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A Critical Review of Current Evidence on Multiple Types of Discrimination and Mental Health

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Little is known about people who experience multiple types of discrimination (e.g., racism and heterosexism). While some work suggests that multiply discriminated groups are at higher risk for poor mental health, other studies propose that they may develop resilience against additional kinds of discrimination. We conducted a review of published studies on the relationship between multiple types of discrimination and mental health to critically examine evidence in support of broad risk and resilience models. Using PRISMA guidelines, we identified 40 studies that met our inclusion criteria. Typically, studies examined either whether experiencing multiple discrimination was related to poorer mental health, or whether one kind of discrimination was more predictive of poor mental health. Studies generally showed support for the risk model, with multiple forms of discrimination associated with higher risk for depression symptoms. Furthermore, both racism and heterosexism uniquely predicted symptoms of depression, although initial evidence suggested that only heterosexism predicted suicidality among lesbian, gay, bisexual, transgender, and queer (LGBTQ) racial/ethnic minorities. Findings on multiple discrimination and other mental health problems (e.g., anxiety, posttraumatic stress disorder [PTSD], distress, and substance use) were mixed. The current evidence suggests that multiply discriminated groups exhibit higher risk for some mental health problems, particularly depression symptoms. However, methodological problems abound in this literature (e.g., correspondence between study sample and types of discrimination assessed), which limits our ability to draw clear conclusions about multiple discrimination. We propose that to further our understanding of how multiple kinds of discrimination may affect mental health, studies must remedy these and other issues.

Public Policy Relevance Statement

Discrimination is related to poorer mental health. Experiencing multiple kinds of discrimination (e.g., racism and heterosexism) may further increase people's chances of developing depression symptoms. Experiencing racism and heterosexism both uniquely contribute to depression risk among racially/ethnically diverse sexual and gender minorities. Although only a few studies examined suicide risk, some initial evidence indicates that experiencing heterosexism, above and beyond racism, may explain suicidal risk among lesbian, gay, bisexual, transgender, and queer (LGBTQ) racial/ethnic minorities.

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Perceived interpersonal discrimination is related to poorer mental health (Lewis, Cogburn, & Williams, 2015; Pascoe & Smart Richman, 2009). Most research evaluates a single type of discrimination, primarily racism (Pascoe & Smart Richman, 2009), paying limited attention to discrimination attributed to multiple reasons (e.g., because of one's gender, race/ethnicity, and sexual orientation). Yet, some groups (e.g., lesbian, gay, bisexual, transgender, and queer [LGBTQ] racial/ethnic minorities) frequently experience more than one type of discrimination (Grollman, 2012; Harnois, 2014).

Although small, the existing literature offers two competing perspectives on how experiencing multiple kinds of discrimination is related to health: *risk models* that argue that experiencing multiple forms of discrimination is increasingly detrimental to one's mental health, and *resilience models* that suggest that experiencing multiple or a single kind of discrimination have a similar impact on mental health (Cyrus, 2017). These models also include assumptions about whether differences exist in the way discrimination types contribute to health more generally. Whereas most research shows that experiencing multiple types of discrimination (i.e., multiple discrimination) is associated with higher risk of mental health problems, some studies appear to find evidence of resilience. The current article synthesizes and provides a critical review of the literature on the relationship between multiple discrimination and mental health, with a focus on risk and resilience models. Throughout the article, we use the terms "types," "kinds," "reasons," and "forms" of discrimination interchangeably to reflect the variability in use throughout the literature.

According to risk models, discrimination is a chronic social stressor that contributes to poorer health (Busse, Yim, Campos, & Marshburn, 2017; Krieger, 2012; Meyer, 2003) and, thus, experiencing more than one kind of discrimination contributes added health burden (Grollman, 2014; Meyer, Schwartz, & Frost, 2008). Some scholars have suggested that multiple discrimination has an additive effect, meaning that each additional new type of discrimination experienced worsens health (Raver & Nishii, 2010). Others argue that multiple discrimination has an exacerbating effect, such that experiencing two types of discrimination intensifies the impact on health, beyond additive effects (Thoma & Huebner, 2013). Although there are differences in how these models prescribe the effect on health, both suggest that multiple discrimination has a compounding negative impact on health. This argument inherently assumes that each kind of discrimination must be in some way distinct from the other, because each new additional type of discrimination worsens health. Therefore, in combination these risk models indicate that experiencing more forms of discrimination is worse for mental health, and that discrimination types (e.g., racism, sexism) may differ in how they account for mental health issues.

In contrast, resilience models suggest that persons habituate to discrimination and, therefore, singly and multiply discriminated persons exhibit similar health outcomes. Some scholars have referred to this as an inurement effect, drawing from adaptation theory, which suggests that a person exposed to a stimulus habituates over time, and that future similar stimuli will elicit a diminished response (Helson, 1964; Raver & Nishii, 2010; Thoma & Huebner, 2013). Accordingly, individuals who adapt to discrimination in one identity domain (e.g., gender)

may be mostly unaffected when experiencing additional discrimination in other domains (e.g., race/ethnicity). A person may adapt to discrimination through a variety of coping strategies, which are then generalized to experiences with other kinds of discrimination (Cyrus, 2017). This explanation inherently suggests that discrimination types are similar, because generalization of habituation requires comparable stressors. Therefore, resilience models suggest that the mental health outcomes of multiply and singly discriminated persons are largely similar, as are the contributions of distinct forms of discrimination on mental health problems.

The purpose of the current review is to provide a comprehensive overview of existing literature examining whether multiple discrimination confers mental health risk or resilience, and to identify gaps in determining this answer. We first provide a summary of findings and then a critical evaluation of the literature, including highlighting conceptual gaps and inconsistencies. We propose directions for future research to address these issues and improve our understanding of how multiple discrimination affects mental health.

Method

Literature Search and Study Selection

We used PsycINFO, PubMed, Web of Science, ERIC, and ProQuest Sociology Databases to search for peer-reviewed articles published in English. We utilized three sets of keywords in combination to capture studies on the relationship between multiple discrimination and mental health: (a) *discrimination, prejudice, mistreatment, stigma, and unfair treatment*; (b) *double disadvantage, multiple marginal**, *multiple min**, *intersectionality, multiple*; and (c) *health, mental health*. We selected these keywords using an iterative process that involved first surveying the literature, identifying key exemplary studies and reviewing keywords associated with those studies, and conducting test searches using combinations of keywords to finalize our list. The final search was run in August 2019.

Our search showed that studies examining risk or resilience among multiply discriminated persons typically asked different questions about how experiencing multiple kinds of discrimination contributed to mental health. Two groups of studies evaluated whether experiencing multiple discrimination was related to poorer mental health, but they differed in the way they conceptualized and measured discrimination. The first group of studies counted the number of types of discrimination participants reported. For example, some studies in this category assessed whether participants experienced one, two, or three types of discrimination by asking about experiences of racism, sexism, and heterosexism. Studies in this group then evaluated whether experiencing more kinds of discrimination was associated with worse mental health. We included studies in this group if they: (a) included a measure reflecting the number of discrimination types experienced (e.g., 0–8 kinds of discrimination); and (b) evaluated the relationship between types of discrimination and any mental health outcome.

The second group of studies examined the relationship between intersectional discrimination and mental health. These studies often relied on aspects of intersectionality theory, argu-

ing that multiply marginalized groups do not experience discrimination as a sum of their marginalized identities (Bowleg, 2008) and, therefore, unique measurements are needed. Studies in this group relied on intersectional discrimination scales (e.g., racist heterosexism) that inquired about experiences that were unique to the intersecting identities of the population from which they sampled (e.g., LGBTQ racial/ethnic minorities). We included studies if they: (a) used an intersectional discrimination scale; and (b) evaluated the relationship between intersectional discrimination and mental health.

Although the first two groups of studies generally assessed whether a relationship existed between multiple discrimination and mental health, the third group focused on a slightly different question. These studies examined whether differences existed in how much discrimination types predicted mental health. In other words, they examined the independent effects of different types of discrimination on a mental health problem, while accounting for other kinds of discrimination. Much of the literature we identified fell in this group. For example, many studies examined the unique effects of racism in predicting depression symptoms, while accounting for heterosexism, and vice versa. These studies provide information about risk and resilience because they help clarify whether some types of discrimination are more harmful than others (Thoma & Huebner, 2013). Studies in our search were included in this group if they: (a) included separate variables representing different types of discrimination; and (b) conducted a statistical test that simultaneously examined the effect of each type of discrimination on a mental health problem.

Given the variability in key terms across studies (Grollman & Hagiwara, 2017), articles that evaluated experiences with discrimination, unfair treatment, stigma, or prejudice were included. Studies that reported on multiple settings in which discrimination occurred (e.g., at work or school), but did not refer to discrimination related to multiple social statuses (e.g., based on race/ethnicity, gender, and sexual orientation) were excluded. Because discrimination is constructed by sociocultural context and history, we only reviewed studies based in the United States. Only quantitative research studies were included.

Study Selection and Analysis

We followed PRISMA guidelines for our study search and selection (see Figure 1; Shamseer et al., 2015). Given our interest in identifying gaps in existing research on multiple discrimination, we performed a critical review of the literature. Unfortunately, a meta-analysis was not feasible given the poor quality of the studies reviewed and the diverse methodologies used across studies. Furthermore, most studies lacked available data to calculate effect sizes (e.g., many studies reported beta coefficients with diverse covariates in their model, but did not report correlation coefficients; Borenstein, Hedges, Higgins, & Rothstein, 2009). Given that methodological quality was a major issue across the studies, a narrative review was conducted to identify the issues needed to be addressed and future directions to improve our understanding of multiple discrimination and mental health. Forty studies met criteria for our review, and all except one were cross-sectional designs.

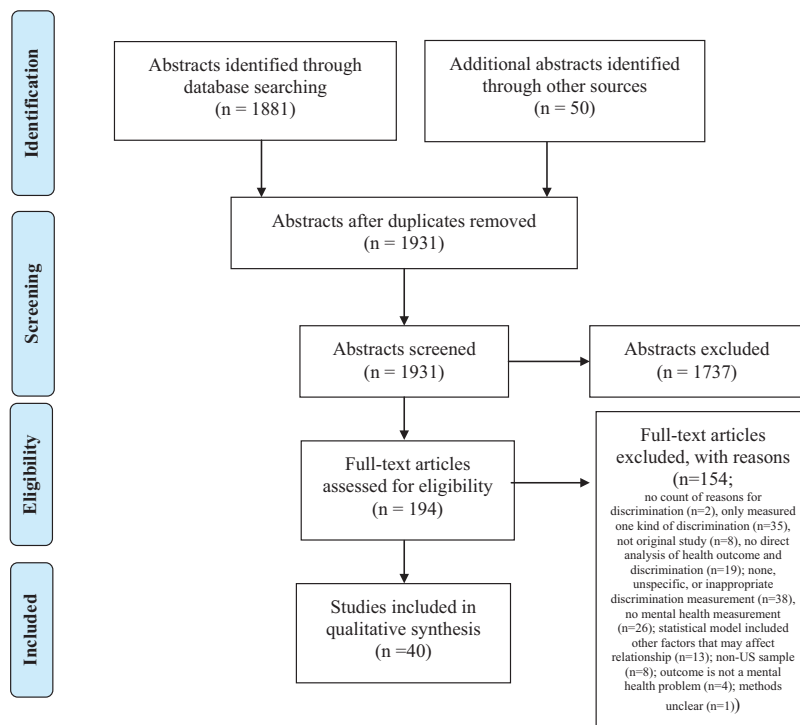


Figure 1. Breakdown of study selection using PRISMA guidelines. See the online article for the color version of this figure.

Results

Is Experiencing Multiple Types of Discrimination Related to Worse Mental Health?

Fourteen studies measured the relationship between experiencing multiple discrimination and self-reported mental health (see Table 1). These studies all generated a count of the number of discrimination types each participant reported experiencing. To do this, approximately half of the studies ($n = 8$) relied on a two-stage measure that typically inquired first about the frequency of discrimination and then about the perceived reasons for discrimination. For example, Grollman (2014) asked participants how often they experienced unfair treatment in their daily lives, and then asked them to identify the main reason for the unfair treatment. The author summed the reasons each participant endorsed to represent the number of types of discrimination experienced (e.g., only racism = 1 type; sexism, racism, and heterosexism = 3 types).

In contrast, the remaining studies ($n = 6$) used a one-stage approach to assess experiences of multiple kinds of discrimination. For example, McCabe, Bostwick, Hughes, West, and Boyd (2010) inquired about the frequency of each type of discrimination (e.g., experienced discrimination “because you were assumed to be gay, lesbian, or bisexual”) across several settings. They then created a variable representing endorsement of any of 0–3 types of discrimination.

Several studies examined more than one mental health problem. Most measured depression ($n = 10$), which was sometimes combined with anxiety ($n = 2$). Some of these studies focused on major depression disorder (MDD; $n = 4$), while most ($n = 7$) measured depression symptoms within the past month. One study assessed both symptoms and disorder at different time points (Gayman & Barragan, 2013). Studies also measured generalized anxiety disorder ($n = 1$), posttraumatic stress disorder (PTSD) symptoms ($n = 2$), psychosis symptoms ($n = 1$), psychological distress ($n = 2$), general mental health ($n = 3$), and substance use ($n = 2$). Given the variability in outcomes, we present depression and other mental health problems separately. We grouped studies that examined depression and anxiety simultaneously under depression given the high comorbidity among these problems (Kaufman & Charney, 2000).

Depression. In general, experiencing more kinds of discrimination was associated with greater depression symptoms across diverse samples (e.g., Sanders Thompson, Noel, & Campbell, 2004; Young, Stuber, Ahern, & Galea, 2005). Participants who reported experiencing more than one type of discrimination were 60–263% more likely to endorse depression symptoms or meet criteria for disorder than were participants who endorsed only a single type of discrimination (Gayman & Barragan, 2013; Grollman, 2012, 2014) or no discrimination (Bostwick, Boyd, Hughes, West, & McCabe, 2014). Further, experiencing multiple discrimination increased one’s odds of developing depression symptoms three years later by 115% (Gayman & Barragan, 2013). Several studies also explored mediation effects, showing that multiply marginalized groups (e.g., participants who were racial/ethnic and sexual minorities) endorsed more depression symptoms partly

because they experienced multiple kinds of discrimination (Calabrese, Meyer, Overstreet, Haile, & Hansen, 2015; Grollman, 2012, 2014). In combination, these studies provide support for a broad risk model.

A few studies provided mixed evidence of resilience. Calabrese et al. (2015); Hammond, Gillen, and Yen (2010); and Kessler, Mickelson, and Williams (1999) found no association between multiple discrimination and depression. Calabrese and colleagues (2015) did not find an association in their overall sample, but they did find evidence of risk among one subgroup; for Black sexual minority (SM) women in their sample, experiencing multiple discrimination was related to depression symptoms. Furthermore, multiple discrimination partially mediated the relationship between gender and depression among Black SMs. Similarly, Vu and colleagues (2019) only found evidence of the association between multiple types of discrimination and depression symptoms among Black and White women, but not men. This suggests there may be gender differences in how multiple discrimination affects depression. Next, Hammond and colleagues (2010) found no relationship between multiple discrimination and depression symptoms, but they only examined discrimination in the workplace, as their focus was more limited than others in our review. Finally, Kessler and colleagues (1999) reported no evidence of cumulative effects on MDD among persons reporting more than one type of discrimination. However, this study relied on the same high quality nationally representative dataset as Grollman (2014), who did find evidence of risk. Grollman (2014) excluded nearly 400 participants who had missing demographic or discrimination data, which may have contributed to the contradicting findings across investigators. In summary, although a few studies provide support for the resilience model, it is possible the results are explained by methodological and sampling differences (described in Discussion section).

Overall, these studies show that experiencing multiple discrimination is related to worse depression symptoms and greater likelihood of MDD, providing support for the risk model. Four studies found mixed or partial support for the resilience model. These differences in results may be related to study methodology and sample composition.

Other mental health. Ten studies examined mental health problems other than depression. These studies similarly showed that multiple discrimination was associated with greater PTSD (Reisner et al., 2016; Seng, Lopez, Sperlich, Hamama, & Reed Meldrum, 2012) and psychosis symptoms (Sanders Thompson et al., 2004), lower self-rated general mental health (Calabrese et al., 2015; Harnois & Bastos, 2018; Young et al., 2005), and greater odds of substance use (McCabe et al., 2010; Vu et al., 2019). This work provides initial support for a risk model across several types of mental health problems. However, three studies found some evidence of resilience for different psychological problems. Using the same large dataset with some sample differences, neither Kessler et al. (1999) nor Grollman (2014) found an association between multiple discrimination and psychological distress. Kessler and colleagues (1999) also found no evidence of higher risk for GAD among people who reported two or more types of discrimination. Additionally, Vu et al. (2019) found mixed results in the association between multiple discrimination and substance use. They showed resilience effects for men, but risk effects for women.

Table 1. Studies Examining the Association Between Multiple Discrimination and Mental Health

Reference	Sample	Construct	Discrimination scale	Possible reasons	Measurement of multiple discrimination	Mental health outcome	Major findings
Young, Stuber, Ahern, and Galea (2005)	Illicit drug users in New York City ($N = 1,008$); $M_{age} = 40.4$; 63.9% male; 49.7% Black and 41.7% Hispanic	Lifetime discrimination	Single prompt with possible reasons	Age, race, sex, sexual orientation, poverty, drug use, former imprisonment, other	Sum of reasons (yes/no; 0-8)	Current depression symptoms (CES-D); general mental health (SF-36)	Number of reasons associated with more depression symptoms, and with worse general mental health
Sanders Thompson, Noel, and Campbell (2004)	1,827 adults receiving mental health services; $M_{age} = 43$; 60% female; 57% White, 17% Black; 87% self-identified heterosexual	Lifetime discrimination	Experience of Discrimination Scale	Mental disability, race, gender, sexual orientation, religion, ethnicity, age, economic circumstance, physical disability, homeless status, prior arrest or conviction, other	Sum of reasons (yes/no; 0-12)	Past week depression and anxiety symptoms (Hopkins Symptom Checklist); past month psychotic symptoms (Colorado Symptom Index)	Number of reasons associated with more depression/anxiety symptoms, and with more psychosis symptoms
Gayman and Barragan (2013)	Longitudinal community-based sample from Miami-Dade County (Wave 1 $N = 1,944$; Wave 2 $N = 1,464$; persons with disabilities were oversampled); $M_{age} = 57.45$; 53% female; 48% Hispanic, 30% Black	Lifetime discrimination	Major Lifetime Discrimination (MLD) + reasons	Ethnicity, gender, race, age, religion, personal appearance, sexual orientation, income level, skin color, education, hair style, accent, physical limitation, not speak Spanish/English, other	None, 1, 2 + reasons	Lifetime Major Depression Disorder (CID); collected at Wave 1), past month depression symptoms (CES-D; collected 3 years later at Wave 2)	2 + vs. 1 type of discrimination: 173% more likely to meet criteria for depression disorder; 115% more likely to endorse past month depression symptoms at 3-year follow-up
Kessler, Mickelson, and Williams (1999)	Nationally representative telephone survey of 3,032 adults (ages 25-74), oversampling of men and older adults	Lifetime and daily discrimination	MIDUS discrimination questions (precursors to MLD and Everyday Discrimination Scale (EDS) + reasons)	Race/ethnicity, gender, SES, sexual orientation, physical/mental disability, other	One or 2 + reasons	Past year Major Depression Disorder (CID); past year Generalized Anxiety Disorder (GAD); past month psychological distress	No evidence of cumulative effects of discrimination in predicting any outcomes (no data shown)
Grollman (2012)	Nationally representative survey (Black Youth Culture Survey; $N = 1,052$); adolescents and young adults; Blacks and Latinos/as oversampled	Lifetime discrimination	Four questions asked about frequency of discrimination for each specific reason	Race, gender, sexual identity, social class	Sum of reasons (0-4)	Past month depressive symptoms (two items)	Two (60%), three (100%), and four (130%) types of discrimination were more likely (vs. single discrimination) to report depression symptoms. Number of reasons partially mediated number of disadvantaged statuses and depression
Grollman (2014)	Subsample from MIDUS nationally representative survey (study $N = 2,647$); $M_{age} = 44.83$; 5% immigrant	Daily unfair treatment	EDS, MLD, + reasons	Age, gender, race/ethnicity/nationality, religion, weight or height, other aspect of appearance, physical disability, sexual orientation	One, 2, or 3 + reasons	Past year Major Depressive Disorder (based on DSM-IV); past month psychological distress	Multiple discrimination 83% more likely (vs. single discrimination) to meet criteria for MDD; no difference for psychological distress. Number of types of discrimination mediated number of disadvantaged statuses and depression
Calabrese, Meyer, Overstreet, Haile, and Hansen (2015)	Sexual minorities from general population living in New York City ($N = 1,98$); $M_{age} = 31.86$; Black sexual minority women ($n = 64$) and men ($n = 67$), White sexual minority women ($n = 67$)	Daily unfair treatment	EDS + reasons	Gender, race, sexual orientation, other (not included in analysis)	Number of reasons (0-3)	Past week depression symptoms (CES-D); psychological wellbeing	Number of reasons not correlated with depression and negatively correlated with psychological wellbeing in general sample. Number of reasons mediated relationship between gender and both mental health outcomes among Black sexual minorities.
Hammond, Gillen, and Yen (2010)	Hospital workers ($N = 664$); one-quarter sample seeking care for work-related injury; ages 45-55; majority U.S.-born women; 39% White; college graduates	Past year discrimination in workplace	Initially screen for discrimination based on reason (yes/no), then assess overall frequency in different work situations	Race/ethnicity, nationality, gender, sexual orientation, age	None, 1, or 2 + reasons	Past week depression symptoms (CES-D)	Number of reasons not associated with depression

(table continues)

Table 1 (continued)

Reference	Sample	Construct	Discrimination scale	Possible reasons	Measurement of multiple discrimination	Mental health outcome	Major findings
Bostwick, Boyd, Hughes, West, and McCabe (2014)	LGB subsample from a national survey ($n = 577$) surveying general population; $M_{age} = 43.4$ – 47.3 years; 53% women; over 70% White	Past year discrimination	Adapted Experience of Discrimination Scale, using six items assessing frequency of discrimination for each reason	Race/ethnicity, sex, sexual orientation	1–3 reasons	Any/none past year mood or anxiety disorder (AUDADIS-IV)	Two (149%) and three (224%) types of discrimination more likely (vs. no discrimination) to report past year disorder. No difference in disorder between one type and no discrimination.
Vu, Li, Haardörfer, Windle, and Berg (2019)	Black or White adults ($N = 2,315$) participating in the final wave of a larger longitudinal study recruiting college/university students in Georgia; $M_{age} = 20.49$; 65.75% female; 25.10% Black; 11% sexual minority; 46.64% parental education less than a Bachelor's degree	Lifetime unfair treatment	Single items assessing racism and heterosexism (adapted from prior studies)	Race, sexual orientation	None or both reasons	Depressive symptoms during past 2 weeks (PHQ-9); past month alcohol use; past month tobacco product use; past month marijuana use	Women who experienced both types of discrimination (vs. no discrimination) were 263% more likely to report depressive symptoms, 65% more likely to use alcohol, 245% more likely to use tobacco, and 238% more likely to use marijuana. No such effects for men
Reisner et al. (2016)	Community-based sample ($N = 412$) of transgender adults; 19.2% people of color; 87.1% sexual minority	Daily unfair treatment	EDS + reasons	Age, sex, race, ethnicity, nationality, religion, sexual orientation, disability, SES, weight, gender expression, masculine/feminine appearance, other aspect of appearance, other reason	Sum of reasons (0–14)	Past month PTSD symptoms (PC-PTSD)	Number of reasons associated with more PTSD symptoms
Seng, Lopez, Sperlich, Hamana, and Reed Meldrum (2012)	Women participants part of larger study on PTSD and childbearing ($N = 619$); majority White (55.3%) or Black (33.9%)	Daily unfair treatment	EDS + reasons	Race, ethnicity/nationality, religion, sex, sexual orientation, disability, physical appearance, age, pregnancy status, other	Sum of reasons (0–10)	PTSD symptom count (NWS-PTSD)	Number of reasons predict PTSD symptoms
McCabe, Bostwick, Hughes, West, and Boyd (2010)	LGB adults from general population surveyed during the second wave of a national survey ($N = 577$); 81.9% ages 25–64; 51.3% female; 72.3% non-Hispanic White	Past year and lifetime discrimination	Experience of Discrimination Scale	Sexual orientation, race/ethnicity, gender	Combination of types (e.g., "all three types," "race and gender," "sexual orientation only")	Past year substance use disorder (AUDADIS-IV)	Three types (past year or lifetime) vs. no discrimination were approximately 300% more likely to have past year substance use; no difference between one type and no past-year discrimination
Harnois and Bastos (2018)	Nationally representative survey of U.S. adults ($N = 3,724$); 50.1% women; majority non-Hispanic Whites; majority junior college or high school degrees	Workplace discrimination (timeframe not specified)	Three questions assessing discrimination by reason	Gender, race or ethnic origin, age	Count of reasons (0, 1, 2 +)	Self-reported number of days with poor mental health during past month (single item)	2 + types vs. no discrimination reported 56% (overall sample) higher mean number of days of poor mental health during past month. Men showed 64% higher and women showed 56% higher mean number of days.

Note. LGB = Lesbian, gay, bisexual; CES-D = Center for Epidemiologic Studies Depression Scale; CIDI = Composite International Diagnostic Interview; AUDADIS = alcohol use disorder and associated disabilities interview schedule; NWS-PTSD = National women's study PTSD module; MIDUS = Midlife development in the United States; SF-36 = Short Form Health Survey.

In summary, these studies provide initial evidence for risk for PTSD and psychosis symptoms, general mental health, and mixed evidence for substance use. No evidence of a relationship between multiple discrimination and psychological distress or GAD was found, suggesting some support for a resilience model.

Are Intersectional Experiences of Discrimination Related to Poorer Mental Health?

We found 11 studies that used group-specific measures to capture intersectional experiences of discrimination (see Table 2). These studies differed from those that inquired about multiple kinds of discrimination, in that intersectional discrimination involved experiences of unfair treatment based on combined marginalized identities. For example, whereas studies inquiring about multiple types of discrimination might assess the discrimination experiences of racial/ethnic SMs by inquiring separately about racism and heterosexism, Balsam, Molina, Beadnell, Simoni, and Walters (2011) developed a scale to measure specific intersectional experiences, including heterosexism in racial/ethnic minority communities, and racism in LGBTQ spaces. The studies in our review that relied on intersectionality measured depression and anxiety symptoms ($n = 4$), anxiety symptoms only ($n = 1$), self-rated mental health ($n = 1$), PTSD symptoms ($n = 1$), and psychological distress ($n = 4$). All studies showed that intersectional discrimination was associated with worse mental health. These studies provide support for the risk model among intersectional discrimination experiences.

Is One Kind of Discrimination More Predictive of Mental Health Problems Than Others?

Seventeen studies tested the independent effects of different types of discrimination on mental health (i.e., when accounting for other kinds of discrimination; Table 3). For example, DeBlaere et al. (2014) examined whether perceived racism, sexism, and heterosexism each uniquely contributed to psychological distress by running all three types of discrimination in a simultaneous multiple regression model. Studies focused on diverse mental health problems, including depression ($n = 7$), depression in combination with anxiety ($n = 5$), anxiety ($n = 1$), PTSD ($n = 1$), general psychological distress ($n = 1$), substance use ($n = 1$), premenstrual distress ($n = 1$), and self-harm or suicidality ($n = 4$). Below we present results for depression, and then separately other mental health problems.

Depression. Twelve studies compared the independent effects of different types of discrimination on depression, with less than half assessing depression in combination with anxiety. Only one study appeared to measure depressive disorder (MDD; Crawford et al., 2014), whereas all other studies measured depressive symptoms. Some studies (e.g., DeBlaere et al., 2014; Krieger et al., 2011) referred to psychological distress, though their measures inquired specifically about depression and anxiety only. We refer to all these studies as examining depression. Studies measured discrimination based on the following reasons: race or ethnicity ($n = 12$), sexual orientation ($n = 10$), gender or sex ($n = 5$),

weight ($n = 1$), socioeconomic status (SES; $n = 1$), prior incarceration ($n = 1$), drug use ($n = 1$), homelessness ($n = 1$), or foreign nationality ($n = 1$). Our results will only highlight findings based on racism and heterosexism because these were the most common types of discrimination examined. Although several studies also examined sexism, they typically combined several additional types of discrimination in the analysis, which made it impossible to draw any conclusions regarding patterns across studies.

We found conflicting results across the studies we reviewed. However, most studies included at least one major methodological flaw (e.g., poor correspondence between types of discrimination measured and sample composition), which likely affected results (described in discussion section). Therefore, we examined whether the six studies without major flaws yielded consistent results. Among the six studies, they examined discrimination experiences among Blacks ($n = 1$), Latinos ($n = 2$), or diverse racial/ethnic minorities ($n = 3$). Five of these studies compared only racism and heterosexism among sexual and gender minority (SGM) racial/ethnic minorities. In three of these studies, all participants were male (Choi, Paul, Ayala, Boylan, & Gregorich, 2013; Díaz, Ayala, & Bein, 2004; Reisen, Brooks, Zea, Poppen, & Bianchi, 2013). In one study, half of participants were male (Thoma & Huebner, 2013); in another study, half were women, 9% were transgender, and 32% were men (Sutter & Perrin, 2016). All five studies showed that both racism and heterosexism independently contributed to depression symptoms. This suggests that among some racial/ethnic minority SGM groups, both racism and heterosexism are unique indicators of risk for depression.

The remaining study compared the effects of racism, sexism, and heterosexism among SM women of color (DeBlaere et al., 2014). The authors showed that among their sample, only heterosexism uniquely predicted depression symptoms. This study provides initial evidence of risk among racially/ethnically diverse SM women, and suggests possible gender differences in the way discrimination types predict depression.

Other mental health. Nine studies examined diverse mental health problems other than depression. Studies measured discrimination attributed to the following reasons: race or ethnicity ($n = 9$), sexual orientation ($n = 6$), sex/gender ($n = 3$), weight ($n = 1$), height ($n = 1$), age ($n = 2$), HIV status ($n = 1$), foreign nationality ($n = 1$), other ($n = 2$), and homelessness ($n = 1$). Given that racism and heterosexism were the most common types of discrimination examined, our results will focus on these two only.

Three studies provide initial evidence for heterosexism, but not racism, as a unique predictor of suicidality (Garnett et al., 2014; Sutter & Perrin, 2016; Thoma & Huebner, 2013). Another study found that, when combined, none of the types of discrimination (e.g., racism, heterosexism, and homelessness stigma) uniquely predicted suicidality (Gattis & Larson, 2016). However, across all four studies, only two did not exhibit major flaws, again related to correspondence between types of discrimination assessed and sample composition (Sutter & Perrin, 2016; Thoma & Huebner, 2013). Both of these studies found that heterosexism, but not racism, contributed unique risk for suicidality. One study found this relationship among SGM Black adolescents (Thoma & Huebner, 2013), and the other study showed this among diverse racial/ethnic

Table 2. *Studies Examining the Relationship Between Intersectional Discrimination and Mental Health Outcomes*

Reference	Sample	Construct	Discrimination scale	Possible reasons	Mental health outcome	Major findings
Balsam, Molina, Beadnell, Simoni, and Walters (2011)	LGBTQ ethnic minorities ($N = 297$); $M_{age} = 33$ years; 50.2% women, 7.4% transgender or genderqueer; 17.8% Black, 18.9% Latino, 17.8% Asian American, 3.4% American Indian/Alaska Native, 27.5% multiracial; $M_{income} = \$60-79,000$ /household; 70.7% at least college degree, 31.3% graduate degree	Microaggressions	LGBT People of Color (PoC) Microaggressions Scale	LGBT racism, PoC heterosexism, LGBT relationship racism	Past week depression symptoms (CES-D 10)	LGBT PoC microaggressions and depression were positively correlated
Jefferson, Neilands, and Sevelius (2013)	Trans women ($N = 98$) in San Francisco; $M_{age} = 42.84$; 70.4% Black, 25.5% Latina, 22.4% multiracial, 13.3% White; 62% income \leq \$1,000/month; 55% high school or less education	Combined lifetime discrimination and experiences of transphobia	Schedule of Racist Events, Transphobia Events Measure (rescored to yield high, medium, low combined discrimination groups)	Race, transgender identity	Past week depression symptoms (CES-D; score ≥ 20 considered present)	In comparison with low combined discrimination, persons experiencing high combined discrimination 218% more likely to experience depression symptoms. No significant difference for medium combined discrimination.
Keum et al. (2018)	Asian American adults ($N = 564$); $M_{age} = 23.3$; 98.7% women, remainder gender-fluid or other; 66.7% second generation immigrant; 43.3% middle class, 27.3% upper-middle class; 89.9% some college or higher education	Lifetime microaggressions	Gendered Racial Microaggressions Scale for Asian American Women	Intersectional gender and race	Past 2 week depression symptoms (PHQ-9)	More gendered racism predicted higher levels of depression symptoms. Submissiveness subscale predicted depression symptoms.
Ramirez and Paz Galupo (2019)	Sexual minority persons of color ($N = 88$) residing across 23 states; $M_{age} = 31.42$; 55.7% cisgender men, 44.3% cisgender women; 44.3% Black, 22.7% Latino, 14.8% Asian; 17% working class, 22.7% lower-middle class, 36.4% middle class; 73.9% bachelor or higher degree	Microaggressions	LGBT People of Color Microaggressions Scale	LGBT racism, PoC heterosexism, LGBT relationship racism	Past month depression and anxiety (MHI-5)	Microaggressions were correlated with worse mental health
Perry, Harp, and Oser (2013)	Black women ($N = 204$); $M_{age} = 36.39$ years; $M_{education} = 12.75$ years; $M_{income} = \$20,850$ /household; 13% married	Lifetime discrimination	Schedule of Sexism and Racist Events (merged questionnaires into single latent factor)	Gender, race	Past month anxiety (single item from Addiction Severity Index Lite)	Intersectional discrimination predicted anxiety
Lewis, Williams, Peppers, and Gadson (2017)	231 Black women; $M_{age} = 37$ years; 87% heterosexual, 13% sexual minorities; 92% U.S.-born; 60% middle-class; 62% graduate or professional degree, 25% bachelor degree; 54% U.S. Southeast	Lifetime microaggressions	Gendered Racial Microaggressions Scale	Intersectional gender and race	Self-reported mental health during past 4 weeks (12-item Short Form Health Survey-Version 2)	Gendered racial microaggressions predicted negative mental health
Moody and Lewis (2019)	Black women ($N = 226$); $M_{age} = 26.2$; 82% heterosexual, 18% sexual minorities; 92% U.S.-born; 9% poor, 27% working class, 47% middle class; 19% high school education, 23% some college, 10% no education reported, remaining associates or higher degrees	Lifetime microaggressions	Gendered Racial Microaggressions Scale	Intersectional gender and race	Past month traumatic stress symptoms (PTSD Symptom Checklist)	Gendered racial microaggressions were associated with greater traumatic stress symptoms

(table continues)

Table 2 (*continued*)

Reference	Sample	Construct	Discrimination scale	Possible reasons	Mental health outcome	Major findings
Lewis and Neville (2015)	Black women ($N = 210$); $M_{age} = 37.69$; 92% U.S.-born; 60% middle-class; majority from U.S. West coast or Midwest	Lifetime microaggressions	Gendered Racial Microaggressions Scale	Intersectional gender and race	Psychological well-being and distress (MHI-5)	Gendered racial microaggressions were correlated with psychological distress
Ouch and Moradi (2019)	Sexual minority persons of color ($N = 209$); $M_{age} = 28.1$; 46% women, 27% nonbinary, 21% men, 4% other gender identity; 33% Black, 32% Asian American, 27% Latino; 68% middle or lower middle class; 57% bachelor or higher degree; residing in California 25%, Texas 11%, Florida 8%, and 27 other states or Washington DC	Past year discrimination	Discrimination Scale for Sexual Minority People of Color	Intersectional sexual orientation and race/ethnicity	Psychological distress (Hopkins Symptom Checklist – 21)	Discrimination was associated with psychological distress
Velez, Cox, Pollhronakis, and Moradi (2018)	Employed women of color ($N = 276$); $M_{age} = 32.77$; 46% Black, 21% Asian/Pacific Islander, 15% Latina; 95% cisgender; 63% exclusively heterosexual; 31% bachelor degree, 22% graduate degree, 20% some college education	Workplace discrimination (comprised of combined past year racist and sexist workplace discrimination)	Gender Experiences Questionnaire, Racial Ethnic Harassment Scale	Gender, race	Psychological distress (Hopkins Symptom Checklist-21)	Workplace discrimination predicted psychological distress
Szymanski and Lewis (2016)	Black women ($N = 212$), $M_{age} = 19.5$; all university students, diverse self-identified SES; 74% resided in the U.S., South	Past year discrimination	Racialized Sexual Harassment Scale	Gender, race	Psychological distress (Hopkins Symptom Checklist-21)	Gendered racism experiences predicted psychological distress

Note. SES = socioeconomic status; PTSD = posttraumatic stress disorder; LGBTQ = lesbian, gay, bisexual, transgender, and queer; MHI-5 = Mental Health Inventory.

Table 3. Studies Examining the Independent Effects of Different Types of Discrimination on Mental Health Outcomes

Reference	Sample	Construct	Discrimination scale	Possible reasons	Measurement of multiple discrimination	Health outcome	Major findings
Canady, Bullen, Holzman, Bromann, and Tian (2008)	Pregnant women in Michigan (N = 2,731); M _{age} = 26.5; 27% Black, 73% White, 82% at least 12 years of education; 60% employed	Pervasive lifetime discrimination	A single item inquired about each type of discrimination (ever/never) across seven settings	SES, gender, race	Categories qualifying amount of discrimination based on number of settings in which each type of discrimination occurred (e.g., none, some, high sexism)	Depression symptoms (CES-D 20)	SES, gender, and race discrimination independently predicted depression. When all 3 combined, only gender and SES uniquely contributed to depression
Crawford et al. (2014)	Drugs-using adults in New York City (N = 636); M _{age} = 33; 70.13% male; 49.37% Black, 36.32% Latino; 49.76% less than high school educated; low-income sample	Lifetime discrimination	Single prompt with possible reasons	Race, drug use, prior incarceration	Ever/never discrimination per reason	Lifetime depression (CID)	Each type independently predicted depression. When run together, only incarceration and drug use discrimination uniquely contributed to depression
Garnett et al. (2014)	High school Boston students (N = 965); 58% female; 45% non-Hispanic Black, 29% Hispanic; 12% sexual minority	Past year discrimination and past year bullying	Single item inquiring about discrimination based on each reason (ever/never)	Race/ethnicity; foreign nationality; sexual orientation; weight	Latent class analysis categories: low, racial, sexual orientation, and intersectional discrimination	Past month depression symptoms (modified MDS); past year self-harm or suicidal ideation (SI; CDC survey)	Depression. Racial, sexual orientation, and intersectional discrimination predicted MDD. <i>Suicidality</i> . Sexual orientation and intersectional discrimination predicted self-harm. Only intersectional predicted SI
Reisen, Brooks, Zeo, Poppen, and Bianchi (2013) ^b	HIV-positive Latino gay males in New York City (N = 301); M _{age} = 41; 9% U.S.-born; low-income	Pervasive lifetime discrimination	Adapted scale (gay discrimination in general and employment-related); National Survey of Functional Health scale (ethnic discrimination across multiple settings)	Ethnicity, sexual orientation	Frequency of each type	Depression symptoms (BDI)	Both separately correlated with depression. When run together, both uniquely predicted depression
Thoma and Huebner (2013) ^b	Black sexual minority adolescents (N = 276); M _{age} = 17.45; 59% male, 8% transgender	Pervasive and school-based past year discrimination	Schedule of Racist Events (across multiple settings); adapted scale (antigay discrimination in school)	Race, sexual orientation	Frequency of each type	Past week depression symptoms (CES-D); past year suicidal ideation (SI; single item); past month cigarette use, past month marijuana use, past year alcohol use, past year binge drinking	Depression. Heterosexism and racism both uniquely contributed when run separately and together. <i>Suicidality</i> . Both racism and heterosexism separately predicted SI. When combined, only heterosexism predicted. <i>Substance use</i> . When run separately; only racism predicted marijuana use. When run together, only racism uniquely contributed to marijuana use and binge drinking
Gattis and Larson (2016)	Black homeless youth in Milwaukee (N = 89); M _{age} = 20.06; identified as "100% hetero-sexual" (49.4%) or "mostly hetero-sexual" (7.6%)	Social stigma and pervasive past year discrimination	Social Stigma Scale; Race-Ethnicity Scale (from AUDADIS-IV); Sexual Orientation Discrimination (AUDADIS-IV)	Homelessness, race/ethnicity, sexual orientation	Frequency of each type (racism, heterosexism) and degree of agreement (homelessness stigma)	Past week depression symptoms (CES-D); past year suicidality (adapted from YRES)	Depression: All types independently associated with symptoms. When run together, only racism and homelessness were unique predictors. <i>Suicidality</i> : Only racism and homelessness stigma correlated with suicidality. When combined, none were unique contributors

(table continues)

Table 3 (continued)

Reference	Sample	Construct	Discrimination scale	Possible reasons	Measurement of multiple discrimination	Health outcome	Major findings
Choi, Paul, Ayala, Boylian, and Gregorich (2013) ^b	Racial/ethnic minority men who have sex with men ($N = 1,196$) in Los Angeles; $M_{age} = 36$; 33.7% Black, 32.9% Asian/Pacific Islander, 33.4% Latino, 66% U.S.-born; 74% gay, 19% bisexual, 7% other; 36% HIV-positive; 39% high school degree or lower; 29% some college education, 32% bachelor degree	Past year pervasive discrimination	Racism in general community (four items), gay community (four items); heterosexism in general community (four items), among heterosexual friends (three items), family (four items)	Race, sexual orientation	Degree of agreement with occurrence of each type of discriminatory experience using a Likert scale (1-4)	Past week depression symptoms (CES-D); past week anxiety (BSI-anxiety subscale)	<i>Depression.</i> When combined, only racism within the general community and homophobia among heterosexual friends uniquely predicted depression. <i>Anxiety.</i> When combined, racism and homophobia within the general community and homophobia among heterosexual friends uniquely predicted anxiety. Racism within gay community was unique predictor for Asians/Pacific Islanders only.
Raver and Nishii (2010)	Adult employees at various organizations ($N = 735$); 58% women; 80% White, 20% racial minority	Work-place harassment during past 24 months	Ethnic Harassment Experiences scale; Gender Harassment Experiences Questionnaire; Aggressive Experiences Scale	Gender, ethnicity, generalized	Frequency of each type	Past month anxiety and depression symptoms (Psychological General Wellbeing Index)	All three types independently predicted anxiety and depression. When run together, only ethnic and generalized harassment predicted anxiety and depression
Sutter and Perrin (2016) ^b	LGBTQ ethnic minorities ($N = 200$); $M_{age} = 29.5$; 53% women, 32% men, 9% trans-gender; 33% non-Latino Black, 27.5% Asian/Asian American, 13% Latino, 4.5% American Indian, 19% multiracial, 3% other; 92% greater than high school education; 8.5% unemployed	Past year daily discrimination and past year pervasive discrimination	Racism and Life Experiences Scale (Daily Life Experiences subscale); Heterosexist Harassment, Rejection, and Discrimination Scale	Race/ethnicity, sexual orientation and gender identity	Frequency of each type	Past week depression and anxiety (Hopkins Symptom Checklist-25); suicidal ideation (single item from SBQ-14)	<i>Depression:</i> Heterosexism and racism were unique predictors. <i>Suicidality:</i> Only heterosexism (harassment/rejection) predicted suicidal ideation
DeBlare et al. (2014) ^b	Sexual minority women from Northeast and Mid-West U.S. ($N = 134$); $M_{age} = 32.53$; 40% Black, 14% Asian/Asian American, 19% Latina; 45% graduate degree, majority middle or higher SES, 23% single	Past year daily and pervasive discrimination	Daily Life Experience Racism subscale (past year daily), Schedule of Sexist Events-Recent (past year in multiple settings), Heterosexist Harassment, Rejection, and Discrimination Scale (LBW version; past year in multiple settings)	Race, gender, sexual orientation	Frequency of each type	Psychological distress measuring anxiety and depression symptoms (Hopkins Symptoms Checklist-21)	Independently, each type correlated with psychological distress. When run together, only heterosexism uniquely predicted distress
Krieger et al. (2011)	1202 workers in greater Boston; $M_{age} = 49.3$; 38% Black, 22% Latino, 24% White, 50% U.S.-born; 74.8% sexual minority; 45% below poverty level, 65.6% high school education or lower	Pervasive and lifetime discrimination and past year harassment	Experiences of Discrimination (race, multiple settings), single item queries about having ever been exposed to gender- or sexuality-based discrimination, Sexual Experiences Questionnaire (sexual harassment)	Race, gender, sexual orientation	Number of situations (ever based on race), ever/never (sexual orientation, gender), frequency (sexual harassment)	Past month psychological distress measuring anxiety and depression symptoms (K-6 scale)	When run separately, race, gender, sexual orientation discrimination, and sexual harassment predicted distress. When combined, only racism and sexual harassment uniquely predicted distress

(table continues)

Table 3 (continued)

Reference	Sample	Construct	Discrimination scale	Possible reasons	Measurement of multiple discrimination	Health outcome	Major findings
Díaz et al. (2004) ^b	Sexual minority Latino men (N = 912); M _{age} = 31.2; 72.2% immigrant (52.6% ≤10 years in U.S.); 64.2% some college or more; 27.3% unemployed	Pervasive lifetime discrimination	New scale based on content from study focus groups Assessed homophobia and racism in several settings occurring in childhood and adulthood	Race, sexual orientation	Frequency of each type	Past 6-month depression, anxiety, and suicidality symptoms (single symptom scale created based on content of focus groups; 5 items total)	Both homophobia and racism uniquely predicted symptoms
Bostwick et al. (2014)	LGB subsample from a national survey (n = 577); M _{age} = 36.5–50.7 years; 53% women over 70% White	Pervasive past year discrimination	Adapted Experience of Discrimination Scales	Race/ethnicity, sex, sexual orientation	Frequency per type	Any past year disorder, based on combined mood/anxiety subscales (AUDADIS-IV)	When combined, only sexism uniquely predicted past year mental health disorder
Pilver, Desai, Kasl, and Levy (2011)	Women from two national surveys (N = 2718); M _{age} = 28.8; 43.7% Latina; 40.6% Black; 15.7% Asian; 72.6% high school educated or beyond; 60.88% employed	Daily discrimination	Everyday Discrimination Scale + reasons	Race (national ancestry, race, skin color), gender, age, height or weight, other	Yes/no per reason	Lifetime premenstrual symptoms (PMS) and premenstrual Dysphoric Disorder (PMDD; CIDI)	PMS: When run together, race, gender, and other predicted symptoms. PMDD: When run together, race, gender, and other predicted disorder
Monardi and Subich (2003)	133 Black women from university and community samples; M _{age} = 27.77 years; mostly self-identified as lower and middle social class; 72% high school highest level of education, but of these 80% working towards a bachelor degree	Lifetime and past year discrimination (for each measure)	Schedule of Racist Events, Schedule of Sexist Events	Race, sex	Frequency per type per time/frame	Psychological distress (Brief Symptom Inventory)	Path analysis showed that when combined, only sexism uniquely contributed to distress
Bogart et al. (2011) ^a	HIV-positive Black men who have sex with men (N = 181); M _{age} = 43.4, recruited in HIV social service agencies and medical clinics in Los Angeles, CA	Past year discrimination	Multiple Discrimination Scale; Black, HIV, Gay subscales	Race, HIV status, sexual orientation	Multiple situations yes/no per reason	Past month PTSD (PTSD Scale)	When combined, only HIV predicted PTSD symptoms
Harnois and Bastos (2018)	Nationally representative survey of U.S. adults (N = 3,724); majority non-Hispanic Whites; 50.1% women; majority junior college or high school degrees	Work-place discrimination (time-frame not specified), past year workplace harassment	Three questions assessing discrimination by reason, single item about sexual harassment and other	Gender, race or ethnic origin, age, other	Ever/never by reason and harassment questions	Self-reported number of days with poor mental health during the past month (single item)	When combined, women experiencing other harassment (43.3%) and gender discrimination (51.7%) were less likely to have no poor mental health days; for men, experiencing other harassment made them 66.5% less likely to experience no poor mental health days. Overall, women who experienced other harassment showed 38% higher mean number of poor mental health days. Other types were not significant.

Note. SES = socioeconomic status; LGB = Lesbian, gay, bisexual; PTSD = posttraumatic stress disorder; CIDI = Composite International Diagnostic Interview; AUDADIS = alcohol use disorder and associated disabilities interview schedule; YRBS = Youth risk behavior survey; SBQ = Suicide behaviors questionnaire.

^a This study also examined depression but we were unable to interpret these findings. ^b Indicates study without major methodological flaws included in review analysis of depression.

minority adults (Sutter & Perrin, 2016). These studies provide initial support for the risk model, and suggest that experiencing heterosexism may contribute, beyond other discrimination experiences, to suicidality among racial/ethnic minorities and SGMs.

Few studies examined other mental health problems. One study showed that sexism, but not racism, uniquely contributed to distress (Moradi & Subich, 2003). Only one study reviewed here examined substance use, and found that both racism and heterosexism play a unique role in explaining some types of substance use and abuse (Thoma & Huebner, 2013). One study examining PTSD symptoms found no evidence in support of racism or heterosexism as unique predictors (Bogart et al., 2011). One study showed that both racism and homophobia were unique predictors of anxiety among Asian/Pacific Islanders, Black, and Latino men, (Choi et al., 2013). Another study found that women who reported discrimination based on race, gender, and other reasons showed higher odds of premenstrual dysphoric disorder, when accounting for other types of discrimination (Pilver, Desai, Kasl, & Levy, 2011).

In summary, these studies yield largely inconclusive findings. Only a limited number of studies examined mental health problems beyond depression, with most problems represented in only a single study. However, a few studies point to heterosexism, above and beyond racism, playing an important role in explaining suicide risk among SGM racial/ethnic minorities.

Discussion

Summary of Findings

We reviewed existing literature to evaluate support for risk or resilience explanations among people who experienced multiple discrimination in the United States. We identified 40 studies, which primarily assessed depressive symptoms and typically addressed one of three different questions concerning the link between multiple discrimination and mental health. For the most part, studies that measured multiple types or intersectional discrimination showed evidence of risk for poorer mental health across a range of problems. Few studies found evidence of resilience, and this may be partly explained by methodological differences.

We also reviewed literature examining whether discrimination types differed in their impact on mental health problems. We identified a large group of studies that compared the independent effects of different kinds of discrimination on mental health problems. However, most of these studies were methodologically flawed. Studies without major flaws suggest that among SGM racial/ethnic minorities, both racism and heterosexism uniquely contribute to depression symptoms. Some initial work suggests that heterosexism, but not racism, uniquely contributes to suicidality among some racial/ethnic and SGM groups. Given that the most commonly assessed types of discrimination were racism and heterosexism, we were unable to reach clear conclusions from the literature about other kinds of discrimination (e.g., sexism). In general, these studies provide initial support for the risk model, in depression symptoms and suicidality.

However, across all studies we noted numerous problems and important gaps in the literature. This limits our ability to draw clear conclusions about whether experiencing multiple types of discrimination confers mental health risk or resilience. We discuss below

the significant methodological problems and variability in the existing literature, and suggest future directions to improve this important body of work.

Critique of Existing Literature

Correspondence between discrimination and study sample. For many studies, the types of discrimination assessed did not correspond to samples' characteristics, or did so inconsistently. For example, Gattis and Larson (2016) measured racism, homelessness stigma, and heterosexism in their study of Black homeless youth. Yet, fewer than half of the sample identified as sexual minority and, thus, the odds that participants experienced racism or homelessness stigma versus heterosexism were likely greater. Not surprisingly, the authors found that racism and homelessness stigma, but not heterosexism, were unique predictors of depression. Similarly, Canady and colleagues (2008) and others' (e.g., Crawford et al., 2014; Harnois & Bastos, 2018; Pilver et al., 2011) results mirror inconsistent correspondence between their samples and the types of discrimination evaluated. Similarly, Calabrese et al., 2015 and Vu et al., 2019 both found that among women, but not men, multiple discrimination was related to greater depression. This difference may be explained by correspondence issues, because racial/ethnic minority women are more likely to experience both racism and sexism, whereas racial/ethnic minority men are less likely to experience sexism and therefore may experience only a single type of discrimination (racism). This methodological issue may have contributed to conflicting findings across many of the studies, and muddles their interpretation.

Measurement of multiple discrimination. Furthermore, we noted several methodological issues surrounding the way studies measured discrimination. First, some studies relied on a dichotomous measure of discrimination (e.g., "In your lifetime, have you ever experienced discrimination or unfair treatment?"; Crawford et al., 2014; Garnett et al., 2014; Krieger et al., 2011; Harnois & Bastos, 2018). These assessments likely tap into a range of experiences, from a single event in a person's life, to chronic discrimination, and into diverse severity of discrimination events (e.g., major events like losing a job vs. daily unfair events). This is a problem because chronic (Schmitt, Branscombe, Postmes, & Garcia, 2014) and major discriminatory (Lewis et al., 2015) experiences are associated with poor health, but limited evidence has examined the role of low frequency discriminatory events. The lack of theoretical rationale for why unspecified, potentially single-event discrimination would affect health makes it difficult to interpret these studies' findings.

Second, studies varied in whether they assessed pervasive discrimination—that is, discrimination that takes place in multiple contexts (Krieger, 2012). While some studies measured discrimination across multiple settings (e.g., discrimination at work, housing, and health care; Bogart et al., 2011), others inquired about discrimination globally, without specifying the setting (e.g., Garnett et al., 2014 asked participants if they had been "discriminated against or been treated badly by other people"), or in they specified a single type of setting (e.g., workplace discrimination; Harnois & Bastos, 2018; Raver & Nishii, 2010). Particularly concerning were studies in our review that assessed pervasive discrimination incon-

sistently—inquiring about discrimination across several settings for some types of discrimination but not others. For example, several studies inquired about pervasive racism, but did not specify the settings in which other kinds of discrimination (e.g., heterosexism or sexism) occurred (e.g., Díaz et al., 2004; Krieger et al., 2011; Thoma & Huebner, 2013). Some theoretical and experimental work suggests that experiencing pervasive discrimination is worse for psychological health than single-event discrimination (see Schmitt et al., 2014). More research is needed to understand the implications of measuring and comparing dichotomous, frequent, setting-specific, and pervasive discrimination. Many studies in our review did not appear to acknowledge these differences or provide a rationale behind their measurement choices.

Additionally, several studies relied on single-item assessments of discrimination (e.g., Canady et al., 2008; Crawford et al., 2014). Multiple studies also used unvalidated measures to assess discrimination (e.g., Choi et al., 2013; Grollman, 2012; Hammond et al., 2010; Harnois & Bastos, 2018). These measurement problems must be addressed to better understand the relationship between multiple discrimination and mental health.

Moreover, some debate exists about how best to capture experiences of multiple discrimination (Harnois, 2014). Our review included studies that relied on diverse measurements, including two-stage measures of unfair treatment, multiple one-stage measures of single kinds of discrimination, or single scales of intersectional discrimination. We did not find any pattern of differences based on these measures. This may suggest that in terms of the impact they have on mental health, any of the three methods are acceptable to examine evidence of risk for multiple discrimination. However, a more thorough review is needed to understand how these different approaches toward multiple discrimination relate to one another.

Finally, nearly every study in our review assessed racism, while other forms of discrimination were mostly missing from the literature. For example, a small proportion of studies examined sexism, yet approximately half the population is female. Furthermore, most of the studies examining racism focused on Blacks or Latinos. Yet, other racial/ethnic minority groups are also affected by discrimination. One study suggested that racism, when compared with other kinds of discrimination, may be especially important toward understanding anxiety among SM Asian/Pacific Islander men (Choi et al., 2013). Similarly, some studies showed gender differences in the relationship between multiple discrimination and mental health (e.g., Calabrese et al., 2015; Vu et al., 2019). To understand how experiencing multiple-discrimination may affect mental health, greater attention to diverse kinds of discrimination and minority samples are needed. Additionally, many of the studies involved small sample sizes that may have affected our ability to identify patterns within the data. Future research may benefit from attending to demographic differences and greater sample size to understand whether multiple discrimination affects groups differently.

Mental health measurement and study time-frame. Studies measured diverse mental health outcomes. Most studies examined depression, but primarily measured symptoms ($n = 17$) not disorder. Greater attention to mental health disorders, rather than symptoms, may help clarify the role of discrimination in disparities among multiply marginalized groups.

Future research should also continue to attend to mental health problems other than depression. Additionally, nearly all the studies in this review were cross-sectional and all were correlational, making inferences about causality impossible (Lewis et al., 2015). More longitudinal studies, controlling for baseline depression, are needed to understand the relationship between multiple discrimination and mental health problems.

Missing theoretical mechanisms. We found evidence that discrimination types contribute to mental health in different ways. Similarly, a past meta-analysis found differences in the effect sizes of discrimination types with psychological wellbeing (Schmitt et al., 2014). Yet, few studies attended to why these differences exist. Discrimination appears to affect health through repeated activation of one's stress response (Busse et al., 2017; Meyer, 2003), but what differentiates the stress of one discrimination experience from another? The literature lacks clear conceptual mechanisms to explain these differences. Some scholars have suggested the pervasiveness of multiple discrimination is at fault (Thoma & Huebner, 2013). It is also possible that differences are related to the concealability of stigmas, or whether different types of discrimination are subtle or blatant. Some initial work indicates that concealable (vs. unconcealable) and some kinds of subtle (vs. blatant) discrimination may be more harmful to health (Pascoe & Smart Richman, 2009; Pilver et al., 2011; Schmitt et al., 2014). Greater attention to these myriad factors may help us understand why and how differences emerge across experiences of multiple discrimination.

Future Directions

Coping as a moderator. To properly understand how experiencing multiple discrimination affects health, future work must also attend to potential modifying factors. People may utilize diverse coping strategies to manage experiences of discrimination, such as a heightened sense of competency, reappraisal of a situation, or seeking social support to cope with discrimination stress (Cyrus, 2017). This may help buffer the impact of discrimination on health. Findings on this topic are mixed and more work is needed (Brondolo, Brady Ver Halen, Pencille, Beatty, & Contrada, 2009; Pascoe & Smart Richman, 2009). Attention to these factors is important for understanding multiple discrimination.

Although our review shows limited evidence of resilience in the relationship between discrimination and mental health, the risk and resilience framework partly relies on a moderator explanation that does not appear to have been examined. Resilience theory suggests that people who experience multiple discrimination generalize their coping strategies to manage diverse discrimination experiences. Because the studies we reviewed generally did not measure coping, we are unable to say how people respond to multiple discrimination. However, some scholars have suggested that multiply marginalized groups may have limited access to resources to cope with discrimination that likely contributes to their experiencing more cumulative social stress associated with discrimination (Meyer et al., 2008). More work is needed to understand how multiply marginalized groups cope with discrimination and how this affects mental health.

Internalized stigma. Conceptual models of stigma related to mental illness point to multiple dimensions through which health may be affected (Link & Phelan, 2001), including external and internalized stigma. Internalized stigma refers to the extent to which a person adopts stigmatized views about their identity, which can affect the way she views her social status (Schmitt et al., 2014). Our review focused on perceived interpersonal discrimination, which is a type of external stigma. However, many studies suggest that internalized stigma may also be damaging to mental health, even when controlling for external stigma (Carr, Szymanski, Taha, West, & Kaslow, 2014; Kecojovic, Wong, Corliss, & Lankenau, 2015; Szymanski & Stewart, 2010; Velez, Moradi, & DeBlaere, 2015). More attention is needed to understand how discrimination experiences may affect internal self-perceptions and the relationship this has with health. For example, future studies may examine what role the demographic characteristics of those perpetrating discrimination has on discrimination, internalization, and mental health.

Limitations and Conclusion

Several limitations exist. We conducted a review of only published peer-reviewed studies based in the United States. It is unclear how multiple discrimination may affect the mental health of persons living outside of the United States. Additionally, while we relied on multiple methods to identify studies for our review, it is possible we missed other relevant studies. The low number of studies examining mental health problems other than depression may indicate that our keywords missed these studies. However, given the broad focus on mental health in our search strategy, it seems more likely that the lack of nondepression studies reflects the current state of the field. Furthermore, given that most studies examined depression symptoms, it is unclear what role multiple discrimination may play in exacerbating risk of developing depressive disorder. Additionally, it is likely multiple discrimination affects health in a more complex way than captured by our broad conceptual models of risk and resilience. Furthermore, although individual-level reports of discrimination are an important way of analyzing the effects on health, this method does not allow us to capture the numerous other ways in which discrimination may indirectly affect health (Krieger, 2012). Comparisons of the health effects of interpersonal discrimination types may overlook important discriminatory historical and structural factors that contribute to health inequities. Finally, most studies were comprised of cross-sectional data, and all relied on data collected from the same source (i.e., the mono-method bias). These limitations do not allow us to determine the directionality of the relationship between multiple discrimination and mental health.

Nevertheless, our review provides an important summary and critique of the existing literature on the relationship between multiple discrimination and health. We propose that the multiple discrimination literature currently answers related, but different, questions: (a) whether it increases a person's chances of poor mental health; and (b) how much of a person's mental health problems are explained by different types of discrimination. Our review of existing literature shows initial evidence of the risk model, with limited support for the resilience model. However, to draw clear conclusions about how experiencing multiple types of

discrimination affects mental health, future research must address the methodological issues and empirical gaps we described.

Keywords: multiple discrimination; perceived discrimination; depression; multiple marginalization; intersectionality

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