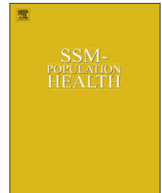
SSM - Population Health 5 (2018) 227–238

Contents lists available at ScienceDirect

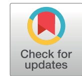
SSM - Population Health

journal homepage: www.elsevier.com/locate/ssmph



Article

Perceived neighborhood disorder, racial-ethnic discrimination and leading risk factors for chronic disease among women: California Behavioral Risk Factor Surveillance System, 2013



Jesse J. Plascak[a,*], Bernadette Hohl[a], Wendy E. Barrington[b], Shirley AA Beresford[c]

[a] Department of Epidemiology, School of Public Health, Rutgers University, Piscataway, NJ, USA
[b] Department of Psychosocial and Community Health, School of Nursing, University of Washington, Seattle, WA, USA
[c] Department of Epidemiology, School of Public Health, University of Washington, Seattle, WA, USA

ARTICLE INFO

Keywords:
Perceived neighborhood disorder
Discrimination
Tobacco smoking
Alcohol consumption
Physical activity

ABSTRACT

Social environmental factors are theoretically identified as influential drivers of health behaviors – tobacco smoking, alcohol consumption, and physical activity – related to chronic disease disparities. Empirical studies investigating relationships involving social environmental factors have found that either greater interpersonal racial-ethnic discrimination or perceived neighborhood disorder were associated with adverse health behaviors, with potentially larger effects among women. We simultaneously tested whether measures of perceived racial-ethnic discrimination and perceived neighborhood disorder were associated with physical activity, alcohol consumption and tobacco smoking; lifestyle risk factors of major chronic disease among women. Data were from the 2013 California Behavioral Risk Factor Surveillance System. In addition to demographic and socioeconomic factors, women self-reported experiences with racial-ethnic discrimination and perception of neighborhood disorder (i.e., crime safety, traffic safety, and aesthetics/physical disorder). Survey-, and inverse probability of censoring-weighted regression models of each chronic disease risk factor were used to investigate associations involving racial-ethnic discrimination and neighborhood disorder, controlling for potential confounders. Perceiving racial-ethnic discrimination and greater neighborhood disorder were associated with a greater tobacco smoking prevalence. Experiences of racial-ethnic discrimination were associated with greater alcohol consumption among African American and Latino women, but not White women. Similarly, African American women reporting experiences with racial-ethnic discrimination report engaging in physical activity about half as much time as women reporting no racial-ethnic discrimination. Increases in perceived neighborhood disorder were associated with increases in alcohol consumption. All associations with social environmental factors were adjusted for potential confounders and each other. Neighborhood disorder and racial-ethnic discrimination may be important, independent contributors to chronic disease risk through relationships with tobacco smoking, alcohol consumption, and physical activity.

Introduction

According to the Global Burden of Disease Study 2015, 88.8% of all U.S. deaths and 89.6% of years lived with disability (YLD) were attributable to non-communicable disease; 64.7% of deaths and 15.6% of YLD resulted from cancer, cardiovascular disease, diabetes mellitus or chronic obstructive pulmonary disease (i.e., preventable chronic diseases with common risk factors) (Vos, Barber, Bell, Bertozzi-Villa, Biryukov & Bolliger, 2015; Wang, Naghavi, Allen, Barber, Bhutta & Carter, 2016). Shared risk factors among the leading and preventable chronic diseases include tobacco use, excessive alcohol use and physical inactivity (Forouzanfar, Alexander, Anderson, Bachman, Biryukov & Brauer, 2015). Despite changing trends, 2015 estimates of risk factor prevalence among U.S. adults remained high –51.0% physically inactive, 15.1% smoked tobacco, and 23.4% reported at least one heavy alcohol consumption day (≥ 4 drinks for women, ≥ 5 drinks for men) in the previous year (Ward, Clarke, Nugent & Schiller, 2016). Identifying common and modifiable mechanisms associated with these risk

* Correspondence to: Department of Epidemiology School of Public Health Rutgers, The State University of New Jersey, 683 Hoes Lane West, Room 209, Piscataway, NJ 08854, USA.

E-mail addresses: jesse.plascak@rutgers.edu (J.J. Plascak), bch59@sph.rutgers.edu (B. Hohl), wendybar@uw.edu (W.E. Barrington), beresfrd@uw.edu (S.A. Beresford).

https://doi.org/10.1016/j.ssmph.2018.07.001
Received 21 March 2018; Received in revised form 1 June 2018; Accepted 8 July 2018
2352-8273/ © 2018 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/BY-NC-ND/4.0/).

factors could motivate public health interventions aiming at reducing chronic disease burden.

Recently, increased attention has focused on the social and physical environmental factors affecting an individual's health opportunities and decisions (Bailey, Krieger, Agnor, Graves, Linos & Bassett, 2017; Cooper, Arriola, Haardrfer & McBride, 2016; Pratt, Perez, Goenka, Brownson, Bauman & Sarmiento, 2015). Recognizing that various contexts are important to explaining patterns of population health and health behaviors is not new (Cornely, 1956). However, identifying *modifiable* social and physical environmental factors that influence health and health choices is gaining attention as progress to intervene on increasing trends of certain chronic disease risk factors has slowed and financial costs risen (Bailey, et al., 2017; Pratt, et al., 2015). In contrast to individually focused behavioral interventions such as counseling and education, efforts that focus on social and physical contexts are suggested to be more effective based on their wider reach and potential for sustainability. (Adler, Cutler, Jonathan, Galea, Glymour & Koh, 2016; Frieden, 2010; Gottlieb, Glymour, Kersten, Taing, Hagan & Vlahov, 2016).

Neighborhood disorder (physical deterioration/disorganization or lack of social control) and racial-ethnic discrimination are potentially influential social environmental factors that are linked to health behaviors and outcomes (Bécares, 2014; Chen & Yang, 2014; Ross & Mirowsky, 2001). Neighborhood disorder potentially results from institutional forms of racial-ethnic discrimination, such as housing and mortgage-lending discrimination (Powell, Slater, Chaloupka & Harper, 2006; Rugh, et al., 2015). Evidence from studies of the early 21st Century subprime lending and foreclosure crisis suggest racialized patterns of subprime lending, foreclosure, and real-estate-owned (REO) homes (Howell, 2006; Kim & Cho, 2016; Rugh, 2015; Rugh, et al., 2015). Due to these race- and ethnicity-based patterns of home mortgage lending and REO, African American and Latino families lost disproportionate amounts of wealth during the most recent economic downturn (Rugh, et al., 2015; Rugh, 2015). Evidence suggests that REO homes, which are concentrated in neighborhoods with a disproportionate percentage of African American or Latino residents due to de facto racial-ethnic residential segregation, are less well maintained than surrounding, owner-occupied homes (Dane, et al., 2013). Thus, these forms of institutional discrimination are important factors in the creation of adverse neighborhood characteristics (i.e., reduced socioeconomic resources, health-related access, and increased racial-ethnic segregation). These adverse neighborhood characteristics, in turn, influence interpersonal racial-ethnic discrimination and might also feed back into neighborhood disorder (Bécares, 2014; Osypuk, Roux, Hadley & Kandula, 2009; Sampson, et al., 1997; Sampson & Raudenbush, 2004). A nascent body of literature suggests that perceptions of neighborhood disorder systematically vary based on intrapersonal characteristics, including demographic, socioeconomic, and experiential factors (Brunton-Smith, 2011; Franzini, Caughy, Nettles & O'Campo, 2008; Hipp, 2010). Despite these systematic differences through which individuals perceived neighborhood disorder, previous research has demonstrated correlations between neighborhood disorder that is measured objectively and through perceptions.

While several studies have reported associations involving either greater perceived racial-ethnic discrimination or neighborhood disorder and increased prevalence of major risk factors for chronic disease (Borrell, Kiefe, Diez-Roux, Williams & Gordon-Larsen, 2013; Chavez, Ornelas, Lyles & Williams, 2015; Chen & Yang, 2014; Echeverra, Diez-Roux, Shea, Borrell & Jackson, 2008; Hunte, 2011; Osypuk, et al., 2009), none have jointly tested the relationships between racial-ethnic discrimination and neighborhood disorder on health behaviors. Given the theoretical and empirical evidence indicating a potential relationship between perceived racial-ethnic discrimination and perceived neighborhood disorder, simultaneous investigation of the associations of both factors and health is important for motivating interventions. Moreover, evidence suggests that relationships between social environmental factors, especially those involving perceived neighborhood disorder, and health related factors or outcomes might vary by sex, necessitating sex-specific analyses (Bennett, McNeill, Wolin, Duncan, Puleo & Emmons, 2007; Boehmer, Hoehner, Deshpande, Ramirez & Brownson, 2007; Unger, Diez-Roux, Lloyd-Jones, Mujahid, Nettleton & Bertoni, 2014).

The purpose of this study was to simultaneously investigate relationships between perceived racial-ethnic discrimination, neighborhood disorder and prevalence of common and shared risk factors of several chronic diseases among women. These risk factors include: weekly aerobic physical activity duration, past month alcohol consumption and current tobacco smoking. We hypothesized that, independent of one another, increased perceived neighborhood disorder and perceived racial-ethnic discrimination would be associated with increased prevalence of each chronic disease risk factor. As relationships between racial-ethnic discrimination and health might be different by race and ethnicity (Krieger, Smith, Naishadham, Hartman & Barbeau, 2005), we also hypothesized that the associations of perceived racial-ethnic discrimination on each chronic disease risk factor would be greater among African American and Latina compared to non-Latina White women.

Materials and Methods

Data

Data were self-reported from the California 2013 Behavioral Risk Factor Surveillance System Survey (BRFSS). The California survey is part of the US BRFSS –the world's largest ongoing public health survey (Centers for Disease Control and Prevention, (CDC), 2012). The telephone-administered survey became dual framed in California in 2012 to include cell phone users in addition to landline (Ryan-Ibarra, Inundi, Zuniga & Ewing, 2013). Since 2011, US and California BRFSS were weighted using iterative proportional fitting to account for potential biases due to non-response and non-coverage and allow generalizations to the target populations (Centers for Disease Control and Prevention, (CDC), 2012; Ryan-Ibarra, et al., 2013). Iterative proportional fitting is a weighting procedure considered superior to the previously used method of post-stratification because the latter required knowledge of demographic distributions within small geographic areas while the newer procedure does not require this information (Centers for Disease Control and Prevention, (CDC), 2012). The California data was utilized for this study because the two exposure variables of interest – perceptions of racial-ethnic discrimination and perceptions of neighborhood disorder – were unique to California BRFSS. Moreover, California is a socio-demographically diverse state with a large population. The 2013 California BRFSS response rate as calculated by using standards set by the Council of American Survey Research Organizations was 42%. (Ryan-Ibarra, et al., 2013).

Weekly aerobic physical activity duration was a variable calculated by BRFSS personnel and provided within survey responses. It is derived from a series of questions about types of non-work related physical activities, and frequency and duration of those activities. Typical minutes of weekly vigorous intensity or vigorous intensity equivalents of aerobic physical activity (hereafter, "physical activity") were then calculated from each participant's responses. Aerobic physical activity duration was limited to those reporting no more than 2520 min (42 h) per a week (n = 55, 1.7% > 2520 min per a week). Similarly, previous 30-day alcohol consumption was calculated from alcohol consumption type (beer, wine, liquor), frequency, and volume questions. Tobacco smoking was categorized as current versus former or never.

Age (integer years), race and ethnicity ('non-Latina White' ("White"), 'non-Latina Black or African American' ("African American"), or 'Latina/Hispanic'), marital status ('married/unmarried couple' and 'divorced, widowed, separated or never married'), educational attainment ('less than high school diploma', 'high school diploma

Download English Version:

https://daneshyari.com/en/article/7528034

Download Persian Version:

https://daneshyari.com/article/7528034

Daneshyari.com