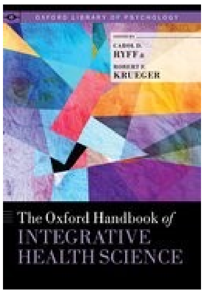

The Oxford Handbook of Integrative Health Science
Carol D. Ryff (ed.), Robert F. Krueger (ed.)

https://doi.org/10.1093/oxfordhb/9780190676384.001.0001
Published: 2018 **Online ISBN:** 9780190676407 **Print ISBN:** 9780190676384

Search in this book

CHAPTER

13 Family as a Naturally Occurring Stressor: Race, Psychosocial Factors, and Daily Health

Kelly E. Cichy, Jeong Eun Lee

https://doi.org/10.1093/oxfordhb/9780190676384.013.11 Pages 173–190
Published: 09 October 2018

Abstract

Racial disparities in health are substantial and well documented. Differential exposure and reactivity to psychological stressors provide one way through which African Americans' health is disadvantaged. Although supportive family networks buffer African Americans from the harmful effects of stressors, a growing body of work emphasizes the physical and psychological costs associated with African Americans' family ties. This chapter summarizes research on racial disparities in health and well-being and illustrates the advantages of daily diary methods for examining links between race, psychosocial stressors, and daily health by describing Midlife in the United States (MIDUS) research on racial differences in the health implications of stressful experiences involving family relationships. Together, findings provide insights into how and when family stressors and social support demands compromise African Americans' health and well-being. The chapter concludes with a discussion of the broader implications of the MIDUS findings and directions for future research on race and health.

Keywords: health, African Americans, family, well-being, daily diary methods, race, psychosocial stressors, MIDUS, racial differences, social support

Subject: Health Psychology, Psychology

Series: Oxford Library of Psychology

Collection: Oxford Handbooks Online

Introduction

In this chapter, we address four goals in order to describe the links between race, psychosocial stressors, and daily health and well-being. First, we review prior findings on racial disparities in health and well-being, while noting the race paradox in mental health. Second, we provide an overview of differential stress exposure and make the case for the value of daily diary methods to capture within-person processes of reactivity to daily stressors commonly experienced by African Americans, including racial discrimination and family strains. Third, we provide empirical examples from our research program to illustrate how stressful aspects of family relationships (e.g., stressful events, social support demands) are stratified by race. Finally, we offer a conclusion and future directions.

Overview of Prior Findings on Racial Disparities in Health

Racial disparities in health and well-being between African Americans and European Americans are substantial and well documented (Williams, 2005; Williams & Earl, 2007). Even after controlling for socioeconomic status (SES), African Americans remain at increased risk of morbidity and mortality for most of the leading causes of death, including heart disease, cancer, stroke, and diabetes (Farmer & Ferraro, 2005; Kung, Hoyert, Xu, & Murphy, 2008; Williams & Jackson, 2005; Williams & Mohammed, 2009) and report lower quality of life (Hu, 2007; Skarupski et al., 2007). Compared to European Americans, African Americans also experience accelerated physiological aging (Fuller-Rowell, Doan, & Eccles, 2012; p. 174 Geronimus, ↳ Bound, Waidmann, Colen, & Steffick, 2001; Warren-Findlow, 2006) and greater dysregulation in the functioning of the hypothalamic–pituitary–adrenocortical (HPA) axis (Cohen et al., 2006).

Compared to racial disparities in physical health, studies of mental health are more challenging to interpret. Research reveals a race paradox in mental health, where despite greater stressor exposure, prevalence rates for mental health disorders are lower among African Americans (Keyes, 2009). In comparison, racial differences in psychological well-being (PWB) remain equivocal. Using data from the Midlife in the United States (MIDUS) study, Ryff, Keyes, and Hughes (2003) found that minority status was associated with higher PWB, whereas other studies suggested African Americans experience lower PWB (Hughes & Thomas, 1998; Williams & Harris-Reid, 1999), higher levels of psychological distress (Williams & Mohammed, 2009), and more severe, persistent, and debilitating depression when it does occur (Breslau et al., 2006). These discrepancies exist at all income levels (Kessler, Mickelson, & Williams, 1999), highlighting the need to consider the contribution of other factors, such as psychosocial stressors, to racial health disparities.

Race, Psychosocial Stressors, and Daily Health

There are several pathways through which stress may contribute to the health disadvantages of African Americans. Differential exposure and reactivity to stressors is one way through which African Americans' health may be compromised (Kessler et al., 1999; Pearlin, Schieman, Fazio, & Meersman, 2005; Williams & Mohammed, 2009). Further, the experience of stressors may lead to negative coping mechanisms, such as smoking, drinking alcohol, or emotional eating (Boardman & Alexander, 2011; Jackson, Knight, & Rafferty, 2010; Mezuk et al., 2010). Prior stress research has focused on African Americans' disproportionate exposure to chronic stressors, such as discrimination, economic and relationships strains, residential segregation, and stressful life events (Mouzon, 2013; Mujahid, Diez Roux, Cooper, Shea, & Williams, 2011; Murry, Brown, Brody, Cutrona, Simons, 2001). By definition, stress is a process that occurs within the individual when an individual encounters a challenging or disruptive event (i.e., stressor exposure) and evinces a reaction to the event (i.e., stressor reactivity).

Daily diary methods provide the opportunity to capture these within-person processes, making it possible to examine day-to-day fluctuations in associations between naturally occurring stressful experiences and health and well-being within the same individual over time (Almeida, 2005; Bolger, Davis, & Rafaeli, 2003). Daily approaches also alleviate memory distortions and have the advantage of capturing life as it is lived (Bolger et al., 2003). Through the use of a daily diary paradigm, it is possible to examine the immediate health implications of daily stressful experiences.

For example, research reveals robust associations between chronic exposure to racial discrimination and a host of adverse psychological and physical health outcomes (Brondolo, Rieppi, Kelly, & Gerin, 2003; Landrine, Klonoff, Corral, Fernandez, & Roesch, 2006; Ryff et al., 2003). In efforts to identify the potential mechanisms that underlie these associations, research has utilized daily diary assessments to examine how African Americans' everyday experiences with racial discrimination compromise daily health and well-being (Burrow & Ong, 2010; Ong, Fuller-Rowell, & Burrow, 2009; Sellers & Shelton, 2003; Swim, Hyers, Cohen, Fitzgerald, & Bylsma, 2003) and increase their risk for engaging in unhealthy behaviors, such as smoking or alcohol use (Bennett, Wolin, Robinson, Fowler, & Edwards, 2005; Martin, Tuch, & Roman, 2003; O'Hara, Armeli, Scott, Covault, & Tennen, 2015).

Moreover, research reveals stronger and more negative effects from subtle racial encounters, termed *microaggressions* (Sue et al., 2007), than from blatant encounters with discrimination (Bennett et al., 2005; Merritt, Bennett, Williams, Edwards, & Sollers, 2006; Stetler, Chen, & Miller, 2006), highlighting the importance of capturing naturally occurring daily discrimination encounters. These microaggressions are often ambiguous, and in many cases the perpetrator may be unaware of his or her behavior (Sue et al., 2007); however, microaggressions have been linked to a variety of poor health and mental health outcomes (Hoggard, Byrd, & Sellers, 2015; Seaton & Douglass, 2014). Daily diary methods provide a means for individuals to report experiences with microaggressions as they occur before they are forgotten or reframed, providing a more accurate measure of respondents' immediate behavioral responses to these encounters on the day that they occur (Burrow & Ong, 2010; Ong et al., 2009; Sellers & Shelton, 2003; Swim et al., 2003).

p. 175

Race and the Daily Family Stress Model

In the same way that daily diary studies have shed light on the health consequences of naturally occurring discrimination experiences (Burrow & Ong, 2010; Ong et al., 2009), daily diary approaches have promise for capturing another ubiquitous source of stress: family relationships. In our program of research, we explore racial differences in proximal processes, such as reactivity to naturally occurring family stressors, as a first step toward understanding how stressful family experiences have consequences for distal outcomes, such as racial health disparities (Bolger et al., 2003; Williams & Mohammed, 2009). *Daily family stressors* are defined as the routine challenges and frustrations of day-to-day family life that disrupt family relationships that are an inevitable part of daily family life, such as an argument with a spouse or a child's illness. Therefore, in the remainder of this chapter, we provide empirical examples grounded in the Daily Family Stress Model, an adapted version of the Daily Stress Mmodel (Almeida, 2005), which provides the conceptual framework for examining the linkages between race, family relationships, and the daily stress process (Cichy, Stawski, & Almeida, 2012, 2014). We begin by delineating the rationale behind our approach and the primary objectives addressed in our research program.

Although African Americans' extensive family networks are often cited as protective and health-enhancing resources that buffer African Americans from the harmful effects of stressors (Chatters, Taylor, Lincoln, & Schroepfer, 2002; Dilworth-Anderson, Williams, & Gibson, 2002), racial differences in the availability of family ties and quality of family relationships fail to explain the race paradox in mental health (Mouzon, 2013). The same family relationships that offer love and support are at times conflicted, demanding, and sources of worry or concern (Durden, Hill, & Angel, 2007; Lincoln, Chatters, & Taylor, 2003; Williams, 2002). Indeed, African Americans report more family strains (e.g., conflicts, social support demands) compared to European Americans (Mouzon, 2013), and African Americans' negative family interactions are associated with higher depressive symptoms (R. J. Taylor, Chae, Lincoln, & Chatters, 2015). In later life, the availability of family ties is also not necessarily protective against depression among African Americans (Mair, 2010). Together, these findings underscore the importance of considering negative aspects of African Americans' family ties.

Our investigations add to the growing body of work that has begun to examine the physical and psychological costs associated with African Americans' family ties (Belle & Doucet, 2003; R. D. Taylor, Budescu, & McGill, 2011; Warren-Findlow, Laditka, Laditka, & Thompson, 2011). Prior research suggested that the majority of African Americans' social network members are family, and that family members comprise their most trusted confidantes (Ajrouch, Antonucci, & Janevic, 2001). High levels of interdependence characterize African American families (Ajrouch et al., 2001; Everett, Hall, & Hamilton-Mason, 2010). Compared to European Americans, African Americans' romantic unions tend to be less stable and are more likely to end in divorce (Raley & Sweeney, 2009). African Americans report lower marital satisfaction, more frequent marital disagreements, and a greater emphasis on parental authority (Broman, 2005; Bulanda & Brown, 2007; Smetana & Chuang, 2001). Further, stressful experiences appear to have greater relational consequences for African Americans than for European Americans (Broman), with older African Americans also experiencing fewer age-related reductions in reactivity to interpersonal stressors (Birditt, Cichy, & Almeida, 2011).

The nature of African Americans' family ties combined with racial disparities in health, income, and chronic stressor exposure (Murry et al., 2001; Williams & Mohammed, 2009) may create a context for stressors involving family relationships to frequently arise (i.e., stressor exposure) while increasing African Americans' vulnerability to adverse outcomes when these stressors occur (i.e., stressor reactivity). Stress research emphasizes the significant role minor challenges of daily life have for health and well-being (Almeida, 2005; Bolger, DeLongis, Kessler, & Schilling, 1989; McIntyre, Korn, & Matsuo, 2008), both by disrupting functioning on the day they occur and by accumulating over time (Almeida, 2005; Bolger et al., 1989).

In Figure 13.1, we present the conceptual model that guides our investigations. In Study 1, we examined racial differences in family stressor exposure and reactivity (Cichy et al., 2012).

In this investigation, we considered stressor context in order to explore how different types of family stressors shape daily health and well-being. Specifically, we focused on *interpersonal family tensions*, which p. 176 comprise overt conflicts and avoided disagreements (Charles, Piazza, Luong, & Almeida, ↳ 2009), and *family network events*, which include stressful events that happen to a family member (e.g., sister's relationship difficulty) that elicit distress in the respondent. In Study 2, we explored racial differences in daily family support exchanges, including the extent to which family support buffers stressor reactivity (Cichy et al., 2014). Finally, in Study 3 we examined racial differences in the extent to which poor health behaviors buffer or exacerbate family stressor reactivity.

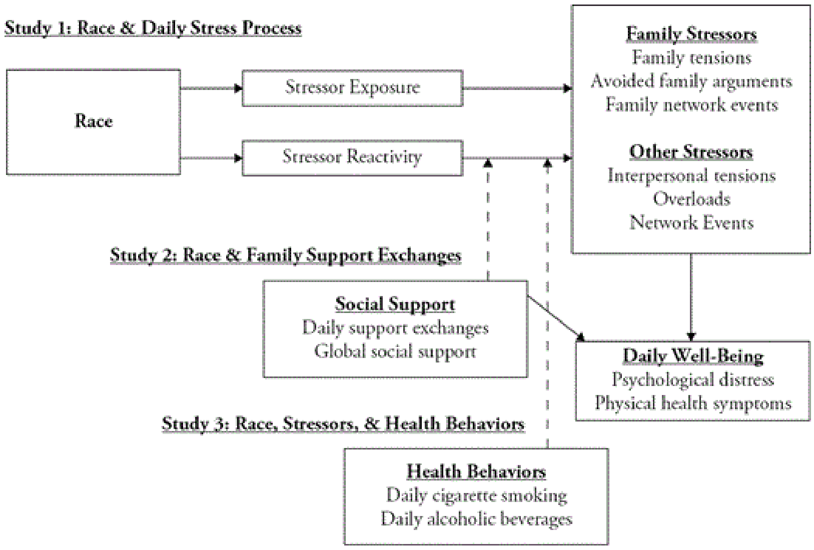

Figure 13.1 Conceptual model for race and daily family stress.

Three Studies on Race and Daily Family Stress

MIDUS Participants

Data are from the second wave of the National Study of Daily Experiences (NSDE II; Almeida, McGonagle, & King, 2009), a daily diary satellite study of the MIDUS survey (MIDUS 2; C. Ryff et al., 2004–2006). The current analyses used data from a nationally representative subsample of European American men and women aged 35–84 years (*M* [sample mean] = 56.35, *SD* [standard deviation] = 12.19) from across the United States (n = 1,703) and a subsample of African Americans from Milwaukee, Wisconsin (n = 228), a US city with among the highest rates of racial segregation (Farley & Frey 1994; Massey & Denton 1993). Sample characteristics were comparable to the general population of African Americans living in Milwaukee (US Census Bureau, 2000), and areas of Milwaukee were stratified by race and income using data from the 2000 US Census to increase socioeconomic diversity in the sample.

Table 13.1 includes sample characteristics separately by race. More than half of the sample (57.5%) were female, nearly 70% were married, and over 32% reported having a college degree. Compared with European

Americans, African Americans were younger, were less likely to have completed college, reported poorer self-rated health, and were less likely to be married.

Respondents participated in a 30-minute phone interview and completed two self-administered questionnaires. Milwaukee respondents completed in-person surveys as well as self-administered questionnaires. After completing these assessments, a random sample of respondents was recruited into NSDE 2 (Almeida et al., 2009). For eight consecutive nights, all participants completed daily telephone interviews, where they provided information about their daily experiences (e.g., family support, stressful events, affect, and physical symptoms).

Measures

Daily stressors.

The Daily Inventory of Stressful Events (DISE; Almeida, Wethington, & Kessler, 2002) was used to assess p. 177 daily stressors. In these studies, we focused on interpersonal tensions (arguments/avoided arguments) and ↳ network events, which refer to stressors that do not directly involve the respondent that still turn out to be stressful for the respondent (e.g., sister's marital difficulties). Stressors were coded dichotomously (1 = yes stressor occurred, 0 = no stressor occurred). Respondents also indicated who else was involved in the event, where family stressors referred to events that involve a child, parent, spouse/partner, grandchild, and other relatives (e.g., siblings).

Table 13.1 Descriptive Statistics on Sociodemographic Characteristics, Predictors, and Outcome Variables (N = 1,931)

	African American (n = 239), % or Mean (SD)	**European American (n = 1,696), % or Mean (SD)**
Age, mean (SD)**	54.3 (11.6)	56.6 (12.2)
Women (% female)	56.1	68
Education, mean (SD)[a]***	2.1 (0.83)	2.5 (0.81)
Income, mean (SD)[b]	2.4 (2.0)	3.8 (2.0)
Marital status (% married)[c]***	36.0	73.2
Self-rated health, mean (SD)**	3.09 (1.08)	3.64 (0.98)
Tensions each day (% of days)	22.8	21.4
Overloads each day (% of days)	4.8	5.2
Family argument (% of days)	4.7	5.5
Avoided family argument (% of days)	7.3	7.8
Family network events (% of days)	2.4	3.1
Family emotional support receipt (% of days)	4.7	5.5
Family emotional support provision (% of days)	2.4	3.1
Perceived family support[d]	3.4 (0.69)	3.5 (0.58)
Perceived family strain[d]	2.2 (0.75)	2.0 (0.58)
Number of cigarettes per day	4.3 (7.01)	3.3 (6.93)
Number of alcoholic beverages per day	0.61 (1.13)	0.64 (1.04)
Positive affect[e]	2.7 (0.83)	2.7 (0.70)
Negative affect[e]**	0.29 (0.38)	0.20 (0.25)
Number of physical symptoms	2.4 (2.5)	1.8 (1.8)

Note: Proportions do not sum to 100 due to missing data. Asterisks Indicate significant race differences.

a Education: 1 = *less than high school*; 2 = *high school diploma/some college*; 3 = *college degree*; and 4 = *graduate/professional degree*.

b Income: 0 = \$0–*\$10,000*; 1 = *\$10,001–\$20,000*; 2 = *\$20,001–\$35,000*; 3 = *\$35,001–\$50,000*; 4 = *\$50,001–\$75,000*; 5 = *\$75,001–\$100,000*; 6 = *\$100,001–\$150,000*; and 6 = *more than \$150,000*.

c Marital status: 0 = *separated/divorced/widowed/never married*; 1 = *married*.

d Family support and strain: 1 = *not at all*; 2 = *a little*; 3 = *some*; and 4 = *a lot*.

e Positive and negative affect: 0 = *none of the time*; 1 = *a little of the time*; 2 = *some of the time*; 3 = *most of the time.*

* p < .05,

** p < .01,

*** $p < .001$.

Daily family support exchanges.

Each day, respondents also indicated whether they provided emotional support to members of their family, such as listening to their problems, giving advice, or comforting them, and whether they received emotional support from members of their family. p. 178 Family support receipt and provision were coded 1 = yes support was received (provided) and 0 = no support was received (provided).

Daily negative affect.

Fourteen items from adapted versions of both the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) and the Non-Specific Psychological Distress Scale (Mroczek & Kolarz, 1998) were used to assess daily negative affect (NA; e.g., nervous, upset, angry, and frustrated). Respondents reported the frequency of experiencing these emotions using a 4-point scale from 0 (*none of the time*) to 3 (*all of the time*). We computed the average scores for each day, so that higher scores indicated greater NA.

Daily physical symptoms.

Each day, participants indicated whether they experienced 28 physical symptoms adapted from the symptom checklist by Larsen and Kasimatis (1991), such as headache, nausea, and cough. We calculated the sum of the number of symptoms so that higher scores indicated more physical symptoms.

Daily poor health behaviors.

Each day, respondents reported the number of cigarettes they smoked and the number of alcoholic beverages (e.g., bottle of beer, glass of wine, or shot of liquor) they consumed. Models for cigarette smoking exclude nonsmokers who reported smoking 0 cigarettes during the interview days, and models for drinking only include those who reported drinking any alcoholic beverages (number of drinks > 0).

Covariates.

We considered additional variables that are often associated with participants' physical and mental health as covariates: age (in years), gender, and marital status. Education was assessed based on four categories, from 1 (*less than high school*) to 4 (*graduate/professional degree*). Income, including household income from wages, pensions, Social Security, and government assistance, was also coded from 0 (*$0–$10,000*) to 6 (*more than $150,000*). Perceived family support and strain were assessed via four items with the response scale of 1 (*a lot*) to 4 (*not at all*; Schuster, Kessler, & Aseltine, 1990; Whalen & Lachman, 2000). Responses were reverse coded; higher scores reflect higher support ($\alpha = .82$) and strain ($\alpha = .80$).

Analysis Strategy

The data for these investigations were analyzed using multilevel modeling (MLM; Raudenbush & Bryk, 2002; Snijders & Bosker, 1999), which allows models to be estimated via full information maximum likelihood, making use of all available data while taking into consideration the amount of data available from each person by giving more weight to persons with complete data than those with some missing data (Rubin & Little, 2002). To test for racial differences in exposure to daily family stressors, we estimated multilevel logistic models (SAS, PROC NLMIXED), predicting daily reports of family stressors as a function of race (Study 1). To test for racial differences in stressor reactivity, including how support exchanges and poor health behaviors buffer or exacerbate reactivity, we used two-level multilevel models that included within-person (Level 1) and between-person (Level 2) effects of daily stressors (Study 1), daily support exchanges (Study 2), and daily poor health behaviors (Study 3). Family stressor reactivity models tested the extent to which daily affect and number of physical symptoms changed as a function of whether respondents reported experiencing a stressor. Our reactivity measure is an approximation that reflects the amount by which an individual's daily affect or symptoms increase or decrease on family stressor days versus days without family stressors (Sliwinski, Almeida, Smyth, & Stawski, 2009). To examine whether race moderates family stressor–related changes in NA or physical symptoms, we also considered the two-way interactions with race (i.e., Race × Family Stressor) or three-way interactions with race (i.e., Race × Stressor × Family Support; Race × Family Stressor × PHB). All models controlled for sociodemographic and psychosocial covariates. Estimates presented in the text abbreviated as "est." are the simple slopes for each racial group. Please see Cichy et al., 2012, 2014, for a more detailed description of the multilevel analyses.

Study 1 Findings: Racial Differences in Exposure and Reactivity to Family Stressors

In the first study, we examined differences in exposure and reactivity to daily family stressors between African Americans and European Americans (Cichy et al., 2012). Given prior research underscoring the importance of strong family ties and high levels of interdependence in African American families (Ajrouch et al., 2001; Everett et al., 2010), we hypothesized that compared to European Americans, African Americans would be exposed to more family stressors (Hypothesis 1) and would be more emotionally and physically
p. 179 reactive to family stressors (Hypothesis 2). We also explored the lagged effects, where the adverse effects ↳ of family stressors were expected to endure into the next day given that individuals tend to behave more negatively and make greater demands on family than they do with other network members (Sillars, Canary, & Tafoya, 2004).

We first examined the *stressor exposure* path in Figure 13.1 to determine how race plays a role in the likelihood of experiencing family stressors. Interestingly, both races reported family stressors on a small proportion of days (less than 10% for arguments, avoiding arguments, or network events). Contrary to our hypothesis, there were no significant racial differences in exposure to family stressors.

Next, we considered the *stressor reactivity* path in our conceptual model, which examines how race is associated with family stressor-related changes in daily NA and daily physical health symptoms (Almeida, 2005; Bolger & Zuckerman, 1995). Results revealed both racial similarities and differences in emotional reactivity; both African Americans and European Americans were emotionally reactive to family arguments (*est.* = 0.19, $p < .001$); avoided family arguments (*est.* = 0.08, $p < .001$); and family network events (*est.* = 0.10, $p < .01$). That is, both races reported higher NA on days when family stressors occurred. In contrast, the lagged effect or previous day's family argument on daily NA was greater for African Americans (*est.* = 0.13, $p < .001$) than for European Americans (*est.* = 0.02, $p < .05$).

Racial differences in physical reactivity to family stressors also emerged. Compared to European Americans, African Americans were more physically reactive to family arguments (*est.* = 0.64, $p < .001$), and the effect of the previous day's family argument on African Americans' physical symptoms lasted into the next day for

African Americans (*est.* = 0.30, $p < .05$), whereas the lagged effect was not significant for European Americans (*est.* = 0.04, *ns* [not statistically significant]).

In sum, our findings provided evidence for racial similarities in family stressor exposure and emotional reactivity to family stressors. For both races, NA was higher on days when family arguments occurred compared to days with no family arguments, indicating that family relationships are a universal source of stress that transcends race. As anticipated, however, African Americans were more physically reactive to family arguments, as evidenced by a greater increase in physical health symptoms on days when family arguments occurred compared to non–family argument days. Further, African Americans' physical reactivity to family stressors endured into the next day. African Americans' greater physical reactivity and prolonged reactivity suggest that the salience of family ties in African Americans' lives may contribute in part to their health disadvantage.

Study 2 Findings: Race, Family Support Exchanges, and Well-Being

In the second study, we explored racial differences in the implications of daily family support exchanges (Cichy et al., 2014). As illustrated in Figure 13.1 (Study 2), social support is hypothesized to contribute to well-being through two processes: (a) the *direct effects model,* where support is beneficial irrespective of stressor exposure (Cohen & Wills, 1985); and (b) the *buffering model*, where support is related to well-being because it protects a person from the negative influence of stressful experiences (Rook, 2003; Schuster et al., 1990). Extensive family networks, however, may act as a double-edged sword, where the same family members who provide support also make their own demands. This dual nature of social support may be particularly significant for African Americans, who may simultaneously be the recipients and providers of family support (Chatters et al., 2002; Lincoln et al., 2003). Thus, on a daily basis, African Americans may be advantaged in terms of the emotional benefits of receiving family support, whereas they may be disadvantaged in terms of the emotional costs of providing family support compared to European Americans. Providing emotional support to family may elicit negative feelings, such as sadness, concern, or anxiety about meeting the recipient's needs (Durden et al., 2007; R. D. Taylor et al., 2011).

Family support exchanges, however, may have the greatest implications for daily well-being when support exchanges co-occur with other daily stressors. Receiving social support buffers the negative effects of chronic stressors for African Americans (Dilworth-Anderson et al., 2002); however, less is known about how social support provision interacts with race to buffer or exacerbate daily stressor reactivity. African Americans often provide support to multiple family members (Chatters et al., 2002; Peek, Coward, & Peek, 2000), and many network members rely on them to listen to their problems and concerns (Durden et al., 2007; R. D. Taylor et al., 2011), which is expected to increase their vulnerability to the stress-exacerbating effects of providing family support.

p. 180 We first examined the direct effects of family support provision and family support receipt on ↳ daily well-being. As expected, after controlling for receiving family support, respondents exhibited increased NA on days they provided family support compared to days they did not provide family support, and this effect was larger for African Americans (*est.* = 0.10, $p < .001$) than for European Americans (*est.* = 0.03, $p < .001$).

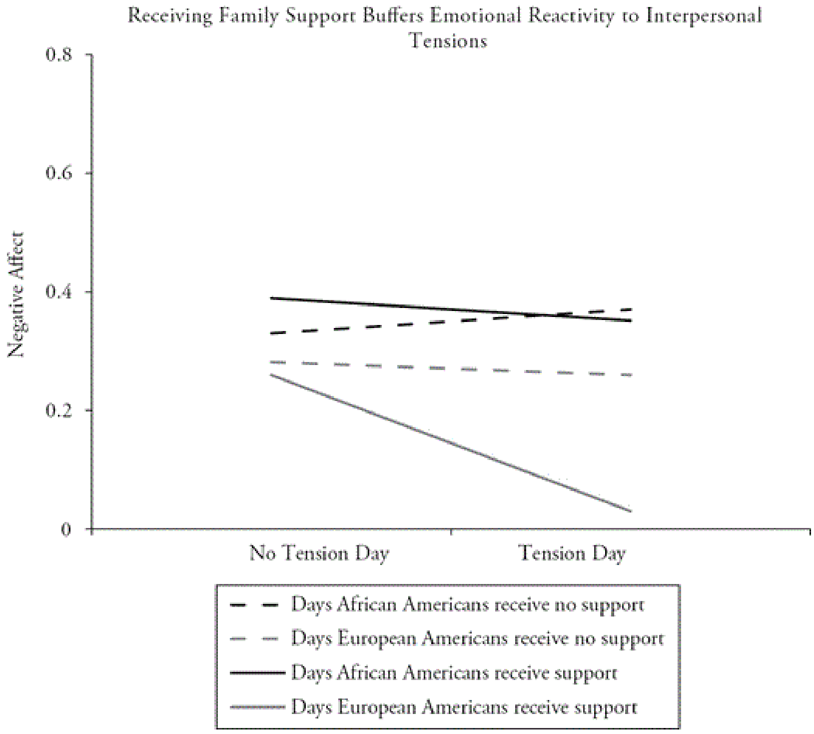

Figure 13.2 Receiving family support buffers reactivity to tensions for both races, and this buffering effect is greater for European Americans than for African Americans.

From Cichy, K. E., Stawski, R. S., & Almeida, D. M. (2014). A double-edged sword: Race, daily social support exchanges, and daily well-being. *Journal of Family Issues, 35*(13), 1824–1845.

Next, we examined the extent to which family support receipt (provision) buffered (or exacerbated) emotional reactivity to daily stressors and how these effects varied by race. Findings indicated that both European Americans and African Americans were less reactive to interpersonal tensions on days when they received family support; however, the buffering effect was much larger for European Americans (Figure 13.2). In contrast, providing family support exacerbated African Americans' reactivity to interpersonal tensions, whereas European Americans' reactivity was reduced on days they provided family support (Figure 13.3).

In summary, our findings indicated several racial differences attached to the meaning of family support. We found that provision of support exacerbated African Americans' reactivity to interpersonal tensions while dampening European Americans' emotional reactivity to tensions. Similarly, European Americans appeared to benefit more from receiving family support. Together, these findings suggest that even after considering the benefits of receiving family support, providing family support takes an emotional toll on African Americans.

Study 3 Findings: Race, Health Behaviors, and Family Stressor Reactivity

In the final study, we considered how health may be compromised when family stressors co-occur with poor health behaviors, including cigarette smoking and drinking alcohol (Figure 13.1). Specifically, we tested two competing hypotheses: (a) the *buffering hypothesis*, where PHBs are expected to mitigate the negative effects of stressors, particularly for African Americans (Boardman & Alexander, 2011; Jackson et al., 2010; Mezuk et al., 2010); and (b) the *double-jeopardy hypothesis*, where engaging in PHBs is expected to exacerbate the negative effects of stressors (Aronson, Almeida, Stawski, Klein & Kozlowski, 2008; Krueger & Chang, 2008) and for these effects to be worse among African Americans. ↳

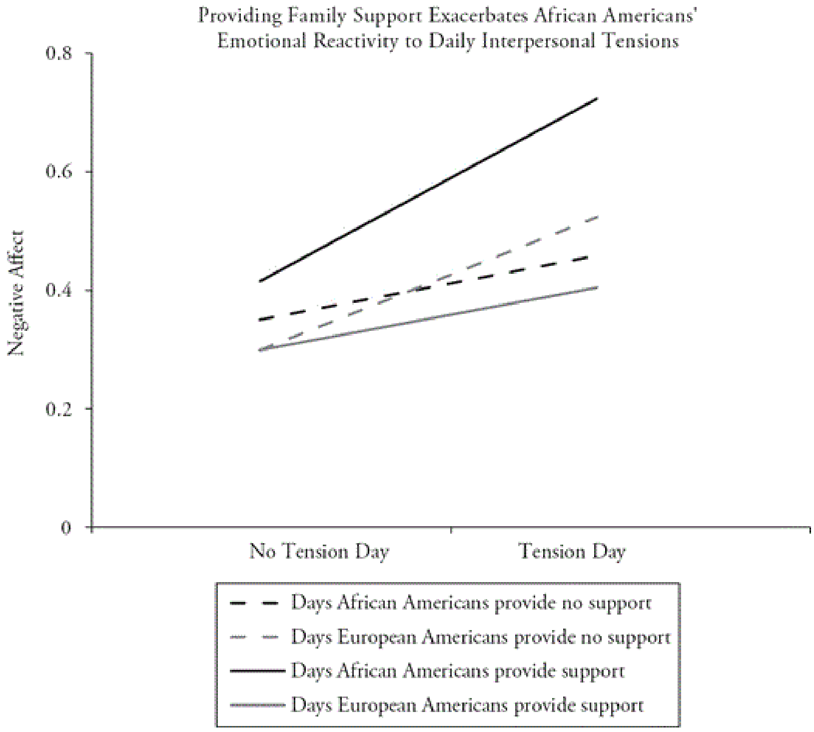

Figure 13.3 Providing family support exacerbates African Americans' emotional reactivity to daily tensions, whereas European Americans' reactivity is reduced on days they provide family support.

From Cichy, K. E., Stawski, R. S., & Almeida, D. M. (2014). A double-edged sword: Race, daily social support exchanges, and daily well-being. *Journal of Family Issues, 35*(13), 1824–1845.

Support for the buffering hypothesis emphasizes how engaging in PHB protects African Americans from poor mental health in the short term, while contributing to African Americans' increased risk of chronic disease and mortality over the long term (Boardman & Alexander, 2011; Jackson et al., 2010; Mezuk et al., 2010). Engaging in PHBs is viewed as a more environmentally accessible coping strategy, particularly for African Americans, whose daily stressors co-occur alongside other chronic stressors, such as discrimination, financial concerns, and relationship strains (Mouzon, 2013; Mujahid et al., 2011; Murry et al., 2001).

In contrast, the double-jeopardy hypothesis offers an alternative perspective, where engaging in PHBs is a deleterious coping strategy that exacerbates stressor reactivity (Aronson et al., 2008; Krueger & Chang, 2008). For example, drinking tends to reduce inhibitions, impairs decision-making, and can increase aggressiveness (Sayette & Wilson, 1991), creating the potential for additional sources of family stress to arise that may intensify rather than alleviate distress. Further, although African Americans are light smokers (<10–15 cigarettes per day), the health consequences of smoking are greater among African Americans than among other racial/ethnic groups (Moolchan et al., 2007). Also, despite lower rates of drinking, African Americans tend to experience more alcohol-related problems when they drink (Chartier & Caetano, 2010; Mulia, Ye, Greenfield, & Zemore, 2009; Zapolski, Pedersen, McCarthy, & Smith, 2014). Therefore, African Americans may be particularly vulnerable to exacerbated stressor reactivity when stressors co-occur with poor health behaviors.

To test the competing hypotheses, we conducted a series of multilevel models that included the direct effects of smoking (drinking) and daily family stressors to examine the extent to which smoking (drinking) buffered (or exacerbated) reactivity to daily family stressors. The models for cigarette smoking provided partial support for the double jeopardy hypothesis. Smoking exacerbated emotional reactivity to family arguments; however, this effect was only significant for African Americans (*est.* = 0.09, $p < .001$), not for

European Americans (*est.* = 0.00, *NS*). Results provided no evidence that smoking moderated physical
p. 182 reactivity to family stressors for either race. ↳

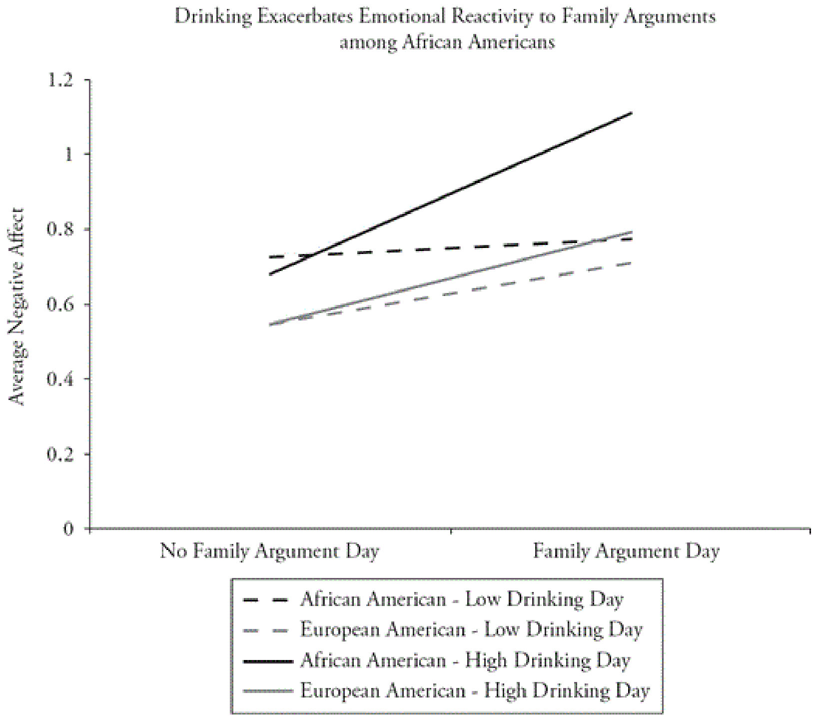

Figure 13.4 For African Americans only, drinking more than usual exacerbates emotional reactivity to family arguments. Low drinking days = 1 *SD* below the mean; high drinking days = 1 *SD* above the mean.

The models for drinking provided support for the double-jeopardy hypothesis with regard to family arguments and support for the buffering hypothesis with regard to family network events, and these effects were only significant for African Americans. Drinking exacerbated emotional reactivity to family arguments (*est.* = 0.17, $p < .001$; Figure 13.4) and physical reactivity to family arguments (*est.* = 1.27, $p < .001$; Figure 13.5), where family argument-related increases in NA and number of symptoms were greater on days when respondents drank more than usual. In comparison, drinking more than usual appeared to dampen African Americans' physical reactivity to family network events (*est.* = −1.96, $p < .001$; Figure 13.6).

In sum, this study provided support for both the double-jeopardy and buffering hypotheses. As posited by the double-jeopardy hypothesis, smoking or drinking while experiencing family arguments had a deleterious effect on daily health and well-being for African Americans. In contrast, consistent with the buffering hypothesis, drinking reduced African Americans' physical reactivity to family network events. Together, these findings suggest that engaging in poor health behaviors may contribute additional vulnerabilities to the effects of daily family stressors on African Americans' health and well-being and underscore the significance of stressor context by revealing differential associations for different types of stressful events.

Summary and Directions for Future Research

Our research program adds to a growing body of work that considers the negative aspects of African Americans' family ties (Belle & Doucet, 2003; R. D. Taylor et al., 2011; Warren-Findlow et al., 2011) by identifying *how* and *when* family stressors and strains take a unique toll on African Americans' daily health and well-being. By conceptualizing daily stressors broadly, prior research has ignored an important source of variability: the unique context of the stressful event (Almeida, 2005; McIntyre et al., 2008). Overt family arguments are clearly different sources of stress compared to network events, where something happens to a close family member that is out of the respondent's immediate control (e.g., sister's marital difficulties). Across studies, our research underscores the importance of stressor context by revealing how racial
p. 183 differences characterize the daily family stress process under some, but not all, stressful circumstances. ↳

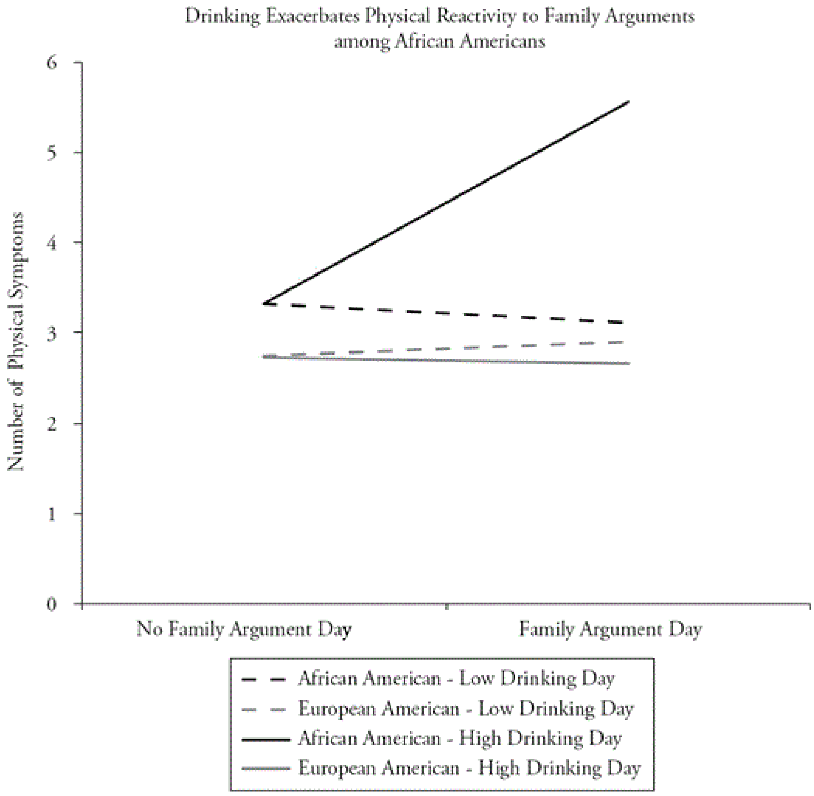

Figure 13.5 For African Americans only, drinking more than usual exacerbates physical reactivity to family arguments. Low drinking days = 1 *SD* below the mean; high drinking days = 1 *SD* above the mean.

For example, prior studies of health behaviors have often considered stressful life events across multiple domains (Boardman & Alexander, 2011; Jackson et al., 2010; Mezuk et al., 2010). Our daily diary findings begin to reconcile these disparate perspectives by shifting the focus from a wide range of relatively infrequent life events to focus on more frequently occurring, specific types of daily stressors, thus taking a more process-oriented approach to the study of how stressors and health behaviors interact to have proximal influences on health and well-being (Almeida, 2005).

Further, although findings revealed racial similarities in family stressor exposure and emotional reactivity, arguments with family, more than other family stressors, held unique implications for African Americans' physical health, as evidenced by African Americans' greater physical reactivity to family arguments and prolonged reactivity to this type of stress (Cichy et al., 2012). More important, African Americans' reactivity to family arguments, but not other family stressors, endured into the next day, suggesting that family arguments in particular take a toll on African Americans' emotional and physical health. Conceivably, the negative repercussions associated with repeated activation of the stress response (Geronimus, Hicken, Keene, & Bound, 2006) among African Americans when faced with family arguments may undermine African Americans' health, contributing in part to racial disparities in physical health (Williams, 2002; Williams & Mohammed, 2009).

Our research also revealed that African Americans are particularly vulnerable to the "costs of caring," where they experience distress not only in response to their own stressful experiences, but also in response to the problems of close others (Kessler & McLeod, 1984). Even after considering the potential benefits of receiving support, our findings indicate that providing family support compromises African Americans' daily well-being while exacerbating their reactivity to interpersonal tensions (Cichy et al., 2014), potentially due to competing demands from multiple family members that often characterize African Americans'
p. 184 family ↳ experiences (Chatters et al., 2002; Durden et al., 2007; R. D. Taylor et al., 2011).

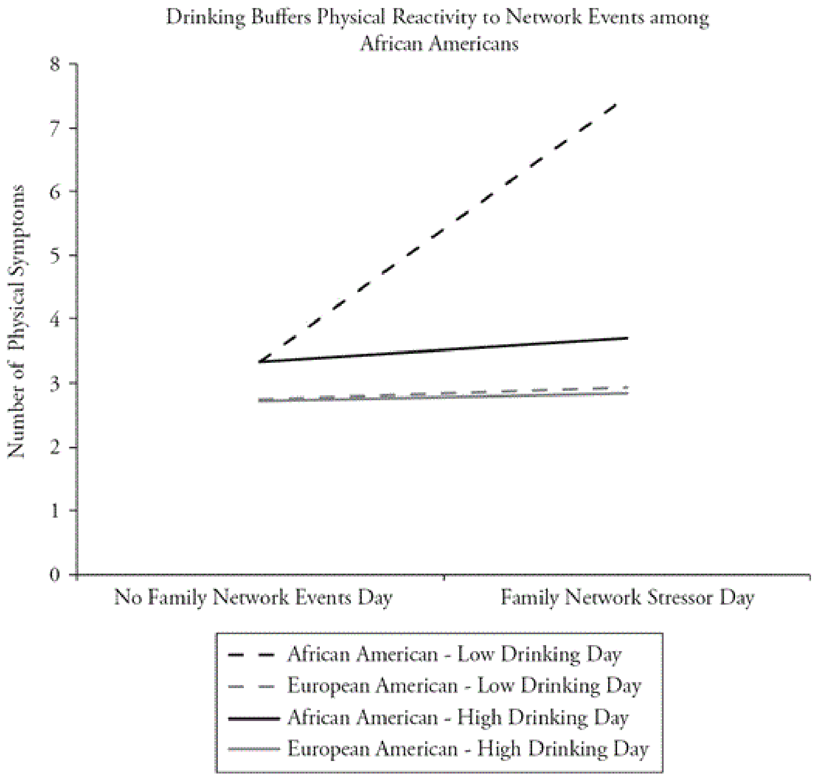

Figure 13.6 For Africans Americans, drinking more than usual buffers (dampens) physical reactivity to family network events. Low drinking days = 1 *SD* below the mean); high drinking days = 1 *SD* above the mean.

Further, our results revealed that more accessible coping strategies, such as drinking alcohol, may to some extent mitigate the negative effects of network stressors among African Americans, whereas these same strategies were associated with exacerbated reactivity to arguments with family. When faced with other family members' problems that do not directly involve the respondent, drinking may be a more environmentally accessible coping strategy (Mezuk et al., 2010) because other efforts to cope by actively trying to change the situation may be futile and inaccessible.

Although these studies contribute to the literature on race and health, our investigations are not without limitations that provide directions for future inquires. Across studies, we have relied on self-report data. A distinct strength of the MIDUS study is the assessment of a wide range of biomarkers and objective markers of physical health (e.g., actigraphy measures of sleep). Using MIDUS data, Friedman, Karlamangla, Almeida, and Seeman (2012) found that those who perceive more frequent relationship strains are at increased risk for poorer cortisol regulation. Future research should extend this work and examine how daily family stressors and support demands "get under the skin" to disrupt the functioning of the HPA-axis and whether this physiological dysregulation varies by race.

It is also important to acknowledge that the daily diary data examined in our studies preclude us from unambiguously determining the direction of effects. To address this limitation, longitudinal analyses are needed. Using multiple waves of MIDUS data, Piazza, Charles, Sliwinski, Mogle, and Almeida (2013) found that greater affective reactivity to daily stressors at baseline predicted an increased likelihood of reporting chronic physical conditions nearly 10 years later. Future research needs to continue to leverage longitudinal MIDUS data to elucidate the degree to which the emotional wear and tear of providing family support experienced by African Americans predicts poorer physical or mental health as they age.

Moreover, the unique structure of the MIDUS study provides the means to consider other pathways through which both racial discrimination and negative relationship experiences undermine African Americans' health. Prior MIDUS research revealed p. 185 ↳ that perceived discrimination was associated with greater relationship strains (Doyle & Molix, 2014a; 2014b; Lincoln & Chae, 2010), and that emotion dysregulation and chronic inflammation were potential pathways through which discrimination contaminated African Americans' relationships (Doyle & Molix, 2014b). African Americans may also be vulnerable when those they love experience discrimination. For example, future research should consider how midlife parents' health is jeopardized when their children or grandchildren encounter racial microaggressions.

Our analyses also only focused on smoking and alcohol consumption, whereas prior work revealed links between daily stressors and unhealthy eating behaviors (O'Connor, Jones, Conner, McMillan, & Ferguson, 2008). Consumption of high-fat/high-sugar snacks in response to psychosocial stressors has been proposed as an explanatory mechanism for racial disparities in health and well-being (Jackson et al., 2010; Mezuk et al., 2010). Given the well-documented links between consuming comfort foods, stress, and obesity (Groesz et al., 2012; Jackson et al., 2010; Sims et al., 2008), future investigations should include daily assessments of emotional eating in order to examine the degree to which African Americans turn to food to cope with family strains.

To further address this limitation, future research is needed that utilizes ecological momentary assessment (EMA) data, which provides real-time data on participants' momentary states in the natural environment, making it possible to examine temporal sequences of events (Shiffman, 2009; Shiffman, Stone, & Hufford, 2008). EMA provides a means to explore when family stressors and social support demands precede engagement in poor health behaviors, such as emotional eating or alcohol consumption.

Finally, our research focuses on negative family experiences; however, it is equally important to explore African Americans' resilience (Keyes, 2009), particularly when faced with race-related adversities (Warren-Findlow et al., 2011). MIDUS findings suggest cultural socialization by the family is protective for African Americans' well-being (Spencer, Swanson, & Glymph, 1996), underscoring the unique strengths of African American families (Hill, 1999). Therefore, future studies should consider how family resources, such as adaptability and cohesion, and individual strengths, such as cultural identity, buffer African Americans from the adverse effects of stressors (Utsey, Giesbrecht, Hook, & Stanard, 2008).

Conclusion

In conclusion, our research program suggests that the context of African Americans' family lives plays a role in undermining African Americans' daily health through differential physical reactivity and prolonged emotional reactivity to family stressors. Even after considering the benefits of receiving family support, providing support takes an emotional toll on African Americans. Finally, the waxing and waning of poor health behaviors may confer additional vulnerabilities to the effects of daily family stressors on African Americans' health and well-being. These deleterious effects, however, do not extend to all sources of family stress. The interaction between race, PHBs, and health is complex. Our findings suggest that more accessible coping strategies, such as drinking, may to some extent mitigate the negative effects of uncontrollable stressors, such as network events, whereas these same strategies may inadvertently exacerbate reactivity to family arguments. Future research that utilizes longitudinal, daily, and momentary assessments is needed to fully elucidate the underlying mechanisms that link differential reactivity to psychosocial stressors and coping resources to African Americans' long-term health outcomes.

References

Ajrouch, K. J., Antonucci, T. C., & Janevic, M. R. (2001). Social networks among blacks and whites: The interaction between race and age. *Journals of Gerontology*, *Series B: Psychological Sciences and Social Sciences*, *56*, S112–S118.
Google Scholar WorldCat

Almeida, D. M. (2005). Resilience and vulnerability to daily stressors assessed via dairy methods. *Current Directions in Psychological Science,* 14, 64–68.
Google Scholar WorldCat

Almeida, D. M., McGonagle, K., & King, H. (2009). Assessing daily stress processes in social surveys by combining stressor exposure and salivary cortisol. *Biodemography and Social Biology*, *55*, 219–237.
Google Scholar WorldCat

Almeida, D. M., Wethington, E., & Kessler, R. C. (2002). The daily inventory of stressful events: An interview-based approach for measuring daily stressors. *Assessment*, *9*, 41–55. doi:10.1177/1073191102091006
Google Scholar WorldCat

Aronson, K. R., Almeida, D. M., Stawski, R. S., Klein, L. C., & Kozlowski, L. T. (2008). Smoking is associated with worse mood on stressful days: Results from a national diary study. *Annals of Behavioral Medicine*, *36*, 259–269.
Google Scholar WorldCat

Belle, D., & Doucet, J. (2003). Poverty, inequality, and discrimination as sources of depression among US women. *Psychology of Women Quarterly*, *27*, 101–113.
Google Scholar WorldCat

Bennett, G. G., Wolin, K. Y., Robinson, E. L., Fowler, S., & Edwards, C. L. (2005). Racial/ethnic harassment and tobacco use among African American young adults. *American Journal of Public Health*, *95*(2), 238–240.
Google Scholar WorldCat

Birditt, K. S., Cichy, K. E., Almeida, D. (2011). Age differences in exposure and reactivity to interpersonal tensions among black and white individuals across adulthood. *Race & Social Problems*, *3*, 225–239. doi:10.1007/s12552-011-9058-y
Google Scholar WorldCat

p. 186 Boardman, J. D., & Alexander, K. B. (2011). Stress trajectories, health behaviors, and the mental health of black and white young adults. *Social Science and Medicine Journal*, *72*, 1659–1666.
Google Scholar WorldCat

Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, *54*, 579–616. doi:10.1146/annurev.psych.54.101601.145030
Google Scholar WorldCat

Bolger, N., DeLongis, A., Kessler, R. C., & Schilling, E. A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology*, *57*, 808–818. doi:10.1037/0022-3514.57.5.808
Google Scholar WorldCat

Bolger, N., & Zuckerman, A. (1995). A framework for studying personality in the stress process. *Journal of Personality and Social Psychology*, *69*, 890–902. doi:10.1037/0022-3514.69.5.890
Google Scholar WorldCat

Breslau, J., Aguilar-Gaxiola, S., Kendler, K. S., Su, M., Williams, D., & Kessler, R. C. (2006). Specifying race-ethnic differences in risk for psychiatric disorder in a USA national sample. *Psychological Medicine*, *36*, 57–68.
Google Scholar WorldCat

Broman, C. L. (2005). Marital quality in black and white marriages. *Journal of Family Issues*, *26*, 431–441. doi:10.1177/0192513X04272439
Google Scholar WorldCat

Brondolo, E., Rieppi, R., Kelly, K. P., & Gerin, W. (2003). Perceived racism and blood pressure: A review of the literature and conceptual and methodological critique. *Annals of Behavioral Medicine*, *25*, 55–65.
Google Scholar WorldCat

Bulanda, J. R., & Brown, S. L. (2007). Race-ethnic differences in marital quality and divorce. *Social Science Research*, *36*, 945–967. doi:10:1016.j.ssresearch.2006.04.001
Google Scholar WorldCat

Burrow, A. L., & Ong, A. D. (2010). Racial identity as a moderator of daily exposure and reactivity to racial discrimination. *Self and Identity*, *9*, 383–402. doi:10.1080/15298860903192496
Google Scholar WorldCat

Charles, S. T., Piazza, J. R., Luong, G., & Almeida, D. M. (2009). Now you see it, now you don't: Age differences in affective reactivity to social tensions. *Psychology and Aging*, *24*(3), 645.
Google Scholar WorldCat

Chartier, K., & Caetano, R. (2010). Ethnicity and health disparities in alcohol research. *Alcohol Research & Health*, *33*(1–2), 152–160.
Google Scholar WorldCat

Chatters, L. M., Taylor, R. J., Lincoln, K. D., Schroepfer, T. (2002). Patterns of informal support from family and church members among African Americans. *Journal of Black Studies,*33, 66–85. doi:10.1177/002193470203300104
Google Scholar WorldCat

Cichy, K. E., Stawski, R. S., & Almeida, D. M. (2012). Racial differences in exposure and reactivity to daily family stressors. *Journal of Marriage and Family*, *74*, 572–586. doi:10.1111/j.1741-3737.2012.00971.x NIHMS448412
Google Scholar WorldCat

Cichy, K. E., Stawski, R. S., & Almeida, D. M. (2014). A double-edged sword: Race, daily social support exchanges, and daily well-being. *Journal of Family Issues,* 35(13), 1824–1845. doi:10.1177/0192513X13479595 NIHMS448689
Google Scholar WorldCat

Cohen, S., Schwartz, J. E., Epel, E., Kirschbaum, C., Sidney, S., & Seeman, T. E. (2006). Socioeconomic status, race, and diurnal cortisol decline in the Coronary Artery Risk Development in Young Adults (CARDIA) Study. *Psychosomatic Medicine*, *68*, 41–50.
Google Scholar WorldCat

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*, 310–357.
Google Scholar WorldCat

Dilworth-Anderson, P., Williams, I. C., & Gibson, B. (2002). Issues of race, ethnicity, and culture in caregiving research: A twenty year review (1980–2000). *Gerontologist*, *42*, 237–272.
Google Scholar WorldCat

Doyle, D. M., & Molix, L. (2014a). Love on the margins: The effects of social stigma and relationship length on romantic relationship quality. *Social Psychological and Personality Science*, *5*, 102–110. doi:10.1177/1948550613486677
Google Scholar WorldCat

Doyle, D. M., & Molix, L. (2014b). Perceived discrimination as a stressor for close relationships: Identifying psychological and physiological pathways. *Journal of Behavioral Medicine*, *37*, 1134–1144. doi:10.1007/s10865-014-9563-8
Google Scholar WorldCat

Durden, E. D., Hill, T. D., & Angel, R. J. (2007). Social demands, social supports, and psychological distress among low-income women. *Journal of Social and Personal Relationships*, *24*, 343–361. doi:10.1177/0265407507077226
Google Scholar WorldCat

Everett, J. E., Hall, C., & Hamilton-Mason, J. (2010). Everyday conflict and daily stressors: Coping responses of Black women. *Journal of Women and Social Work*, *25*, 30–42. doi:10.1177/0886109909354983
Google Scholar WorldCat

Farley, R., & Frey, W. H. (1994). Changes in the segregation of whites from blacks during the 1980s: Small steps toward a more integrated society. *American Sociological Review*, *59*, 23–45.
Google Scholar WorldCat

Farmer, M. M., & Ferraro, K. F. (2005). Are racial disparities in health conditional on socioeconomic status? *Social Science & Medicine*, *60*(1), 191–204.
Google Scholar WorldCat

Friedman, E. M., Karlamangla, A. S., Almeida, D. M., & Seeman. T. E. (2012). Social strain and cortisol regulation in midlife in the US. *Social Science & Medicine*, *74*, 607–615.
Google Scholar WorldCat

Fuller-Rowell, T. E., Doan, S. N., & Eccles, J. S. (2012). Differential effects of perceived discrimination on the diurnal cortisol rhythm of African Americans and whites. *Psychoneuroendocrinology*, *37*(1), 107–118.
Google Scholar WorldCat

Geronimus, A. T., Bound, J., Waidmann, T. A., Colen, C. G., & Steffick, D. (2001). Inequality in life expectancy, functional status, and active life expectancy across selected black and white populations in the United States. *Demography*, *38*(2), 227–251.
Google Scholar WorldCat

Geronimus, A. T., Hicken, M., Keene, D., & Bound, J. (2006). ''Weathering'' and age patterns of allostatic load scores among blacks and whites in the United States. *American Journal of Public Health*, *96*, 826–833. doi:10.2105/AJPH.2004.060749
Google Scholar WorldCat

Groesz, L. M., McCoy, S., Carl, J., Saslow, L., Stewart, J., Adler, N., . . . Epel, E. (2012). What is eating you? Stress and the drive to eat. *Appetite*, *58*, 717–721. doi:10.1016/j.appet.2011.11.028
Google Scholar WorldCat

Hill, R. B. (1999). *The strengths of African American families: Twenty-five years later*. Lanham, MD: University Press of America.
Google Scholar Google Preview WorldCat COPAC

Hoggard, L. S., Byrd, C. M., & Sellers, R. M. (2015). The lagged effects of racial discrimination on depressive symptomology and interactions with racial identity. *Journal of Counseling Psychology*, *62*, 216–225.
Google Scholar WorldCat

Hu, J. (2007). Health-related quality of life in low-income older African Americans. *Journal of Community Health Nursing*, *24*, 253–265. doi:10.1080/0737001070164590
Google Scholar WorldCat

Hughes, M., & Thomas, M. E. (1998). The continuing significance of race revisited: A study of race, class, and quality of life in America, 1972 to 1996. *Annual Sociological Review*, *63*, 785–795.
Google Scholar WorldCat

p. 187
Jackson, J. S., Knight, K. M., & Rafferty, J. A. (2010). Race and unhealthy behaviors: Chronic stress, the HPA axis, ↳ and physical and mental health disparities over the life course. *American Journal of Public Health*, *100*, 933–939. doi:10.2105/AJPH.2008.143446

Kessler, R. C., & McLeod, J. D. (1984). Sex differences in vulnerability to undesirable life events. *American Sociological Review*, *49*, 620–631.
Google Scholar WorldCat

Kessler, R. C., Mickelson, K. D., & Williams, D. R. (1999). The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior*, *40*, 208–230.
Google Scholar WorldCat

Keyes, C. L. (2009). The black-white paradox in health: Flourishing in the face of social inequality and discrimination. *Journal of Personality*, *77*, 1677–1706. doi:10.1111/j.1467-6494.2009.00597.x
Google Scholar WorldCat

Krueger, P. M., & Chang, V. W. (2008). Being poor and coping with stress: Health behaviors and the risk of death. *American Journal of Public Health*, *98*, 889–896.
Google Scholar WorldCat

Kung, H. C., Hoyert, D. L., Xu, J., & Murphy, S. L. (2008). Deaths: Final data for 2005. *National Vital Statistics Reports*, *56*(10), 4–26.
Google Scholar WorldCat

Landrine, H., Klonoff, E. A., Corral, I., Fernandez, S., & Roesch, S. (2006). Conceptualizing and measuring ethnic discrimination in health research. *Journal of Behavioral Medicine*, *29*, 79–94.
Google Scholar WorldCat

Larsen, R. J., & Kasimatis, M. (1991). Day-to-day physical symptoms: Individual differences in the occurrence, duration, and emotional concomitants of minor daily illnesses. *Journal of Personality*, *59*, 387–423.
Google Scholar WorldCat

Lincoln, K. D., & Chae, D. H. (2010). Stress, marital satisfaction, and psychological distress among African Americans. *Journal of Family Issues*, *31*, 1081–1105. doi:10.1177/0192513X10365826
Google Scholar WorldCat

Lincoln, K. D., Chatters, L. M., & Taylor, R. J. (2003). Psychological distress among black and white Americans: Differential effects of social support, negative interaction and personal control. *Journal of Health and Social Behavior*, *44*, 390–407.
Google Scholar WorldCat

Mair, C. A. (2010). Social ties and depression: An intersectional examination of black and white community-dwelling older adults. *Journal of Applied Gerontology*, *29*, 667–696.
Google Scholar WorldCat

Martin, J. K., Tuch, S. A., & Roman, P. M. (2003). Problem drinking patterns among African Americans: The impacts of reports of discrimination, perceptions of prejudice, and “risky” coping strategies. *Journal of Health and Social Behavior*, *44*(3), 408–425.
Google Scholar WorldCat

Massey, D. S., & Denton, N. A. (1993). *American apartheid: Segregation and the making of the underclass*. Cambridge, MA: Harvard University Press.
Google Scholar Google Preview WorldCat COPAC

McIntyre, K. P., Korn, J. H., & Matsuo, H. (2008). Sweating the small stuff: How different types of hassles result in the experience of stress. *Stress and Health*, *24*, 383–392. doi:10.1002/smi.1190
Google Scholar WorldCat

Merritt, M. M., Bennett, G. G., Jr., Williams, R. B., Edwards, C. L., & Sollers, J. J., III. (2006). Perceived racism and cardiovascular reactivity and recovery to personally relevant stress. *Health Psychology*, *25*(3), 364. doi:10.1037/0278-6133.25.3.364.
Google Scholar WorldCat

Mezuk, B., Rafferty, J. A., Kershaw, K. N., Hudson, D., Abdou, C. M., Lee, H., . . . Jackson, J. S. (2010). Reconsidering the role of social disadvantage in physical and mental health: Stressful life events, health behaviors, race, and depression. *American Journal of Epidemiology*, *172*, 1238–1249. doi:10.1093/aje/kwq283
Google Scholar WorldCat

Moolchan, E. T., Fagan, P., Fernander, A. F., Velicer, W. F., Hayward, M. D., King, G., & Claton, R. R. (2007). Addressing tobacco-related health disparities. *Addiction*, *102*, 30–42.
Google Scholar WorldCat

Mouzon, D. M. (2013). Can family relationships explain the race paradox in mental health? *Journal of Marriage and Family*, *75*, 470–485.
Google Scholar WorldCat

Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. *Journal of Personality and Social Psychology*, *75*, 1333–1349.
Google Scholar WorldCat

Mujahid, M. S., Diez Roux, A. V., Cooper, R. C., Shea, S., & Williams, D. R. (2011). Neighborhood stressors and race/ethnic differences in hypertension prevalence (The Multi-Ethnic Study of Atherosclerosis). *American Journal of Hypertension*, *24*, 187–193.
Google Scholar WorldCat

Mulia, N., Ye, Y., Greenfield, T. K., & Zemore, S. E. (2009). Disparities in alcohol-related problems among white, black, and Hispanic Americans. *Alcoholism: Clinical and Experimental Research*, *33*(4), 654–662.
Google Scholar WorldCat

Murry, V., Brown, A. P., Brody, G. H., Cutrona, C., & Simons, R. (2001). Racial discrimination as a moderator of the links among stress, maternal psychological functioning, and family relationships. *Journal of Marriage and Family*, *63*, 915–926.
Google Scholar WorldCat

O'Connor, D. B., Jones, F., Conner, M., McMillan, B., & Ferguson, E. (2008). Effects of daily hassles and eating style and eating behavior. *Health Psychology*, *27*, S20–S31. doi:10.1037/0278-6133.27.1
Google Scholar WorldCat

O'Hara, R. E., Armeli, S., Scott, D. M., Covault, J., & Tennen, H. (2015). Perceived racial discrimination and negative-mood–related drinking among African American college students. *Journal of Studies on Alcohol and Drugs*, *76*(2), 229–236.
Google Scholar WorldCat

Ong, A. D., Fuller-Rowell, T., & Burrow, A. L. (2009). Racial discrimination and the stress process. *Journal of Personality and Social Psychology*, *96*, 1259–1271. doi:10.1037/a0015335
Google Scholar WorldCat

Pearlin, L. I., Schieman, S., Fazio, E. M., & Meersman, S. C. (2005). Stress, health, and the life course: Some conceptual perspectives. *Journal of Health and Social Behavior*, *46*, 205–219.
Google Scholar WorldCat

Peek, K. M., Coward, R. T., & Peek, C. W. (2000). Race, aging, and care. *Research on Aging,* 22, 117–142.
Google Scholar WorldCat

Piazza, J. R., Charles, S. T., Sliwinski, M. J., Mogle, J., & Almeida, D. M. (2013). Affective reactivity to daily stressors and long-term risk of reporting a chronic physical health condition. *Annals of Behavioral Medicine*, *45*, 110–120.
Google Scholar WorldCat

Raley, R. K., & Sweeney, M. M. (2009). Explaining race and ethnic variation in marriage: Directions for future research. *Race and Social Problems*, *1*, 132–142.

Google Scholar WorldCat

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage.
Google Scholar Google Preview WorldCat COPAC

Rook, K. S. (2003). Exposure and reactivity to negative social exchanges: A preliminary investigation using daily diary data. *Journals of Gerontology: Psychological Sciences*, *58B*, P100–P111.
Google Scholar WorldCat

Rubin, D. B., & Little, R. J. (2002). *Statistical analysis with missing data*. Hoboken, NJ: Wiley.
Google Scholar Google Preview WorldCat COPAC

Ryff, C., Almeida, D. M., Ayanian, J. S., Carr, D. S., Cleary, P. D., Coe, C., . . . Williams, D. National Survey of Midlife Development in
p. 188
the United States (MIDUS II), ↳ 2004–2006. ICPSR04652-v6. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], https://doi.org/10.3886/ICPSR04652.v7.

Ryff, C. D., Keyes, C. L., & Hughes, D. L. (2003). Status inequalities, perceived discrimination, and eudaimonic well-being: Do the challenges of minority life hone purpose and growth? *Journal of Health and Social Behavior*, *44*, 275–291.
Google Scholar WorldCat

Sayette, M. A., & Wilson, G. T. (1991). Intoxication and exposure to stress: Effects of temporal patterning. *Journal of Abnormal Psychology*, *100*, 56–62.
Google Scholar WorldCat

Schuster, T. L., Kessler, R. C., & Aseltine, R. H. (1990). Supportive interactions, negative interactions, and depressive mood. *American Journal of Community Psychology*, *18*, 423–438.
Google Scholar WorldCat

Seaton, E. K., & Douglass, S. (2014). School diversity and racial discrimination among African-American adolescents. *Cultural Diversity and Ethnic Minority Psychology*, *20*, 156–165.
Google Scholar WorldCat

Sellers, R. M., & Shelton, J. N. (2003). The role of racial identity in perceived racial discrimination. *Journal of Personality and Social Psychology*, *84*, 1079–1092.
Google Scholar WorldCat

Shiffman, S. (2009). Ecological momentary assessment (EMA) in studies of substance use. *Psychological Assessment*, *21*, 486–497.
Google Scholar WorldCat

Shiffman, S., Stone, A. A., & Hufford, M. (2008). Ecological momentary assessment. *Annual Review of Clinical Psychology*, *4*, 1–32.
Google Scholar WorldCat

Sillars, A., Canary, D. J., & Tafoya, M. (2004). Communication, conflict, and the quality of family relationships. In A. L. Vangelisti (Ed.)., *Handbook of family communication* (pp. 413–446). Mahwah, NJ: Erlbaum.
Google Scholar Google Preview WorldCat COPAC

Sims, R., Gordon, S., Garcia, W., Clark, E., Monye, D., Callender, C., & Campbell, A. (2008). Perceived stress and eating behaviors in a community-based sample of African Americans. *Eating Behaviors*, *9*, 137–142. doi:10.1016/j.eatbeh.2007.06.006
Google Scholar WorldCat

Skarupski, K. A., de Leon, C. F. M., Bienias, J. L., Scherr, P. A., Zack, M. M., Moriarty, D. G., & Evans, D. A. (2007). Black-white differences in health related quality of life among older adults. *Quality of Life Research*, *16*, 287–296.
Google Scholar WorldCat

Sliwinski, M. J., Almeida, D. M., Smyth, J., & Stawski, R. S. (2009). Intraindividual change and variability in daily stress processes: Findings from two measurement-burst diary studies. *Psychology and Aging*, *24*(4), 828–840.
Google Scholar WorldCat

Smetana, J. G., & Chuang, S. (2001). Middle-class African American parents' conceptions of parenting in early adolescence. *Journal of Research on Adolescence*, *11*, 177–198.
Google Scholar WorldCat

Snijders, T. A. B., & Bosker, R. (1999). *Multilevel analysis*. Thousand Oaks, CA: Sage.
Google Scholar Google Preview WorldCat COPAC

Spencer, M. B., Swanson, D. P., & Glymph, A. (1996). The prediction of parental psychological functioning: Influences of African American adolescent perceptions and experiences of context. In C. D. Ryff and M. M. Seltzer (Eds.), *The parental experience in midlife* (pp. 337–382). Chicago: University of Chicago Press.
Google Scholar Google Preview WorldCat COPAC

Stetler, C., Chen, E., & Miller, G. E. (2006). Written disclosure of experiences with racial discrimination and antibody response to an influenza vaccine. *International Journal of Behavioral Medicine*, *13*(1), 60–68. doi:10.1207/s15327558ijbm1301_8.
Google Scholar WorldCat

Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. M. B., Nadal, K. L., & Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical practice. *American Psychologist*, *62*, 271–286.
Google Scholar WorldCat

Swim, J. K., Hyers, L. L., Cohen, L. L., Fitzgerald, D. C., & Bylsma, W. H. (2003). African American college students' experiences with everyday racism: Characteristics of and responses to these incidents. *Journal of Black Psychology*, *29*, 38–67.
Google Scholar WorldCat

Taylor, R. D., Budescu, M., & McGill, R. K. (2011). Demanding kin relations and depressive symptoms among low-income African American women: Mediating effects of self-esteem and optimism. *Cultural Diversity and Ethnic Minority Psychology*, *17*, 303–308.
Google Scholar WorldCat

Taylor, R. J., Chae, D. H., Lincoln, K. D., & Chatters, L M. (2015). Extended family and friendship support networks are both protective and risk factors for major depressive disorder and depressive symptoms among African-Americans and black Caribbeans. *The Journal of Nervous and Mental Disease*, *203*, 132–140.
Google Scholar WorldCat

US Census Bureau. (2000). *Census 2000 demographic profile highlights: Milwaukee County, Wisconsin*. Retrieved November 11, 2011, from https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml
WorldCat

Utsey, S. O., Giesbrecht, N., Hook, J., & Stanard, P. M. (2008). Cultural, sociofamilial, and psychological resources that inhibit psychological distress in African Americans exposed to stressful life events and race-related stress. *Journal of Counseling Psychology*, *55*, 49–62. doi:10.1037/0022-0167.55.1.49
Google Scholar WorldCat

Warren-Findlow, J. (2006). Weathering: Stress and heart disease in African American women living in Chicago. *Qualitative Health Research*, *16*, 221–237. doi:10.1177/1049732305278651
Google Scholar WorldCat

Warren-Findlow, J., Laditka, J. N., Laditka, S. B., & Thompson, M. E. (2011). Associations between social relationships and emotional well-being in middle-aged and older African Americans. *Research on Aging*, *33*, 713–734. doi:10.1177/0164027511411928
Google Scholar WorldCat

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, *54*, 1063–1070.
Google Scholar WorldCat

Whalen, H. R., & Lachman, M. E. (2000). Social support and strain from partner, family, and friends: Costs and benefits for men and women in adulthood. *Journal of Social and Personal Relationships*, *17*, 5–30.
Google Scholar WorldCat

Williams, D. R. (2002). Racial/ethnic variations in women's health: The social embeddedness of health. *American Journal of Public Health*, *92*, 588–597. doi:10.2105/AJPH.92.4.588
Google Scholar WorldCat

Williams, D. R. (2005). The health of US racial and ethnic populations. *Journal of Gerontology: Psychological Science and Social Science*, *60*, 53–62.
Google Scholar WorldCat

Williams, D. R., & Earl, T. R. (2007). Commentary: Race and mental health-more questions than answers. *International Journal of Epidemiology*, *36*, 758–760.
Google Scholar WorldCat

Williams, D. R., & Harris-Reid, M. (1999). Race and mental health: Emerging patterns and promising approaches. In A. Horwitz and
p. 189 T. Scheid (Eds.), *A handbook for the study of* ↳ *mental health* (pp. 295–314). Cambridge, MA: Cambridge University Press.

Williams, D. R., & Jackson, B. P. (2005). Social sources of racial disparities in health. *Health Affairs*, *24*, 325–334.
Google Scholar WorldCat

Williams, D. R., & Mohammed, S. A. (2009). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine*, *32*, 20–47. doi:10.1007/s10865-008-9185-0
Google Scholar WorldCat

Zapolski, T. C., Pedersen, S. L., McCarthy, D. M., & Smith, G. T. (2014). Less drinking, yet more problems: Understanding African
p. 190 American drinking and related problems. *Psychological Bulletin*, *140*(1), 188. ↳
Google Scholar WorldCat