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Vicarious Discrimination, Psychosocial Resources, and Mental Health among Black Americans

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Abstract

Does hearing about or witnessing someone else experience discrimination harm individuals' mental health? Using data from the Nashville Stress and Health Study, we answer this question by examining how vicarious discrimination impacts depressive symptoms, anxiety symptoms, and anger among black Americans. We also test whether mastery and self-esteem moderate the association between vicarious discrimination and each mental health outcome. Findings indicate experiencing vicarious discrimination via a family member has a similar impact on mental health to personally experiencing discrimination. While experiencing vicarious discrimination via a close friend also increased mental health problems, it appeared to be less harmful than personally experiencing discrimination. Moreover, self-esteem moderated the association between vicarious discrimination via a family member and via a close friend and mental health, while mastery did not. This study provides new insights into ways vicarious discrimination impacts health as well as the role that psychosocial resources play in shaping this relationship.

Keywords

black Americans, mastery, mental health, prejudice and discrimination, self-esteem

It is well established that discrimination has toxic effects on mental health. Black Americans are disproportionately exposed to discrimination (Kessler, Mickelson, and Williams 1999) and these experiences are associated with depressive symptoms, anxiety symptoms, and anger (Paradies et al. 2015; Steffen et al. 2003; Williams et al. 2019). While the majority of research in this area has focused on the impact of direct interpersonal experiences of discrimination on health (Williams and Mohammed 2009), these experiences do not capture the consequences of *indirect discrimination* or *vicarious discrimination* on mental health, which is defined as secondhand exposure to discrimination via hearing about or witnessing discrimination experienced by family, friends, or even strangers (Heard-Garris

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2018). This is a significant oversight, given that approximately 70 percent of African Americans report experiencing vicarious discrimination online (Tynes et al. 2012). Research also indicates it is the rule, not the exception, for racial minorities in the United States to anticipate discrimination for themselves or close others (English et al. 2020; Grace 2020).

An emerging body of work has started to document the harmful impacts that vicarious discrimination has on mental health. Past research has observed links between vicarious discrimination and anger, depression, anxiety, and low birth weight (Chae et al. 2021; Holloway and Varner 2021; Jochman et al. 2019; Sonderlund, Schoenthaler, and Thilsing 2021; Wofford, Defever, and Chopik 2019). There have also been studies, however, that did not find links between vicarious discrimination and mental health (Heard-Garris et al. 2018; Tynes et al. 2012). These mixed findings may occur because the association between vicarious discrimination and mental health may differ based on the relationship type the respondent has with the target of discrimination. For example, scholars have speculated that the experience of vicarious discrimination may be particularly distressing when the target is one's child, due to the fact that parents feel a special responsibility to protect their children (Dow 2016; Gee et al. 2012). It is plausible that the impact of vicarious discrimination on individuals' mental health may vary based on the proximity of these social relationships to them (Holloway and Varner 2021). As such, the use of unidimensional measures of vicarious discrimination that do not account for the relationship that the respondent has to the target of discrimination offers an incomplete view of the association between vicarious discrimination and mental well-being. In the current study, we overcome this limitation by considering the impact of vicarious discrimination via a family member and via a close friend on individuals' mental health.

A second gap in our knowledge includes a lack of understanding of the role that coping resources might play in helping Black Americans cope with vicarious experiences of discrimination. Within the stress process model, the impact of any stressor depends on one's ability to cope with these stressful circumstances, that is, to keep the strain of stressful events within "manageable bounds" (Pearlin 1999:250). Psychosocial resources are an especially important component of the stress process model, and both mastery and self-esteem have been identified as resources that black Americans have access to (Louie and Wheaton 2019; Thomas Tobin, Erving, and Barve 2021). Yet, scholars lack a sufficient understanding if these resources are also efficacious for confronting problems not directly faced by individuals themselves.

Guided by these gaps in our understanding of the relationship between vicarious discrimination and health, our study has three main objectives. Using data from the Nashville Stress and Health Study (NSAHS), we first examine the role of direct and vicarious discrimination on depressive symptoms, anxiety symptoms, and anger among black Americans. Importantly, we consider whether the impact of vicarious discrimination via a family member versus a close friend have differential consequences on mental health. Second, we examine whether two coping resources, mastery and self-esteem, moderate the relationship between vicarious discrimination and mental health. Bringing the role of coping resources to the forefront of research on vicarious discrimination and mental health advances the literature by evaluating whether these resources function similarly for direct and

indirect forms of discrimination. Finally, we extend prior work on vicarious discrimination and mental health by examining multiple mental health outcomes beyond depression, which has received the bulk of research attention to date (Bor et al. 2018; Priest et al. 2017; Sewell, Jefferson, and Lee 2016; Wofford et al. 2019) (see also Chae et al. 2021). As such, it remains unclear whether vicarious discrimination influences a broader array of mental health outcomes, such as anxiety symptoms and anger. The use of multiple outcomes is important for more fully specifying the social consequences of vicarious discrimination on mental health in general (Aneshensel 2005).

BACKGROUND

The stress process model offers a framework to understand the impact of direct and indirect forms of discrimination on mental health as well as the role that coping may play in this relationship (Pearlin 1999). Discrimination, or unfair treatment, is a distinct stressor that can be degrading, traumatizing, and/or stigmatizing (Brown et al. 2000). Scholars have posited that discrimination is a significant risk to well-being because it signals to the targets of discrimination that there are structural barriers in place that may threaten their ability to secure desired social resources (Williams and Mohammed 2009). While decades of research have demonstrated the deleterious consequences of direct interpersonal experiences of discrimination on mental health, considerably fewer studies have examined the impact of indirect forms of discrimination on mental health. Recent evidence suggests that the mental health consequences of discrimination are often not isolated to the target of discrimination alone (Chae et al. 2021; Wofford et al. 2019). Because most individuals are connected to family members and close friends, it is likely that discriminatory treatment has repercussions that impact others in their social sphere. As such, research that focuses only on direct interpersonal discrimination may underestimate the broader impact that discrimination has on communities.

Vicarious Discrimination and Stress Contagion

Vicarious discrimination is defined as secondhand exposure to discrimination that is directed at another individual (Harrell 2000; Heard-Garris et al. 2018). This type of discrimination can be experienced in various ways. For example, some people may witness others experiencing discrimination. Other people may learn about experiences of discrimination from their family member or close friend who directly experienced the discriminatory event. Regardless of whether one witnesses the discriminatory event or learns about it later, these vicarious experiences of discrimination may harm health by initiating worry about one's family member or close friend as well as concern that they personally may experience discrimination in the future (Agnew 2002; Pearlin and Bierman 2013). Some evidence suggests that observers who experience vicarious ostracism (i.e., social exclusion) experience social pain and distress reactions similar to direct ostracism themselves (Giesen and Echterhoff 2018; Masten, Morelli, and Eisenberger 2011). Thus, the experience of vicarious discrimination may harm health in ways similar to directly experiencing discrimination, thus increasing the likelihood of poor mental health.

The concept of stress contagion is helpful to frame the impact that vicarious discrimination may have on health. Stress contagion occurs when a stressor, such as discrimination, affects an individual as well as those in their social sphere

(Milkie and Warner 2011; Wethington 2000). Although there are different ways that stress contagion can occur, we focus on stress crossover, which is described as "stressors that cross from one linked person to another" (Wethington 2000:233). Evidence suggests that stress can spread from children to parents (Sirois 2020; Turney 2022), between romantic partners (Wildeman, Schnittker, and Turney 2012; Wofford et al. 2019), and from individuals to caregivers (Pearlin, Aneshensel, and Leblanc 1997).

In the current study, we extend this previous work by considering the impact of vicarious discrimination experienced via a family member as well as via a close friend on mental health. It is possible that the impact of vicarious discrimination may differ based on the closeness of the relationship. Drawing from the life course principle of linked lives, Gee and colleagues (2012) suggest we might expect discriminatory experiences of those closest to the individual, such as family members, to resonate more deeply and bear stronger associations with mental well-being. For example, vicarious discrimination may be particularly harmful when the target of discrimination is one's spouse, child, or relative and less detrimental if the target of discrimination is one's close friend. This rationale is consistent with previous studies that suggest that stress contagion is greater in closer relationships (Christakis and Fowler 2007; Kimura, Daibo, and Yogo 2008; Wofford et al. 2019). This may be because of greater interaction with family members versus close friends and/or a greater emotional investment in the well-being of kin versus nonkin. However, whether the impact of vicarious discrimination depends on one's relationship to the target of discrimination (i.e., family member or close friend) remains an empirical question.

The Role of Coping Resources: Mastery and Self-Esteem

The impact of a stressor on mental health depends on one's ability to cope with stressful circumstances. Within the stress process framework, coping plays an important role in helping individuals manage the strain of stressful experiences (Pearlin and Schooler 1978). The main function of coping resources is to reduce the demands of stressful environments on one's functioning (Pearlin 1989, 1999). In this study, we examine two coping resources that are integral in the stress process model: mastery and self-esteem (Pearlin et al. 1981; Pudrovska et al. 2005; Thoits 2010).

Mastery is the learned, generalized expectation that one's efforts will influence their environment in desired ways and refers to the "extent to which individuals see their lives under their own controls as opposed to ruled by external fatalistic forces" (Pearlin and Schooler 1978:5). Mastery, or perceived control over one's life, is essential for inhibiting the noxious effects of stress (Mirowsky and Ross 2003; Pearlin 1999), as persons with higher levels of mastery view stressors as less threatening because mastery encourages active problem solving (Mirowsky and Ross 2003; Thoits 2010). Thus, individuals with high levels of mastery are likely to use a range of strategies in an attempt to solve their problems as well as identify instrumental sources of support in stressful times (Mirowsky and Ross 2003; Schieman and Plickert 2008; Thoits 2010). These active coping efforts increase the likelihood that one is able to achieve a desired outcome. As such, those with higher levels of mastery are less depressed than those with lower levels of mastery (Pearlin et al. 1981).

Mastery has been shown to be an important stress buffer, or moderator, in the stress process model. For example,

mastery has been shown to weaken the impact of various stressors, like financial strain (Koltai, Bierman, and Schieman 2018), work–family conflict (Badawy and Schieman 2020), economic hardship (Pudrovska et al. 2005), and stressful events (Turner, Taylor, and Van Gundy 2004), on mental health.

Despite decades of work on mastery as a coping resource, whether mastery moderates the effect of direct discrimination and vicarious discrimination on mental health has yet to be examined. There is reason to expect that because individuals with higher levels of mastery perceive stressors as less overwhelming, the impact of direct discrimination and vicarious discrimination might be weakened. Research by Schieman and Turner (2001) found that people with higher levels of mastery are better able to separate their own problems from those of others, which could make experiences of vicarious discrimination less harmful to their well-being. Along similar lines, it is possible that mastery could help the person to take active steps to support the victim of discrimination without becoming overwhelmed.

Self-esteem has also been identified as another key personal coping resource in the stress process model (Pearlin et al. 1981). High self-esteem consists of the evaluation that one is "good, valued, and competent" (Thoits 2010:S46) and helps protect against stressful circumstances (Pearlin and Schooler 1978). Scholars have suggested that self-esteem counteracts the threat of stressful circumstances by indirectly diminishing the appraised threat of the stressor (Thoits 1995) by "minimi[zing] threat to the self" (Pearlin and Schooler 1978:8).

Self-esteem as a personal coping resource is viewed as an especially important resource for black Americans because having a sense of secure self-worth helps to lessen the psychological impact of living in a society that continually devalues the lives of black people (Gayman et al. 2014; Louie and Wheaton 2019). It is commonly understood that self-esteem develops within one's social environment and is heavily influenced by peers and family members (Cast and Burke 2002; Rosenberg and Simmons 1972). Thus, black Americans who are often surrounded by other black Americans in their day-to-day lives often develop a positive sense of their worth that is separate from the mainstream portrayal of black culture (Constantine and Blackmon 2002; Hughes and Demo 1989; Rosenberg and Simmons 1972). In addition, research suggests that black parents use concerted strategies to help their children develop a secure sense of self-worth that will aid them in navigating a world where they may face unfair treatment (Brown and Zeigler-hill 2018; Dow 2016). As such, it may be unsurprising that black Americans often report higher levels of self-esteem than white Americans (Pearlin and Schooler 1978; Thomas Tobin et al. 2021) and that self-esteem has been shown to protect against mental health problems, such as depressive symptoms, psychological distress, mood disorders, and anxiety (Jackson et al. 2010; Nguyen et al. 2019; Turner 2013).

Research has also demonstrated that self-esteem can play a moderator role in the relationship between stress and mental health, with findings that self-esteem can weaken the impact of direct discrimination on psychological distress (Moradi and Subich 2004) and anxiety (Tynes et al. 2012). It is also possible that self-esteem will buffer the impact of vicarious discrimination on mental health because having a secure sense of self-worth may result in viewing the discrimination experienced by a family member or close friend as detached from their own self-concept. As a result, individuals with high self-esteem may be protected from the mental health consequences of experiencing vicarious discrimination because

they do not view the stressor as directly threatening.

Mental Health Outcomes

The current study employs three measures of mental health: Center for Epidemiologic Studies–Depression (CES-D) depressive symptoms, anxiety symptoms, and anger. The use of multiple measures of mental health better specifies the impact of vicarious discrimination and coping resources across an array of outcomes. CES-D depression captures symptoms of sadness and hopelessness (Ross and Mirowsky 2013), anxiety symptoms capture feelings of worry and panic, while anger is characterized by "annoyance, irritation, exasperation, and rage" (Mabry and Kiecolt 2005:86).

The use of multiple mental health outcomes in the current study responds to calls for social stress researchers to consider "the spectrum of outcomes associated with particular social arrangements" (Aneshensel 2005:225) and allows us to gain a comprehensive understanding of the association between vicarious discrimination and mental health. If our goal is to address the general mental health impact of a stressor, then a full range of outcomes needs to be considered (Aneshensel 2002). As Aneshensel et al. (1991:167) demonstrates, the study of a single outcome results in misclassification of the overall impact of a stressor on mental health because "persons with other stress-related disorders are misclassified as unaffected by stress." We attempt to avoid the issue of underestimating the impact of vicarious discrimination on mental health by using three mental health outcomes.

Though depression, anxiety, and anger have different social distributions when it comes to race (Barnes and Bates 2017), we do not expect differential theoretical associations between vicarious discrimination and each outcome to emerge. We base this prediction on an extensive parallel literature focused on personal discrimination, which has found this stressor to be associated with higher depression (Brown et al. 2000; Hudson et al. 2016), anger (Magee and Louie 2016; Pittman 2011), and anxiety (Banks, Kohn-Wood, and Spencer 2006). On the basis of this prior work on personal discrimination, we also do not hypothesize different associations between vicarious discrimination and each indicator of mental health, given that perceived injustice and stressors related to discrimination likely underlie each association.

The Present Study

The present study has two aims. First, we examine the association between direct discrimination, vicarious discrimination experienced via a family member, and vicarious discrimination experienced via a close friend with depressive symptoms, anxiety symptoms, and anger. Second, we test whether mastery and self-esteem moderate the association between direct discrimination, vicarious discrimination experienced by family, and vicarious discrimination experienced by a close friend and mental health.

METHOD

Sample

Data come from the NSAHS. The NSAHS is based on a population-based sample of black and white Americans ages 22 to 69 drawn from the city of Nashville and areas within Davidson County, Tennessee. A random sample was obtained using a multistage, stratified sampling approach. Black households were oversampled, and sampling weights were constructed to allow for generalizability to the county population. Between 2011 and 2014, 1,252 respondents provided

information about their personal and family backgrounds, stress and coping experiences, and health histories during three-hour computer-assisted interviews with interviewers of the same race. In the current study, we focus only on black Americans, which resulted in a sample of 627. Furthermore, listwise deletion was used to handle missing data for all variables, including each dependent variable. This resulted in an analytic sample of 596 cases.

Measures

Dependent variables. Depressive symptoms were analyzed using the 20-item measure of the CES-D scale (Radloff 1977), a widely used and highly reliable index (Mirowsky and Ross 2003). The measure of CES-D depression included items such as "You felt like you could not shake off the blues," "You had crying spells," "You felt lonely," and "You thought your life had been a failure." The items ranged from 0 to 3, where 0 = *not at all*, 1 = *occasionally*, 2 = *frequently*, and 3 = *almost all the time*. Responses were summed to produce an index of depression scored 0 to 60 (α = .891).

Anxiety symptoms consisted of a five-item measure. Respondents were asked how true each of the following statements was for them over the past month: "I felt worried over possible misfortunes," "I felt overexcited," "I felt tense," "I felt anxious," and "I felt nervous." The items ranged from 0 to 3, where 0 = *not at all*, 1 = *somewhat*, 2 = *moderately*, and 3 = *very much*. Responses were summed to produce an index of anxiety scored 0 to 15 (α = .830).

Anger was measured using a six-item assessment. Respondents were asked which of the categories best described how they were feeling over the past month. The statements included "When I get angry, I stay angry," "I yell at people," "I feel like I am boiling inside," "I lose my temper," "I feel angry," and "I get into fights and arguments." Response options were 0 = *not like me at all*, 1= *not much like me*, 2 = *somewhat like me*, 3 = *much like me*, 4 = *very much like me*. Responses were summed to produce an index of anger scored 0 to 24 (α = .902).

Independent variable. Discrimination was measured using Williams's Major Discrimination Scale (Williams et al. 1997). Respondents were asked, "Have you or anyone close to you ever had the following experiences?" The experiences were "Been unfairly fired or denied a promotion," "For unfair reasons, not been hired for a job," "Been unfairly treated by the police," "Been unfairly discouraged by a teacher or advisor continuing education," and "Been unfairly discouraged by a teacher or advisor for pursuing a job/career." Respondents were also asked, "For unfair reasons, did a landlord or realtor ever refuse to sell or rent you or someone close to you a house or apartment?" and "For unfair reasons, have neighbors ever made life difficult for you or someone close to you?" Those responding yes were probed whether it happened to them, a spouse, a child, or another relative or close friend. Those answering that they experienced direct discrimination led to routing past the vicarious discrimination response. This prohibited us from identifying those who experienced both personal and vicarious discrimination. A set of dummy variables were created that indicated whether the respondent did not experience discrimination (reference), the respondent personally experienced discrimination, the respondent's family member experienced discrimination (i.e., spouse, child, or another relative), or the respondent's close friend experienced discrimination.

Psychosocial resources. Mastery was measured using Pearlin and Schooler's (1978) seven-item Personal Mastery Scale. Respondents were asked to rate how strongly they agree or disagree with statements such as "There is really no way you can solve the problems you have" and "What happens to you in the future mostly depends on you" (reverse coded). Response options were 0 = *strongly agree*, 1 = *mildly agree*, 2 = *neither agree or disagree*, 3 = *mildly disagree*, and 4 = *strongly disagree*. Items were summed to create a score that ranged from 0 to 28, with higher scores indicating higher levels of mastery (α = .698).

Self-esteem was measured using a modified version of Rosenberg's (1986) Self-Esteem Scale. The six-item scale included items such as "You feel that you have a number of good qualities" and "On the whole you are satisfied with yourself." Response options were 0 = *strongly disagree*, 1 = *mildly disagree*, 2 = *neither agree nor disagree*, 3 = *mildly agree*, and 4 = *strongly agree*. Items were summed to create a continuous score that ranged from 0 to 24, with higher values indicating higher levels of self-esteem (α = .797).

Controls. We include controls for education, family household income, employment status, gender, age, marital status, number of children (continuous), and number of close friends who live less than one hour away from the respondent (continuous). Education reflects the highest level of education attained by the respondent and consists of a set of dummy variables, including high school, some college, and college or more, with less than high school as the reference group. Annual household income was defined as less than $20,000 (reference), $20,000 to $34,999, $35,000 to $54,999, $55,000 to $74,999, $75,000 to $94,999, and $95,000 or more. Employment status was defined as employed versus not employed (reference). Gender was coded as female versus male (reference), age was measured in years, and marital status was defined as married, never married (reference), and other (i.e., widowed, separated, or divorced).

Analytic strategy. Data analysis proceeded in several steps. First, we ran weighted descriptive statistics to describe the analytic sample (Table 1). We then specified the association between direct discrimination, vicarious discrimination via a family member, and vicarious discrimination via a close friend, with controls in the model and each mental health outcome (Table 2). In the next set of analyses, we tested whether mastery and self-esteem buffer the impact of each type of discrimination on depressive symptoms, anxiety symptoms, and anger (Table 3 and Table 4). All multivariable models shown control for gender, age, geographic location, household income, education, employment status, marital status, number of children, number of close friends, and incorporated appropriate survey weights. To preserve space, each table reports only focal associations. Tables with all study variables are presented in Appendix A, available with the online version of the article.

RESULTS

Table 1 presents the descriptive statistics for the sample. In terms of exposure to discrimination, 17 percent of the sample reported no exposure to discrimination, 30 percent reported direct experiences of discrimination, 28 percent reported vicarious discrimination via a family member, and 25 percent reported vicarious discrimination via a close friend. In terms of mental health, we found that the average level of CES-D depressive symptoms is 14.342, the average level of anxiety

Table 1. Descriptives, Nashville Stress and Health Study, 2011 to 2014 (N = 596)

Variable	*M*	*SD*
Dependent variables		
Depressive symptoms	14.342	9.531
Anxiety symptoms	9.196	3.504
Anger	6.800	5.749
Focal measure		
No discrimination	.172	
Direct discrimination	.300	
Vicarious discrimination via a family member	.276	
Vicarious discrimination via a close friend	.252	
Coping resources		
Mastery	19.712	5.200
Self-esteem	21.898	2.819
Controls		
Age	43.650	11.064
Gender		
Female	.541	
Education		
Less than high school	.140	
High school	.261	
Some college	.231	
College or more	.359	
Household income		
<$20,000	.277	
$20,000–$34,999	.207	
$35,000–$54,999	.238	
$55,000–$74,999	.112	
$75,000–$94,999	.093	
≥$95,000	.073	
Employment status		
Employed	.703	
Marital status		
Married	.362	
Never married	.379	
Other	.259	
Number of children	2.069	2.004
Number of close friends	4.781	10.199

symptoms is 9.196, and the average anger score is 6.800. The average mastery score is 19.712, and the average self-esteem score is 21.898.

Table 2 presents the regression models for direct discrimination, vicarious discrimination via a family member, vicarious discrimination via a close friend, and each mental health outcome. Model 1 examines the relationship between each type of discrimination and CES-D depressive symptoms. Results indicate that both direct discrimination (b = 5.216, $p < .001$) and vicarious discrimination via a family member (b = 5.723, $p < .001$) are significantly associated with depressive symptoms. Vicarious discrimination via a close friend was marginally associated with depressive symptoms (b = 2.032, $p < .10$). Post hoc tests indicate that there are no significant differences between experiences of direct

Table 2. Discrimination Type and Mental Health, Nashville Stress and Health Study, 2011 to 2014 (N = 596)

	(1) Depressive symptoms	(2) Anxiety symptoms	(3) Anger
Focal variable	b (SE)	b (SE)	b (SE)
Direct discrimination	5.216***	1.234**	4.177***
	(1.104)	(.424)	(.663)
Vicarious discrimination via a family member	5.723***	1.747***	2.121**
	(1.154)	(.443)	(.693)
Vicarious discrimination via a close friend	2.032†	1.204**	1.983**
	(1.184)	(.454)	(.711)

Note: Results based on linear ordinary least squares regressions. Standard errors in parentheses. Models are weighted and adjusted for age, gender, employment, education, income, marital status, number of children, and number of close friends.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

Table 3. A Test of Mastery as a Moderator in the Association between Each Discrimination Type and Mental Health, Nashville Stress and Health Study, 2011 to 2014 (N = 596)

	(1) Depressive symptoms	(2) Anxiety symptoms	(3) Anger
Variable	b (SE)	b (SE)	b (SE)
Focal variables			
Direct discrimination	13.276***	4.400**	12.666***
	(3.652)	(1.510)	(2.326)
Vicarious discrimination via a family member	8.091*	2.190	3.855
	(3.995)	(1.652)	(2.545)
Vicarious discrimination via a close friend	9.150*	2.802	2.754
	(4.118)	(1.702)	(2.624)
Coping resource			
Mastery	−.522***	−.100	−.098
	(.153)	(.063)	(.096)
Interaction			
Direct Discrimination × Mastery	−.489**	−.182*	−.473***
	(.185)	(.072)	(.118)
Vicarious Discrimination via a Family Member × Mastery	−.174	−.035	−.110
	(.198)	(.082)	(.126)
Vicarious Discrimination via a Close Friend × Mastery	−.367	−.085	−.057
	(.201)	(.083)	(.127)

Note: Results based on linear ordinary least squares regressions. Standard errors in parentheses. Models are weighted and adjusted for age, gender, employment, education, income, marital status, number of children, and number of close friends.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

discrimination and vicarious discrimination via a family member on depressive symptoms ($p > .05$). However, significant differences were observed between direct discrimination and vicarious discrimination via a close friend ($p < .001$) and

Table 4. A Test of Self-Esteem as a Moderator in the Association between Each Discrimination Type and Mental Health, Nashville Stress and Health Study, 2011 to 2014 (N = 596)

	(1) Depressive symptoms	(2) Anxiety symptoms	(3) Anger
Variable	*b* (*SE*)	*b* (*SE*)	*b* (*SE*)
Focal variables			
Direct discrimination	18.913**	8.165**	14.995**
	(7.130)	(2.982)	(4.632)
Vicarious discrimination via a family member	25.327**	8.312*	11.317*
	(8.255)	(3.453)	(5.363)
Vicarious discrimination via a close friend	20.576*	6.336†	10.902*
	(8.850)	(3.702)	(5.750)
Coping resource			
Self-esteem	–.842**	–.033	–.117
	(.274)	(.115)	(.178)
Interaction			
Direct Discrimination × Self-Esteem	–0.661*	–.325*	–.509*
	(.325)	(.136)	(.211)
Vicarious Discrimination via a Family Member × Self-Esteem	–.941*	–.309*	–.435†
	(.377)	(.157)	(.244)
Vicarious Discrimination via a Close Friend × Self-Esteem	–.823*	–.232	–.401†
	(.396)	(.166)	(.257)

Note: Results based on linear ordinary least squares regressions. Standard errors in parentheses. Models are weighted and adjusted for age, gender, employment, education, income, marital status, number of children, and number of close friends.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

vicarious discrimination via a family member versus vicarious discrimination via a close friend ($p < .001$).

In Model 2, we examine the association between each type of discrimination and anxiety symptoms. We see that direct discrimination (b = 1.234, $p < .01$), vicarious discrimination via a family member (b = 1.747, $p < .001$), and vicarious discrimination via close friend (b = 1.204, $p < .01$) are all significantly related to anxiety symptoms. Post hoc tests indicate no significant differences between direct discrimination versus vicarious discrimination via a family member ($p > .05$), direct discrimination versus vicarious discrimination via a close friend ($p > .05$), and vicarious discrimination via a family member versus a close friend ($p > .05$).

The results for anger are presented in Model 3. We see here that both direct discrimination and vicarious discrimination via a family member and via a close friend are significantly associated with anger. We also observed significant differences in the impact of different types of discrimination on anger using post hoc tests: direct discrimination was associated with significantly higher levels of anger than either vicarious discrimination via a family member ($p < .001$) or a close friend ($p < .001$). No significant differences were observed between vicarious discrimination via a family member versus a close friend ($p > .05$).

Turning to Table 3, we investigate the role of mastery as stress buffer for each health outcome. We find that mastery moderates the association between direct discrimination and depressive symptoms (Model 1, b = –.489, $p < .01$), anxiety symptoms (Model 2, b = –.182, $p < .05$), and anger (Model 3, b = –.473,

$p < .001$). In each case, we see that higher levels of mastery weaken the effect of direct discrimination on mental health. We do not observe a significant stress-buffering effect of mastery for vicarious discrimination via a family member or vicarious discrimination via a close friend for any of the mental health outcomes. In supplementary analyses, we tested whether the impact of mastery on discrimination type varied by education level (high education, defined as college or more, versus low education, defined as less than college). The test of the Discrimination × Mastery × Education interaction was not significant (Appendix C, available with the online version of the article).

In our last set of analyses, we tested the role of self-esteem as a stress buffer (Table 4). First, we find that self-esteem moderates the association between vicarious discrimination via a family member ($b = -.941$, $p < .05$) as well as vicarious discrimination via a close friend and depressive symptoms ($b = -.823$, $p < .05$). The Direct Discrimination × Self-Esteem interaction was also significant ($b = -.661$, $p < .05$). For anxiety symptoms, we observed a significant Direct Discrimination × Self-Esteem interaction ($b = -.325$, $p < .05$) and Vicarious Discrimination via a Family Member × Self-Esteem interaction ($b = -.309$, $p < .05$). The Vicarious Discrimination via a Close Friend × Self-Esteem interaction was not significant ($b = -.232$, $p > .05$). Finally, we examine whether self-esteem buffers the impact of discrimination on anger. We observed a significant interaction for Direct Discrimination × Self-Esteem interaction ($b = -.509$, $p < .05$). The interactions for Vicarious Discrimination via a Family Member × Self-Esteem ($b = -.435$, $p < .10$) and Vicarious Discrimination via a Close Friend × Self-Esteem were marginally significant ($b = -.401$, $p < .10$).

To aid in interpretation of Table 4, Figure 1 plots marginal effects at (1) low self-esteem (i.e., one standard deviation below the mean of self-esteem), (2) the mean of self-esteem, and (3) high self-esteem (i.e., one standard deviation above the mean of self-esteem) for direct discrimination, vicarious discrimination via a family member, and vicarious discrimination via a close friend for each mental health outcome. The relationship between direct discrimination, vicarious discrimination via a family member, and vicarious discrimination via a close friend and mental health appears to be weaker among those with higher levels self-esteem (see Panel A, Panel B, and Panel C). For example, black Americans with the mean level of self-esteem who experienced vicarious discrimination via a family member reported, on average, 15.637 depressive symptoms, contrasted with an average score of 10.290 depressive symptoms for those with high self-esteem (see Panel A). A similar pattern was observed for anxiety symptoms (Panel B) and anger (Panel C).

Supplemental Analyses

The relationship between direct discrimination and vicarious discrimination may also vary by gender. In supplemental analyses, we tested interactions between direct discrimination and female, vicarious discrimination via a family member and female, and vicarious discrimination via a close friend and female for all three outcomes. For all tests, no significant interactions were detected (Appendix B, available with the online version of the article). The lack of gender differences may be due to cell size or the fact that the experience of direct and vicarious discrimination is universally harmful to mental health, regardless of gender. Nevertheless, we believe future research is

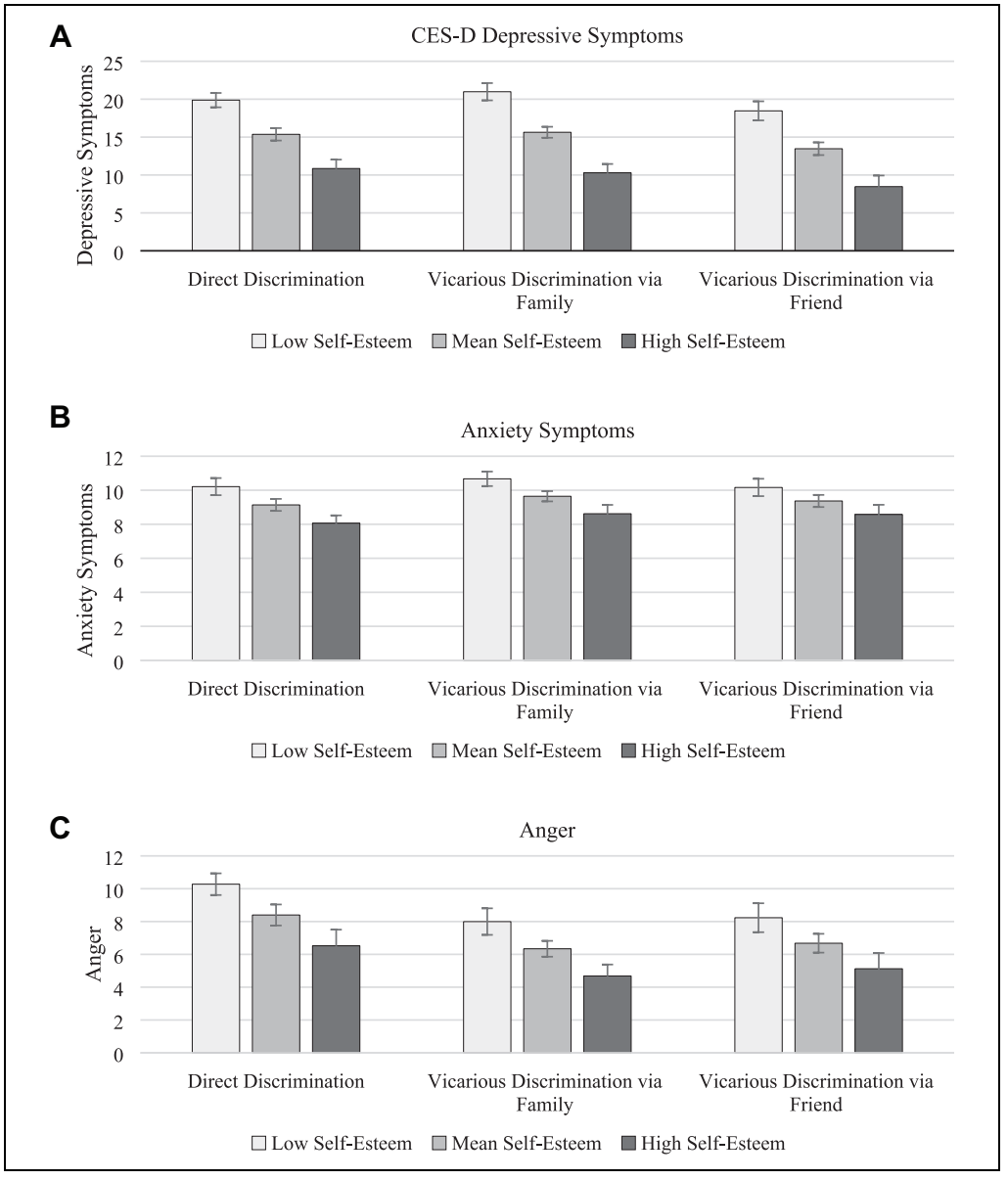

Figure 1. The Moderating Role of Self-Esteem in the Relationship between Direct Discrimination, Vicarious Discrimination via a Family Member, and Vicarious Discrimination via a Friend and Mental Health

Note: Estimates are derived from Model 1 of Table 4. All other covariates are held at their respective means. Ninety-five percent confidence intervals are displayed.

Note: Estimates are derived from Model 2 of Table 4. All other covariates are held at their respective means. Ninety-five percent confidence intervals are displayed.

Note: Estimates are derived from Model 3 of Table 4. All other covariates are held at their respective means. Ninety-five percent confidence intervals are displayed.

necessary with a larger sample of black men and women to determine whether the impact of vicarious discrimination varies by gender.

DISCUSSION

The goal of this study was to examine the association between direct and vicarious experiences of discrimination and mental health as well as the role that psychosocial resources play in buffering this relationship. The findings reported here indicate that direct and vicarious experiences of discrimination are detrimental to mental health. The findings for direct discrimination are consistent with previous research (Kessler et al. 1999; Taylor and Turner 2002; Williams et al. 2019), but the findings for vicarious discrimination gives us important knowledge about the harmful impact that secondhand exposure to discrimination can have on mental health. Our study also sheds new light on the effectiveness of common coping resources in the stress process model for individuals experiencing vicarious discrimination. Indeed, we show that the association between vicarious experiences of discrimination and mental health are dependent on the availability of self-esteem. We find that self-esteem, but not mastery, buffered the impact of vicarious experiences of discrimination via a family member and via a close friend on mental health. Results suggest two primary conclusions, grounded in the stress process model, which we discuss further.

First, our findings indicate that vicarious discrimination is a significant stressor that increases the risk of depressive symptoms, anxiety symptoms, and anger. Importantly, this research suggests that discriminatory events experienced by socially significant others have a powerful impact on the mental health of individuals they are connected to. Our study clearly illustrates that the burden of discrimination, therefore, is shouldered not only by those who directly experience discrimination but also by those who vicariously experience discrimination. As such, stress proliferates beyond the target of discrimination, "disruptively spreading to important social relationships and adversely affects the lives of others in those relationships" (Pearlin et al. 2005:213). Consequently, we find that vicarious discrimination can trigger mental health responses similar to those reported by those who directly experience discrimination.

However, there were notable differences between experiencing vicarious discrimination via a family member versus a close friend. While experiences of vicarious discrimination via a family member had the same impact on mental health as directly experiencing discrimination for depressive symptoms and anxiety, the experience of vicarious discrimination via a close friend was less detrimental to mental health in terms of depressive symptoms than if a family member was discriminated against. This finding suggests that the experience of vicarious discrimination is particularly salient when it is experienced via a family member, which aligns with other research that suggests that social bonds between family members are particularly consequential for health (Umberson, Crosnoe, and Reczek 2010). The importance of family relationships in the stress process is emphasized by Pearlin and Turner (1987:143), who note, "Relationships that begin with life itself and are terminated only by death foster powerful emotional stakes."

Although it is unclear how discrimination spreads beyond the immediate target, scholars have speculated that experiences of discrimination can result in behavioral changes that can strain intimate relationships (Trail et al. 2012;

Wofford et al. 2019). For example, Trail et al. (2012) found that perceived discrimination was associated with lower marital quality and increased verbal aggression among Latinx couples. Others have suggested that vicarious discrimination may damage health by activating feelings of fear and concern for the victim of discrimination and/or by triggering anticipatory fear of being the target of direct discrimination in the future (Grace 2020; McFarland, Taylor, and McFarland 2018). The idea of "linked lives" (Elder 1994) has been used to capture the way in which people may feel that discriminatory acts committed against family members or friends in their social milieu are "collectively shared and can be personally stressful" (Chae et al. 2021:2).

It is important to highlight that the experience of vicarious discrimination via a family member may be particularly salient for black Americans because family relationships play a prominent role in the lives of black Americans and have traditional and cultural significance (Lincoln and Chae 2012; Taylor, Chatters, and Cross 2021). Overall, research indicates that black Americans interact with their family frequently (Lincoln, Taylor, and Chatters 2013; Mouzon 2013; Taylor et al. 2021) and report a high degree of family closeness (Taylor et al. 2021). In addition, racial marginalization in U.S. society has made kin relationships particularly important for black Americans (Lincoln and Chae 2012), and black Americans tend to seek out family relationships to cope with the stressors they experience (Nguyen et al. 2016; Taylor et al. 2013), including the stress of discrimination. As a result of these processes, family members are also exposed to these painful experiences, which could have negative consequences for their mental health. In sum, both the frequency at which black Americans experience discrimination (Kessler et al. 1999) and the central nature of family relationships among black Americans (Lincoln et al. 2013; Taylor et al. 2021) likely result in black Americans experiencing vicarious discrimination in racially specific ways.

Based on the findings reported here, it is clear that more research is needed to elucidate the pathways that connect vicarious discrimination to poor mental health. Though sociological approaches to stress clearly recognize its origin in interpersonal relationships, social stress research largely ignores its relational context. Classic stress proliferation studies of informal caregivers show how care-related stressors create a subsequent chain of stressors that diminish well-being (Pearlin et al. 1997), but this work has privileged circumstances of one individual over potentially other meaningful social connections. Other studies have examined stress contagion in the forms of stress spillover in the context of couples or the mother–child relationship (Trail et al. 2012; Turney 2022). The current study makes important advances by illustrating how mental health is influenced by not only individual-level stressors but also stressors inherently and uniquely tied to family *and* close friends. As an extension to the stress process model, the framework applied here has the potential to advance the study of mental health among racial minorities by illustrating not only that discriminatory stress manifest within the lives of individuals but also that it is shared between persons whose lives are linked.

As a second study contribution, we show that the consequences of vicarious discrimination depend on the presence of self-esteem but not mastery. Having a secure sense of self-worth may help individuals cope with both direct and vicarious experiences of discrimination. People with high self-esteem may be able to experience vicarious discrimination without suffering

the emotional costs because they are able to separate their self-concept from the experiences of their friends and family members. Alternatively, self-esteem may serve as an "emotional anchor" that helps to modify the meaning of the stressor (Cast and Burke 2002). For example, people with high self-esteem may work to discredit negative evaluations and/or by attributing the unfair treatment to external factors. As such, self-esteem serves as a resource that individuals can draw on to buffer the mental health impacts of vicarious discrimination. While we are not aware of any other research that examines whether self-esteem moderates experiences of vicarious discrimination on mental health, others have shown that self-esteem is a resource for reducing the impact of direct experiences of discrimination on mental health (Moradi and Subich 2004; Tynes et al. 2012). In line with previous research, the current study also finds evidence that self-esteem moderates direct experiences of discrimination on depressive symptoms, anxiety, and anger.

The results for mastery as a stress buffer deviate from our findings for self-esteem. Interestingly, we found that mastery moderated the association between direct discrimination and depressive symptoms, anxiety, and anger but not vicarious discrimination and any of the mental health outcomes. This may be because mastery is a resource that focuses on solving problems and controlling one's own circumstances. This orientation may be helpful when one is the target of discrimination because it encourages active problem solving (Ross and Mirowsky 2013) but ineffective when others are targets of discrimination because of the inability to solve other peoples' problems for them. As such, mastery may be ineffectual at protecting individuals from the health consequences associated with vicarious stressors. This finding is surprising given the central role that mastery has played as a stress buffer in the stress process literature (Pearlin 1999; Ross and Mirowsky 2013; Thoits 2010). In fact, Ross and Mirowsky (2013:379) have stated that "of all the beliefs about self and society that might affect distress, belief in control over one's life may be the most important." While this may be true for direct experience of stressors, such as direct discrimination, this may not be true for the experience of vicarious stressors. These results are suggestive of the potential limits of mastery as a stress-buffering resource. However, more research is needed to confirm this possibility.

It is clear that the mental health consequences of discriminatory events extend beyond the target of discrimination, suggesting that vicarious discrimination is a pernicious stressor that warrants further examination. In the current study, we examined major instances of direct and vicarious discrimination, such as being denied a loan, being unfairly fired, and/or being treated unfairly by the police. Vicarious experiences of other forms of discriminatory treatment, such as everyday discrimination and ambiguous discrimination, may also have substantial impacts on mental health. To understand the full extent to which discrimination "gets under the skin" to influence population health, we must more adequately measure the stressors that capture the social context in which black Americans live. It is also important to note that research that excludes measures of vicarious discrimination have likely underestimated the broader impact that discrimination has on population health. Others have noted that discrimination is often conceptualized as an individual-level stressor (Colen et al. 2019), yet mounting evidence suggests that discrimination should thought of as both a mesolevel (Sewell et al.

2016, 2020) and a macrolevel stressor (Bor et al. 2018; Chae et al. 2021).

Finally, we would like to note that the current study adds to the mounting evidence that suggests that self-esteem plays a critical role in protecting the mental health of black Americans (Gayman et al. 2014; Louie et al. 2021; Louie and Wheaton 2019). A secure sense of self-worth may be a particularly important coping resource for black Americans because of the systematic devaluation of black people in mainstream U.S society. As such, black parents may actively foster self-esteem as a strategy to help their children maintain positive evaluations of self in the face of disadvantage and negative messaging about black culture (Dow 2016; Gayman et al. 2014; Louie and Wheaton 2019). This positive self-concept may help black Americans navigate adversity as well as recover from experiences of both direct and vicarious discrimination. Fostering greater levels of self-esteem among black Americans is only a short-term solution to combat the pernicious mental health effects of vicarious discrimination, but reducing discrimination and mitigating its effects will require interventions at all levels of society.

Limitations

The contributions of this study should be understood within the context of various limitations. First, our findings are specific to Nashville, Tennessee, thus findings presented here may not generalize to the broader black American U.S. population. There are historical and contemporary contextual factors specific to Nashville, Tennessee, that deserve mention. First, Nashville played a critical yet underrecognized role in role in the civil rights movement (Isaac et al. 2020). Following from its role in desegregation processes in the United States, Nashville has been a notable mecca for black intellectual life (Briggs 2015). For example, Nashville is home to two historically black universities as well as the oldest historically black medical school in the United States, Meharry Medical College. As a result, Nashville is comprised of a socioeconomically diverse black population, including black Americans of higher socioeconomic status. Altogether, then, our findings here are not generalizable to the broader American populace for these reasons.

Second, the NSAHS is cross-sectional; thus definitive statements about causal ordering cannot be made. However, prior research using longitudinal data does indicate that discrimination is causally prior to poor mental health (Brown et al. 2000; Jackson et al. 1996; Schulz et al. 2006) and not vice versa. There is similar evidence to support self-esteem (Orth, Robins, and Roberts 2008; Orth, Robins, and Widaman 2012) and mastery (Ross and Mirowsky 2013) as occurring prior to poor mental health, especially depression. Another limitation is that we were unable to disaggregate vicarious experiences of discrimination by family relationship type (i.e., spouse vs. child) due to data sparseness. The experience of vicarious discrimination may be further complicated based on whether the target of discrimination is one's spouse versus one's child. Because parents feel a deep responsibility for protecting their children (Dow 2016), the experience of vicarious discrimination via one's child may be particularly harmful for parents' mental health. We were also unable to determine when the discriminatory event(s) occurred. It could be that events that occurred more recently are particularly distressing while discriminatory events that happened several years ago have less of an impact on current mental health.

It is also important to note that individuals tend to perceive more discrimination directed at their group than they do

personally (Taylor et al. 1990). However, the likelihood for this bias is reduced in the current study because we employed a measure of major discrimination that asks about discriminatory behaviors rather than whether the respondent experienced discrimination in general. Prior research suggests that the person/group discrimination discrepancy is reduced when respondents are asked about specific types of unfair treatment (e.g., not hired, denied a bank loan, or fired; Arvey and Cavanaugh 1995). There is also evidence that individuals with higher levels of racial centrality perceive more discrimination than those with lower levels of racial centrality (Seaton, Yip, and Sellers 2009; Sellers and Shelton 2003). In supplemental analyses (not shown), we added a measure of racial centrality as a control in our full models, and the results remained substantively similar.

Finally, the measure of discrimination did not allow for respondents to report both direct and vicarious experiences of discrimination. As a result, we may have underestimated experiences of vicarious discrimination as respondents were asked if they had ever experienced vicarious discrimination only if they did not first report that they experienced direct discrimination. We speculate that estimates of the impact of vicarious discrimination reported in this article are conservative because individuals who experienced direct discrimination may have also experienced vicarious discrimination. Nevertheless, future research should probe the potential compounding impact of experiencing both direct and vicarious discrimination.

CONCLUSION

This study adds to a growing body of research that examines the impact of vicarious stressors on health. In the current study, we show that the experience of vicarious discrimination is common, and its impact on mental health generalizes across several dimensions of mental health, including depressive symptoms, anxiety symptoms, and anger. We also demonstrate that the impact of vicarious discrimination on mental health is not uniform. Self-esteem buffers the impact of vicarious discrimination experienced via a family member or via a close friend on mental health. In contrast, we did not find evidence that mastery served as a stress buffer for vicarious experiences of discrimination. Going forward, it is important for scholars to continue to examine the extent to which different forms of vicarious discrimination at the meso, micro, and macro levels of society impact mental health as well as the role that various coping resources may play in this relationship.

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