for the 26 variables in the main analyses. Diversity 5 significantly correlated with each of the 15 FV rate criterion variables, with correlations ranging from  $-.42$  for the White rate to  $-.62$  for the high age rate. Similarly, White population percent correlated with each of the 15, with correlations ranging from  $.37$  for the White rate to  $.60$  for the high age rate. The extremely similar level of correlation of Diversity 5 and White population percent with the 15 FV rate criteria is not surprising, given the correlation of  $-.93$  between the two RED measures. As well, all 15 FV rate variables significantly correlated with each other to a remarkably high degree.

For the first part of the main analysis, Table 2 shows the results of 15 multiple regression equations determining the predictive capacity of Diversity 5 and White population percent in relation to the 15 different FV rate criteria while utilizing statistical controls. For example, in Equation 1 with the overall FV rate as the criterion, the female minus male rate entered first and accounted for 39.6% of the variance,  $F(1, 48) = 31.53, p < .001$ . The married minus unmarried rate entered second and accounted for a further 17.9%,  $F(1, 47) = 19.89, p < .001$ . Neuroticism entered third and accounted for another 9.0%,  $F(1, 46) = 12.34, p < .001$ . Diversity 5 entered fourth and accounted for a final increment of 11.4%,  $F(1, 46) = 12.34, p < .001$ . The standardized regression coefficient ( $\beta$ ) was significant for neuroticism ( $-.46$ ), Diversity 5 ( $-.42$ ), female minus male FV rate ( $.25$ ), and married minus unmarried FV rate ( $.22$ ).

Relatively similar patterns of relation were found for the other 14 FV rate criteria. Diversity 5 always surfaced as an independent predictor with a negative  $\beta$  sign. White population percent never emerged as an independent predictor. Neuroticism also was an independent predictor with a negative  $\beta$  sign in all equations except with the age 35 to 44 FV rate in which it did not emerge as a significant independent predictor. Curiously, *only* neuroticism and Diversity 5 predicted non-White FV rates.

Regarding control variables, SES was a positive predictor in one equation and unemployment rate was a positive predictor in one equation. Religiosity never surfaced as an independent predictor. When in the predictor pool, the White minus non-White FV rate variable was an independent predictor with a positive  $\beta$  sign in 15.4% of the equations (i.e., Equation 5 and 6). When in the predictor pool, the female minus male FV rate variable was an independent predictor with a positive  $\beta$  sign in 53.8% of the equations (i.e., Equation 1, 2, 7, 8, 12, 13, and 14). When in the predictor pool, the married minus unmarried FV rate variable was an independent predictor with a positive  $\beta$  sign in 61.5% of the equations (i.e., Equation 1, 2, 4, 8, 12, 13, 14, and 15). Finally, when in the predictor pool, the high age minus low age FV rate variable never emerged as an independent predictor.

For the second part of the main analysis, Table 3 displays the results of multiple regression equations showing the impact of trust on the relations of state RED to the 15 state FV rate variables. With each of the 15 FV rates in turn employed as the criterion and using Diversity 5 as the measure of RED, one regression equation was computed with only Diversity 5 as the predictor and a second was computed with trust forced to enter the equation before Diversity 5. The results show the potent capacity of trust to displace the predictive power of RED in relation to each of the 15 FV rate variables. Trust alone accounted for between 32.2% and 65.2% of the variance in the 15 FV rate criteria. Without trust in the equation, the variance accounted for by Diversity 5 ranged from 17.7% to 39.0%. However, with trust in the equation, Diversity 5 failed to account for significant variance in any of the 15 FV rate variables, with the nonsignificant increment in variance attributable to Diversity 5 ranging from .0% to 1.6%. It is apparent that the relations between state RED and state FV rate for each of the 15 FV rate criteria are fully accounted for by trust.

Table 1  
Means, standard deviations, and Pearson correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Diversity 5													
2. White population per cent	-.93***												
3. Overall FV rate	-.57***	.56***											
4. White FV rate	-.42**	.37**	.95***										
5. Non-White FV rate	-.43**	.38**	.71***	.66***									
6. Male FV rate	-.56***	.54***	.99***	.94***	.73***								
7. Female FV rate	-.58***	.56***	.99***	.95***	.69***	.97***							
8. Married FV rate	-.58***	.57***	.99***	.95***	.67***	.98***	.98***						
9. Unmarried FV rate	-.53***	.51***	.97***	.92***	.75***	.96***	.97***	.94***					
10. High age FV rate	-.62***	.60***	.97***	.92***	.65***	.95***	.97***	.97***	.93***				
11. Low age FV rate	-.53***	.53***	.93***	.86***	.75***	.92***	.92***	.90***	.92***	.87***			
12. Age 16 to 24 FV rate	-.52***	.50***	.92***	.89***	.74***	.92***	.91***	.89***	.92***	.86***	.92***		
13. Age 25 to 34 FV rate	-.47***	.41**	.89***	.87***	.68***	.89***	.88***	.88***	.86***	.84***	.82***	.80***	
14. Age 35 to 44 FV rate	-.63***	.59***	.95***	.91***	.66***	.94***	.95***	.96***	.92***	.99***	.87***	.86***	.84***
15. Age 45 to 54 FV rate	-.55***	.55***	.96***	.91***	.64***	.94***	.95***	.95***	.93***	.93***	.82***	.85***	.80***
16. Age 55 to 64 FV rate	-.53***	.53***	.94***	.89***	.62***	.93***	.94***	.94***	.91***	.90***	.86***	.81***	.79***
17. Age 65 and over FV rate	-.48***	.48***	.92***	.87***	.61***	.92***	.91***	.92***	.88***	.86***	.91***	.82***	.76***
18. SES	-.01	.16	.37**	.38**	.23	.35*	.37**	.35*	.40**	.34*	.28	.36*	.09
19. Unemployment rate	.20	-.18	-.20	-.23	.03	-.19	-.20	-.22	-.12	-.18	-.03	-.11	-.05
20. Religiosity	-.02	.09	.08	-.03	.23	.10	.08	.04	.13	.03	.20	.15	.07
21. Neuroticism	-.11	.08	-.54***	-.57***	-.33*	-.55***	-.53***	-.52***	-.53***	-.46***	-.53***	-.48***	-.52***
22. White-non-White FV rate	-.16	.15	.62***	.73***	-.03	.59***	.63***	.66***	.54***	.63***	.46***	.51***	.54***
23. Female-male FV rate	-.42**	.42**	.63***	.61***	.32*	.52***	.71***	.63***	.63***	.66***	.55***	.51***	.52***
24. Married-unmarried FV rate	-.44***	.45***	.62***	.62***	.23	.62***	.61***	.72***	.43**	.67***	.50***	.47***	.56***
25. High-low age FV rate	-.36**	.32*	.40**	.42**	.07	.37**	.42**	.46***	.33*	.56***	.08	.19	.32*
26. Trust	-.67***	.61***	.79***	.76***	.57***	.78***	.79***	.79***	.78***	.79***	.72***	.71***	.65***
Means	.00	74.53	31.07	32.70	22.77	27.11	34.79	36.46	24.64	37.42	24.83	25.96	28.32
Standard deviations	1.00	15.17	6.05	5.97	4.10	5.53	6.71	6.55	5.03	6.69	5.57	5.58	6.07



Variable	14	15	16	17	18	19	20	21	22.	23	24	25	26.
15. Age 45 to 54 FV rate	.90***												
16. Age 55 to 64 FV rate	.87***	.90***											
17. Age 65 and over FV rate	.83***	.85***	.90***										
18. SES	.32*	.45***	.37**	.33*									
19. Unemployment rate	-.13	-.29*	-.26	-.23	-.37**								
20. Religiosity	.05	.06	.11	.02	.31*	.07							
21. Neuroticism	-.42**	-.49***	-.61***	-.58***	-.24	.16	-.29*						
22. White-non-White FV rate	.61***	.63***	.61***	.59***	.29*	-.34*	-.17	-.46***					
23. Female-male FV rate	.64***	.63***	.59***	.56***	.28*	-.17	-.02	-.28*	.52***				
24. Married-unmarried FV rate	.65***	.59***	.61***	.62***	.11	-.32*	-.17	-.29*	.62***	.36**			
25. High-low age FV rate	.54***	.50***	.38**	.22	.22	-.35*	-.28*	-.03	.50***	.41**	.51***		
26. Trust	.78***	.77***	.81***	.70***	.36**	-.26	.09	-.30*	.50***	.51***	.49***	.39**	
Means	36.91	34.90	32.39	26.69	.00	5.20	9.06	.01	9.93	7.68	11.82	12.58	60.10
Standard deviations	6.71	6.95	6.74	7.04	1.00	.98	3.19	1.01	4.48	1.91	2.56	3.32	8.45

**Table 2**  
**Sequential stepwise multiple regression equations demonstrating the relation of RED to the 15 State FV rate criteria utilising statistical controls**

Equation	FV rate	Step	Predictor pool	Predictors	df	R <sup>2</sup> (change)	F	Significant independent predictors	b	t
1	Overall	1	Full <sup>a</sup>	Female-male FV rate	1, 48	.396	31.53***	Neuroticism	-.46	-5.71***
				Married-unmarried FV rate	1, 47	.179	19.89***	Diversity 5	-.42	-4.81***
		2	Diversity 5 White population percent	Neuroticism	1, 46	.090	12.34***	Female-male FV rate	.25	2.97**
				Diversity 5	1, 45	.114	23.17***	Married-unmarried FV rate	.22	2.55*
2	White	1	Partial <sup>b</sup>	Married-unmarried FV rate	1, 48	.386	30.15***	Neuroticism	-.43	-4.59***
				Female-male FV rate	1, 47	.172	18.33***	Married-unmarried FV rate	.30	3.02**
		2	Diversity 5 White population percent	Neuroticism	1, 46	.113	15.85***	Female-male FV rate	.30	3.05**
				Diversity 5	1, 45	.029	4.30*	Diversity 5	-.21	-2.07*
3	Non-White	1	Partial <sup>b</sup>	Neuroticism	1, 48	.108	5.78*	Diversity 5	-.48	-3.95***
		2	Diversity 5 White population percent	Diversity 5	1, 47	.223	15.64***	Neuroticism	-.38	-3.16**
4	Male	1	Partial <sup>c</sup>	Married-unmarried FV rate	1, 48	.385	30.04***	Diversity 5	-.50	-5.98***
				Neuroticism	1, 47	.152	15.49***	Neuroticism	-.49	-6.11***
		2	Diversity 5 White population percent	SES	1, 46	.041	4.49*	Married-unmarried FV rate	.24	2.71**
				Diversity 5	1, 45	.187	35.78***	SES	.20	2.71**
5	Female	1	Partial <sup>c</sup>	White-non-White FV rate	1, 48	.402	32.22***	Diversity 5	-.55	-6.65***
				Married-unmarried FV rate	1, 47	.081	7.34**	Neuroticism	-.43	-5.29***
		2	Diversity 5 White population percent	Neuroticism	1, 46	.073	7.61**	White-non-White FV rate	.31	3.17**
				Diversity 5	1, 45	.220	44.15***			
6	Married	1	Partial <sup>d</sup>	White-non-White FV rate	1, 48	.431	36.37***	Diversity 5	-.51	-6.63***
				Female-male FV rate	1, 47	.109	11.16**	Neuroticism	-.38	-4.85***

		2	Diversity 5 White population percent	Neuroticism Diversity 5	1, 46 1, 45	.050 .203	5.59* 43.99***	White-non-White FV rate	.32	3.76***
7	Unmarried	1	Partial <sup>d</sup>	Female-male FV rate Neuroticism	1, 48 1, 47	.395 .134	31.38*** 13.36***	Neuroticism Diversity 5	-.49 -.46	-5.58*** -4.91***
		2	Diversity 5 White population percent	Diversity 5	1, 46	.162	24.09***	Female-male FV rate	.30	3.10**
8	High age	1	Partial <sup>e</sup>	Married-unmarried FV rate	1, 48	.442	38.00***	Diversity 5	-.42	-4.85***
				Female-male FV rate Neuroticism	1, 47 1, 46	.201 .037	26.42*** 5.31*	Neuroticism Female-male FV rate	-.34 .29	-4.36*** 3.57***
		2	Diversity 5 White population percent	Diversity 5	1, 45	.110	23.55***	Married-unmarried FV rate	.28	3.37**
9	Low age	1	Partial <sup>e</sup>	Female-male FV rate Neuroticism Married-unmarried FV rate	1, 48 1, 47 1, 46	.303 .151 .059	20.90*** 13.00*** 5.56*	Neuroticism Diversity 5 Unemployment rate	-.54 -.51 .26	-5.84*** -5.04*** 3.02**
		2	Diversity 5 White population percent	Unemployment rate Diversity 5	1, 45 1, 44	.044 .162	4.44* 25.35***			
10	Age 16 to 24	1	Partial <sup>e</sup>	Female-male FV rate Neuroticism Married-unmarried FV rate	1, 48 1, 47 1, 46	.264 .119 .055	17.25*** 9.04*** 4.54*	Diversity 5 Neuroticism	-.47 -.46	-3.87*** -4.18***
		2	Diversity 5 White population percent	Diversity 5	1, 45	.140	14.98***			
11	Age 25 to 34	1	Partial <sup>e</sup>	Married-unmarried FV rate Neuroticism Female-male FV rate	1, 48 1, 47 1, 46	.308 .141 .074	21.34*** 11.98*** 7.15**	Neuroticism Diversity 5	-.45 -.36	-4.20*** -3.04**
		2	Diversity 5 White population percent	Diversity 5	1, 45	.081	9.21**			

12	Age 35 to 44	1	Partial <sup>e</sup>	Married-unmarried FV rate	1, 48	.420	34.71***	Female-male FV rate	.38	3.97***
				Female-male FV rate	1, 47	.188	22.46***	Married-unmarried FV rate	.38	3.92***
		2	Diversity 5 White population percent	Diversity 5	1, 46	.066	9.29**	Diversity 5	-.30	-3.05**
13	Age 45 to 54	1	Partial <sup>e</sup>	Female-male FV rate	1, 48	.397	31.56***	Diversity 5	-.40	-4.33***
				Married-unmarried FV rate	1, 47	.153	15.93***	Neuroticism	-.34	-4.05***
				SES	1, 46	.080	9.89**	SES	.28	3.67***
		2	Diversity 5 White population percent	Neuroticism	1, 45	.039	5.36*	Female-male FV rate	.21	2.42*
				Diversity 5	1, 44	.099	18.72***	Married-unmarried FV rate	.21	2.39*
14	Age 55 to 64	1	Partial <sup>e</sup>	White-non-White FV rate	1, 48	.377	29.07***	Neuroticism	-.55	-6.99***
				Neuroticism	1, 47	.136	13.18***	Diversity 5	-.42	-4.85***
				Female-male FV rate	1, 46	.091	10.56**	Married-unmarried FV rate	.20	2.40*
				Married-unmarried FV rate	1, 45	.076	10.70**	Female-male FV rate	.20	2.42*
		2	Diversity 5	White-non-White FV rate	1, 45	-.001	.10			
				Diversity 5	1, 45	.110	23.56***			
15	Age 65 and over	1	Partial <sup>e</sup>	Married-unmarried FV rate	1, 48	.385	30.00***	Neuroticism	-.49	-5.39***
				Neuroticism	1, 47	.177	18.92***	Diversity 5	-.34	-3.43***
				Female-male FV rate	1, 46	.076	9.58**	Married-unmarried FV rate	.26	2.72**
		2	Diversity 5 White population percent	Diversity 5	1, 45	.075	11.77***			

<sup>a</sup>The full pool for stepwise selection included SES, unemployment rate, religiosity, neuroticism, White-non-White volunteer rate, female-male volunteer rate, married-unmarried volunteer rate, and high-low age volunteer rate.

<sup>b</sup>This pool excludes White-non-White volunteer rate from the full pool.

<sup>c</sup>This pool excludes female-male volunteer rate from the full pool.

<sup>d</sup>This pool excludes married-unmarried volunteer rate from the full pool.

<sup>e</sup>This pool excludes high-low age volunteer rate from the full pool.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . All two-tailed tests

**Table 3**  
**Sequential multiple regressions demonstrating the impact of trust on the relation of RED to the 15 State FV rate criteria**

Equation	FV rate	Step	Entry method	Predictors	df	R <sup>2</sup> (change)	F	b	t
1	Overall	1	forced	Diversity 5	1, 48	.327	23.33***	-.57	-4.83***
2		1	forced	Trust	1, 48	.624	79.68***	.74	6.16***
		2	forced	Diversity 5	1, 47	.003	.43	-.08	-.65
3	White	1	forced	Diversity 5	1, 48	.177	10.34**	-.42	-3.22**
4		1	forced	Trust	1, 48	.583	66.99***	.87	7.00***
		2	forced	Diversity 5	1, 47	.015	1.71	.16	1.31
5	Non-White	1	forced	Diversity 5	1, 48	.188	11.14**	-.43	-3.34**
6		1	forced	Trust	1, 48	.322	22.80***	.50	3.12**
		2	forced	Diversity 5	1, 47	.005	.37	-.10	-.61
7	Male	1	forced	Diversity 5	1, 48	.308	21.41***	-.56	-4.63***
8		1	forced	Trust	1, 48	.610	75.18***	.74	6.07***
		2	forced	Diversity 5	1, 47	.002	.23	-.06	-.48
9	Female	1	forced	Diversity 5	1, 48	.331	23.70***	-.58	-4.87***
10		1	forced	Trust	1, 48	.619	78.02***	.73	6.04***
		2	forced	Diversity 5	1, 47	.004	.53	-.09	-.73
11	Married	1	forced	Diversity 5	1, 48	.336	24.29***	-.58	-4.93***
12		1	forced	Trust	1, 48	.620	78.44***	.72	6.03***
		2	forced	Diversity 5	1, 47	.005	.62	-.10	-.79
13	Unmarried	1	forced	Diversity 5	1, 48	.279	18.62***	-.53	-4.32***
14		1	forced	Trust	1, 48	.601	72.16***	.76	6.15***
		2	forced	Diversity 5	1, 47	.000	.02	-.02	-.15
15	High age	1	forced	Diversity 5	1, 48	.388	30.42***	-.62	-5.52***
16		1	forced	Trust	1, 48	.622	78.91***	.67	5.70***
		2	forced	Diversity 5	1, 47	.016	2.12	-.17	-1.46
17	Low age	1	forced	Diversity 5	1, 48	.284	19.07***	-.53	-4.37***
18		1	forced	Trust	1, 48	.513	50.50***	.65	4.77***
		2	forced	Diversity 5	1, 47	.005	.51	-.10	-.72
19	Age 16 to 24	1	forced	Diversity 5	1, 48	.269	17.62***	-.52	-4.20***
20		1	forced	Trust	1, 48	.505	48.89***	.66	4.78***
		2	forced	Diversity 5	1, 47	.003	.32	-.08	-.56
21	Age 25 to 34	1	forced	Diversity 5	1, 48	.222	13.69***	-.47	-3.70***
22		1	forced	Trust	1, 48	.417	34.35***	.60	4.00***
		2	forced	Diversity 5	1, 47	.003	.22	-.07	-.47
23	Age 35 to 44	1	forced	Diversity 5	1, 48	.390	30.74***	-.63	-5.54***

24		1	forced	Trust	1, 48	.603	72.80***	.65	5.38***
		2	forced	Diversity 5	1, 47	.020	2.50	-.19	-1.58
25	Age 45 to 54	1	forced	Diversity 5	1, 48	.297	20.26***	-.55	-4.50***
26		1	forced	Trust	1, 48	.591	69.40***	.73	5.85***
		2	forced	Diversity 5	1, 47	.002	.19	-.06	-.44
27	Age 55 to 64	1	forced	Diversity 5	1, 48	.277	18.43***	-.53	-4.29***
28		1	forced	Trust	1, 48	.652	89.93***	.82	7.12***
		2	forced	Diversity 5	1, 47	.000	.05	.03	.22
29	Age 65 and over	1	forced	Diversity 5	1, 48	.232	14.49***	-.48	-3.81***
30		1	forced	Trust	1, 48	.489	45.87***	.68	4.86***
		2	forced	Diversity 5	1, 47	.000	.03	-.03	-.18

## DISCUSSION

The research results reported here clearly and consistently show that higher state levels of RED are associated with lower state FV rates. The research demonstrates that these relations occur with total, White, non-White, male, female, married, unmarried, and age-group FV rates as the criterion. The results also indicate that having higher trust of neighbours is associated with higher FV rates and with lower RED. Furthermore, controlling for the degree of trust of neighbours can account wholly for the link between RED and all 15 types of state FV rates tested. The study determined too that the relations between RED and FV rates persist when state levels of SES, neuroticism, religiosity, unemployment rate, White versus non-White FV rates, male versus female FV rates, married versus unmarried FV rates, and high FV rate age versus low FV rate age are considered as statistical controls.

As articulated earlier, lower levels of RED are conducive to higher levels of trust, and trust is conducive to higher levels of FV (e.g., Nesbit et al., 2020; Putnam, 2000, 2007; Rotolo & Wilson 2012). Research in several contexts also has demonstrated a positive relation between homophily and trust (e.g., Ahlf, Horak, et al. 2019; Evans & Wensley, 2009; Kim, 2015). It is speculated that trust of “neighbours” that is created and fostered in areas of heightened homophily is the prime operative factor that underlies the association between homophily and FV rates, and ultimately between RED and FV. Where there are foundations for interpersonal trust, there is likely to be greater opportunity for shared purpose, cooperation, a desire to engage in FV, and a desire to enlist others as volunteers.

The speculation is that these state-level relations are grounded in corresponding individual-level relations. According to the geographical psychology approach (e.g., Rentfrow et al., 2008), a locale’s aggregate position on an individual difference variable reflects the standing of the locale’s residents and is associated with the prevalence in that locale of the tendencies linked to that individual difference variable. However, ample empirical evidence at both levels is a prerequisite for firm endorsement of such parallel relations and their underlying dynamics. Otherwise, such generalization risks falling victim to the ecological fallacy (Robinson, 1950) or the compositional fallacy (Pettigrew, 1997), the former when it is *assumed* that aggregate-level results transfer to the individual level and the latter when it is *assumed* that individual-level results transfer to the aggregate level. The demonstration of parallel aggregate and individual relations is critical when it is speculated that the aggregate-level relations reflect, are embedded in, and stem from the connections at the individual level.

Unfortunately, there are no available individual-level studies that offer direct and comprehensive corroboration for the present findings. That is, no existing studies congruently mirror the present variables, analyses, and results in their entirety. However, there is at least some nomothetic individual-level evidence that trust relates positively to homophily (e.g., Ahlf et al., 2019) and FV (e.g., Miranti & Evans, 2019), that homophily relates positively to FV (e.g., Wiertz, 2016), and that RED relates negatively to trust (e.g., Putnam, 2007), homophily (e.g., Bacharach, Bamberger, et al., 2005), and FV (e.g., Putnam, 2007). Therefore, there does appear to be enough extant evidence to support the plausibility of the current explanatory speculations.

The present postulation regarding the psychological mechanisms underlying the supposition that RED leads to lower trust of neighbours draws heavily on the recent work of Dinesen et al. (2020). Briefly described, at root are principles based on mere exposure and homophily. Higher levels of RED raise the probability of mere exposure to those who are racially and ethnically different. Dinesen et al. (2020) have stated that “proximity to interethnic others is an important facilitating condition that accentuates the negative relationship between ethnic diversity and social trust” (p.461). Pervasive public and social media accounts of information pertaining to RED also would appear to have strong impacts by making RED much more visible, seemingly more local, and of more immediate concern. It is inferred that those who are members of a different racial or ethnic group are likely to have different values, attitudes, beliefs, and behaviours which are not conducive to the establishment or maintenance of trust of “neighbours” defined rather broadly, while trust tends to bloom when there is a perception of similarity which “is an indicator of shared norms and other behaviour-regulating features relevant for trust” (Dinesen et al., 2020, p. 444).

The brief speculation here concerning psychological mechanisms involved in the supposition that trust of neighbours promotes greater FV revolves around social interaction and cooperation. Lower trust tends to reduce levels of community social contact (Putnam, 2007) and cooperation (Gächter, Herrmann, et al., 2004), and trust, social interaction, and cooperation are integral aspects of most FV activities. As well, the opportunity for social interaction is considered a prime motivation to volunteer (e.g., Nesbit et al., 2020). Therefore, when trust, social interaction, and cooperation are low, links between elevated RED and attendant diminished trust is likely to lead to less FV.

Among the control variables, the results of the present study also underline the importance of neuroticism as a prime predictor of state FV rates. Pearson correlations between neuroticism and the 15 FV rate variables all were significant ranging from  $-.33$  to  $-.61$  and a mean of  $.51$ . Neuroticism also was included as a significant independent predictor in 14 of the 15 corresponding multiple regression equations, the only exception occurring for age 35 to 44 FV rates. Earlier research by McCann (2017) found that state resident neuroticism was a potent predictor of overall, secular, religious, college student, and senior FV rates, and, that relations between state FV rates and social capital, well-being, collectivism, political preference, and population density could be largely accounted for by state resident neuroticism. McCann speculated that dispositional characteristics of those higher on the neuroticism dimension tend to give rise to social anxiety that decreases the chances of engaging in FV (also see MacDougall & McCann, 2020).

### Limitations and issues

One issue likely to arise for some readers concerns the operational definitions of state RED used in the present research. The two RED measures—Diversity 5 and White population percent—correlated to an extreme degree with a Pearson correlation of  $-.93$ . Because of this high multicollinearity, only the RED variable with the highest predictive capacity could emerge in the multiple regression equations, and this was consistently Diversity 5. Such a high correlation between RED and White population percent strongly suggests that the two diversity measures are interchangeable in the present analytical context. Nevertheless, the issue remains as to whether the relations between Diversity 5 and FV rates are occurring simply because of state differences in White population percent, which also is a pivotal constituent in the computation of Diversity 5.

As well, some readers might have concerns about the *novel* nature of the Diversity 5 index. However, Diversity 5 produces relative state levels of RED in line with other “diversity” assessments. For example, in economics it is common to use the Herfindahl-Hirschman Index (HHI) to operationalize concepts such as market share (Rhoades, 1993). The HHI is simply the sum of the squares of the constituents comprising a set. A lower HHI value indicates higher dispersion among constituents. When the HHI was computed using state White, Black, Hispanic, Asian, and “Other” population using the present study percentages, the resulting HHI variable correlated  $-.98$  with Diversity 5. However, Diversity 5 seems more intuitive and meaningful in the present context of RED.

Another potential limitation is that the racial-ethnic categories were collapsed to simply White or non-White in the present research. The CNCS (2006) database provides separate state FV rates for Whites, Blacks, Hispanics, Asians, and Others. However, complete racial-ethnic data for volunteering were available for only 22 states. For example, in Vermont where there are very few Blacks, Hispanics, or Asians, no volunteering rates for these specific groups are included in the CNCS report. These omissions precluded more finely grained analyses regarding other racial-ethnic groups.

Questions might arise too about the nature of the “trust” variable. In their meta-analysis of research on ethnic diversity and social trust, Dinesen et al. (2020) argue that trust of neighbours is particularly useful when ethnic diversity is researched in “geographically bounded ... residential contexts” which include aggregates such as “municipalities, metropolitan areas, regions, and countries” (p. 443) and implicitly, states. Dinesen et al. found that the relation to ethnic diversity was stronger for neighbour trust than for general trust of others and concluded that “a negative relationship between ethnic diversity and trust in neighbors is one of the most consistent findings in the literature” (p. 452).



Other researchers have used different operationalizations in their research on the relation of ethnic diversity to trust. For example, Uslaner (2000) distinguishes between generalized and particularized trust: “Generalized trust is the belief that most people can be trusted. Particularized trust is faith only in your own kind. Strangers are suspect and are presumed not to be trustworthy” (p. 573). Those who are high on generalized trust are more likely to engage in wide-ranging civic activities such as FV (Uslaner & Conley, 2003).

Dinesen et al. (2020) suggest that “a plausible interpretation of the stronger relationship between ethnic diversity and trust in neighbors than for generalized social trust is that exposure to ethnically dissimilar others is a stronger and more directly relevant cue for trust in neighbors than for trust in other people in general” (p. 452). Dinesen et al. see proximity to racial/ethnic outgroups as accentuator of the negative relation between diversity and trust, and it should be added that modern media depictions also seem likely to make racial/ethnic diversity even more salient and local as a factor influencing such judgements of trust. To Dinesen et al., more “local” racial/ethnic exposure “implies a larger dose of negative cues regarding the trustworthiness of others in general” (p. 445). Therefore, although there are alternatives, the use of the trust-of-neighbours variable seems preferable and quite defensible in the present FV research context.

Some readers also might be concerned that the “trust” variable is based on 2013 data while the present study focused on 2004. Of course, it would have been tidier to have used 2004 data. However, it was assumed that the percent in each state “who trust most or all of their neighbors” was unlikely to show much relative change over the intervening years. Furthermore, this less than temporally perfect variable did produce strong evidence supporting the current general hypothesis.

The present research centred on 2003–2005 and some might harbour reservations about the current relevance of the results. However, a previously unreported supplementary analysis conducted with 2012–2015 data strongly replicated a key aspect of the present study. FV rates were based on pooled data from 2012 to 2015 (Americorps, 2021), RED was based on the mean of 2012 and 2015 data (KFF 2020), and trust was based on the 2013 measure. The supplementary analysis tested only the state overall FV rate as the criterion. In the first equation, Diversity 5 accounted for 27.3% of the variance in overall FV rates and the  $b$  was  $-.52$ . In the second equation, trust accounted for 63.6% of the FV rate variance, the additional variance accounted for by Diversity 5 was 00.0%, and the  $b$  was  $.80$  for trust. In many ways, the 2016 to 2021 period has been rather turbulent. RED has increased appreciably at least in some states and there is more emphasis on diversity and inclusion. However, it is not at clear why we should expect the *nomothetic relations* found for 2003–2005 and 2012–2015 to not apply to a meaningful degree in 2021.

Cross-cultural generalization regarding the present findings must be approached with caution. The four studies were conducted in a predominantly White national population context characterised by strong individualism where FV is traditionally established and remains relatively common (e.g., Kemmelmeier, Jambor, et al., 2006). Dinesen and Sanderskov (2018) suggested that in the US “high levels of ethnic diversity paired with an idiosyncratic pattern of adverse race and ethnic relations has formed a national backdrop particularly conducive to conflictual local interactions eroding social trust” (p. 7) and noted that relations between trust and RED in other Western nations tends to be weaker. Based partially on the work of Helbling et al., (2015) which showed such a relation only in countries relatively preoccupied with immigration issues, Dinesen and Sanderskov also suggested “that political elites and their rhetoric play a role in connecting citizens’ experiences with diversity to their perception of the generalized other” (p. 8).

According to conventional standards, the current sample size was low for multiple regression. A less than optimal case-to-predictor ratio introduces a degree of instability in the predictors that emerge and the size of their regression coefficients. However, such inferential concerns should be minimized regarding the present investigation because the 50 states served as both the sample and the population. Therefore, from a strictly logical standpoint, statistical inferences from the sample to the population are not necessary or appropriate. Such strategies with similar sized samples often have been used successfully (e.g., Barber, 2015; McCann, 2008; Simonton, 2006).

Finally, the usual warnings regarding correlation and causal inference apply. Clearly, FV rates do not cause the assessed differences in RED and trust, but the existence of any untested third variable that could satisfactorily explain the relation between RED and FV rates is unknown. However, given the eradicating powers of trust, finding a more effective substitute to account for the relations between RED and FV rates seems highly improbable.

### **Potential applied implications**

Researchers have recognised that generic campaigns to encourage FV have limited success in areas with higher RED because different racial-ethnic groups have different attitudes, norms, and motivations regarding FV (e.g., Musick, Wilson, et al., 2000; Randle & Dolnicar, 2009, 2012; Sundeen, Garcia, et al., 2009). Others have provided helpful guidance regarding recruitment strategies for engaging members of specific racial-ethnic populations in FV (e.g., Johnson & Lee, 2017; MAVA, 2020; Tang, Copeland, et al., 2012). However, such strategies fail to address certain fundamental aspects of the current results pattern effectively. That is, they usually concentrate on the characteristics of the racial-ethnic minority categories in isolation rather than as embedded in a RED complex wherein the whole might be more than the sum of its parts. The speculation in the present report suggests that FV recruitment policies and strategies instituted to counter the dynamics of homophily might foster greater FV rates among all racial-ethnic subpopulations.

Although based on correlational evidence, the present finding that trust of neighbours can fully account for the relation between state-level RED and FV rates suggests another more indirect tack for increasing rates of FV. If there is any underlying *causal* connection between trust and serving as a volunteer, it might be speculated that any strategy with the capacity to enhance interpersonal trust, especially trust of neighbours in the broad sense, has the potential to increase FV. Consequently, policies and programs as well as mass media efforts aimed at promoting interpersonal trust might serve as catalysts for engaging in FV.

Applied implications in this context also come with qualifications. Dinesen et al. (2020) believe that “the question of the potential negative consequences of ethnic diversity for social trust is arguably the most contentious question in the literature on social trust” (p. 441) because of its effects on social cohesion. However, Baldassarri and Abascal (2020) have warned that the enhancement qualities of prosocial behavior such as volunteering are not likely to occur in more heterogeneous societies unless such prosocial behavior is freed from exclusive networks and effectively crosses racial-ethnic boundaries. They have stressed too that such processes and outcomes also depend upon existing minority positions in the social, economic, institutional, and political context, and the attendant opportunities provided in that milieu. The creators of any future policies and programs to increase volunteering, if they are to be fruitful, should be acutely aware of the details of these qualifications.

### **Future research**

There are many opportunities for further empirical inquiry. For example, what is the relation of the FV rates of specific minority groups to the overall level of RED and to the level of diversity among other racial-ethnic groups? What is the relation of RED to trust and FV rates for specific minority groups? What is the precise independent role of social capital, which usually includes FV as a constituent, in the relation of RED to trust and FV rates? As well, any research with individuals as the analytical units using similar variables could further bolster the speculation resulting from the present studies at the state level of aggregation that the relations between RED, trust, and FV are grounded in relational dynamics occurring at the individual level.

One beneficial avenue of future state-level research would be to examine the role of specific racial-ethnic differences in volunteering rates and trust of neighbours in the relations found here between RED, trust, and FV. The U.S. Bureau of Labor Statistics (2016) reported that the 2015 national FV rates were 26.4% for Whites, 19.3% for Blacks, 17.9% for Asians, and 15.5% for Hispanics. Gao (2016) found

that in 2015 the percent of Americans saying that they trust all or most of their neighbours was 62% for Whites, 31% for Blacks, and 27% for Hispanics.

The present speculation *suggests* that racial-ethnic diversity fosters distrust and that such distrust in turn decreases the tendency to engage in FV. Theoretically, such conjecture casts trust as a *mediator*. However, according to substantial methodological research (e.g., Fairchild & McDaniel, 2017; O'Laughlin, Martin, et al., 2018; Shrout, 2011), mediation assumes causation and temporal sequence, which cannot be inferred from the current cross-sectional correlation-based research. Therefore, appropriately designed experimental and longitudinal studies permitting such formal mediation analysis are encouraged to demonstrate the potential direct and indirect effects of RED on FV with trust as a mediator.

Ideally, research using large-scale multilevel modelling procedures (e.g., Hox & Roberts, 2010) could ascertain the extent to which state-level relations mirror and are dependent on individual-level relations. Such research would require that individual-level data on a large representative sample of residents in each state on each of the relevant variables be procured. The present state-level data did not offer such an opportunity.

### CONCLUSION

The present study is the first to demonstrate comprehensively that higher state-level RED is consistently associated with lower total, White, non-White, male, female, married, unmarried, and different age group state FV rates. Furthermore, it has been shown that trust of neighbours can fully account for these associations. From a basic research perspective, the novel nature of this research and its robust findings advance our understanding of the relations between RED, trust, and FV, particularly at the state level. It also suggests the merit of future parallel analyses with individuals as analytical units, which could benefit further integration and elaboration of relevant dynamics at the state and individual levels. From an applied perspective, the present results suggest new paths of policy and practice that could lead to heightened levels of FV. For example, tailoring approaches based on state characteristics regarding RED and levels of FV, and focusing on ways to create and strengthen trust, are suggestions stemming from the current research that could eventually elevate sagging volunteering rates. FV can be viewed as an essential contributor to the solidarity of democracies that reflects societal values such as altruism, compassion, social responsibility, generosity, and sense of community (Hustinx et al., 2010). Given the gravity of the expression of these fundamental values, it is important to encourage higher levels of FV among all racial-ethnic subpopulations.

Putnam (2007) was acutely aware of the profound issues surrounding RED but also optimistic about our capacity to overcome those challenges. He stated that “the task of becoming comfortable with diversity will not be easy or quick, but it will be speeded by our collective efforts and in the end well worth the effort.” He added that “one great achievement of human civilization is our ability to redraw more inclusive lines of social identity” (p. 165). It seems evident that heightened engagement in FV has the potential to enhance the social identity and well-being of the members of any racial-ethnic subpopulation and to promote the bonds of a more inclusive national identity.

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