RESEARCH FINDINGS SUMMARY

Discrimination and Inflammation in African-American Youths

Foundations of Health Research Center

QUICK SUMMARY

Low-grade inflammation forecasts many chronic diseases of aging. It can be measured by levels of cytokines in our bodies. Finding factors that correlate with inflammation in African-American youths may help us better understand racial health disparities. In this study, our researchers determined whether racial discrimination experienced at ages 17-19 years is associated with elevated cytokine levels at the age of 22 years. We also tested whether this relationship would be less apparent in youths who report positive racial identities (i.e., embrace membership in their racial group).

WHAT IS THE RESEARCH ABOUT?

Previous studies have shown that African-Americans experience chronic diseases of aging earlier in life with more severe symptoms and consequences, compared to other racial groups. Earlier in life, African-American youths are more likely to have obesity, high blood pressure, and insulin resistance, compared to youths of other racial groups. There are many contributors to health disparities. One important factor may be psychosocial stressors, such as racial discrimination that may increase African-Americans' vulnerability to poor health. Conversely, some studies have shown that positive racial identities (feeling positively about one's racial group and about the importance of belonging to this group) in African-American youths can lessen the negative effects of discrimination on depressive symptoms and behavior problems.

WHAT DID WE DO?

A total of 160 youths were recruited from six different rural counties. Youths were 17 years old when they first enrolled in the study. They answered self-report questionnaires that provided information about racial identity and perceived racial discrimination. Several years later, when youths were aged 22 years, blood samples were collected to measure inflammation.

WHAT DID WE FIND?

The results of this study show that (1) perceived racial discrimination is associated with higher cytokine levels several years later in African-American youths; (2) positive racial identity is associated with lower cytokine levels; (3) among youths with a positive racial identity, racial discrimination was no longer related to cytokine levels.

WHAT SHOULD YOU REMEMBER?

These findings tell us that perceived racial discrimination can act as a chronic social-environmental stressor that relates to biological processes that are important for health among youth of color. In addition, a positive racial identity may serve as a buffer, helping to protect youth of color from the effects of discrimination on inflammation.

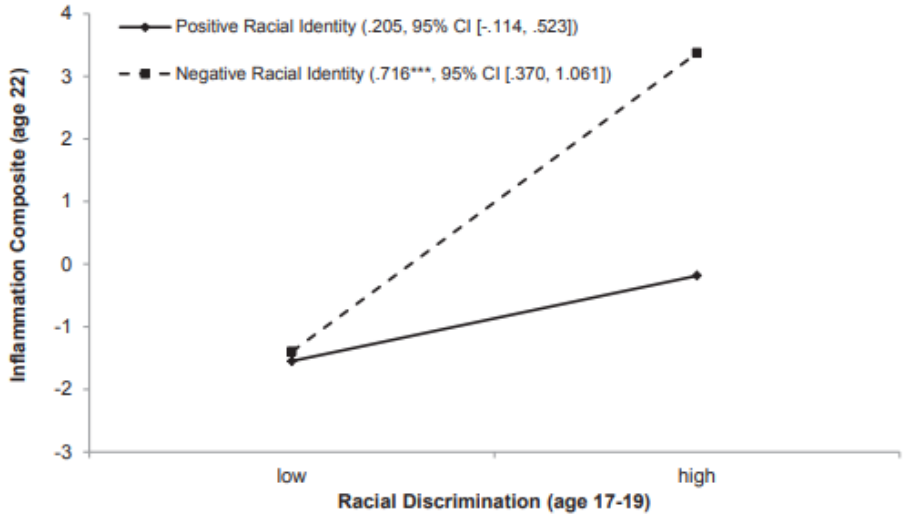

Figure 1. Youths' inflammation at the age of 22 years as a function of perceived racial discrimination and protective racial identity at ages 17–19 years with gender, intervention status, family SES index, life stress, and depressive symptoms at ages 17–19 years and BMI at the age of 22 years controlled, presented as regression lines for different levels of racial identity (positive, 1 SD above the mean; negative, 1 SD below the mean). Numbers in parentheses refer to simple slopes with 95% confidence intervals. ***$p < .001$.

PUBLICATIONS

1. Brody, G. H., Yu, T., Miller, G. E., Chen, E (2015). Discrimination, Racial Identity, and Cytokine Levels Among African-American Adolescents. Journal of Adolescent Health, 56(5), 496-501. doi: 10.1016/j.jadohealth.2015.01.017. https://foundationsofhealth.org/wp-content/uploads/2016/09/J-Ad-Health-2015-1rdaeay.pdf

ABOUT THIS SUMMARY

This summary was prepared by Hee Moon on behalf of the Foundations of Health Research Center at Northwestern University. You can access all of our research for free at our website, www.foundationsofhealth.org/publications.