

THESIS

PERCEIVED DISCRIMINATION AND DEPRESSIVE SYMPTOMS
AMONG MARGINALIZED GROUPS USING AN INTERSECTIONALITY FRAMEWORK

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ABSTRACT

PERCEIVED DISCRIMINATION AND DEPRESSIVE SYMPTOMS AMONG MARGINALIZED GROUPS USING AN INTERSECTIONALITY FRAMEWORK

This work uses Crenshaw's (1989) Intersectionality to quantitatively study intersectional experiences of discrimination and depressive symptoms among historically marginalized and ignored populations. Using a series of multiple mediation models, discrimination (attributed to gender, sexual orientation and/or race/ethnicity) was modeled as a mediator between identity and depressive symptoms among seven diverse identity-based subgroups from Project STRIDE (75% sexual minority, 50% racial/ethnic minority; Meyer et al., 2006). I hypothesized marginalized subgroups would experience more discrimination, and in turn, more depressive symptoms. All models were compared against the eighth, least marginalized subgroup: straight White men. Discrimination partially mediated the effect of identity on depressive symptoms for sexual minority Black women, but only when accounting for discrimination on the basis of all three marginalized identities (woman, Black, and lesbian/bisexual). Sexual minority Black men experienced significantly less/less frequent depressive symptoms relative straight White men; after holding constant discrimination (at 0 for both groups), this was also true for sexual minority White men. Despite the nuances to quantitatively modeling intersectionality and potential issues of generalizability, this work might serve as a framework for carrying out future quantitative intersectionality-based studies. Enacted, this work has the potential to create a healthier and more equitable society for all

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Chapter 1

INTRODUCTION

Problem

In the United States health disparities exist within numerous identity statuses including sex/gender, socioeconomic status, race/ethnicity, sexual orientation, educational attainment, immigrant status, and physical and mental ability (Centers for Disease Control [CDC], 2019). This disproportionality in health outcomes often manifests as a result of health inequity— that is, unequal opportunity for all individuals to reach their health potential that is avoidable, unfair, and unjust (Office of Disease Prevention and Health Promotion [ODPHP], 2019). As such, social stressors such as prejudice and discrimination are major areas of interest in considering health disparities, as marginalized groups are far more likely to experience these stressors, thereby indirectly increasing their risks for adverse health conditions via the strain that ensues. Indeed, strain from one’s social environment is a focal point for studying health disparities among marginalized groups considering the United States’ long history with social inequality.

Health equity among marginalized populations is a noteworthy national goal as the country’s populace continues to diversify. Over a third of the U.S. population now identifies as a racial/ethnic minority, a proportion that continues to grow; in fact, by 2050, the U.S. is expected to be “minority White” (U.S. Census Bureau, 2008). The proportion of people openly identifying as lesbian, gay, or bisexual (LGB) is also on the rise, with more than eight percent of Millennials identifying as LGB according to recent polls— the highest proportion of any generation thus far (Newport, 2018). As the United States continues to diversify, so then do families, neighborhoods, workplaces, student bodies, communities, cities and states. Many of these sectors are faced with meeting important needs that accompany increasing demographic changes. Thus,

there is a call for social scientists to expand and build upon the scope to which identities are studied and health disparities are addressed.

Intersectional theory (i.e., intersectionality) is one such contribution to health disparities work; this theory argues that facets of identity (e.g., gender, race/ethnicity, sexual orientation) mustn't be considered exclusively from one another, but rather as interwoven, interacting identities that contribute to unique experiences of oppression and opportunity (Crenshaw, 1989; Carbado, Crenshaw, Mays, & Tomilson, 2013). Traditional approaches to health disparities examine health among a single demographic (e.g., race/ethnicity differences in health outcomes). On the contrary, intersectionality addresses health for a single, more specific population by acknowledging that population's specific intersection of demographics (e.g., straight Black women). Importantly, an intersectional lens narrows the scope of health disparities literature by addressing the unique needs and challenges faced by specific populations, which provides the opportunity to tailor health interventions more appropriately and effectively. In an increasingly diverse nation, intersectionality-based approaches to health disparities are necessary endeavors from both economic and social justice perspectives.

While health disparities among marginalized populations include an array of ailments (see Chapter 2), this study focuses on mental health disparities and in particular, disparities in the manifestation of depressive symptoms. Depressive symptoms are particularly relevant in studying health disparities. This is because health inequity is often a product of discrimination and prejudice, which collectively play significant roles in the mental wellbeing and the overall prosperity of historically marginalized populations (Meyer, Frost, Narvaez, & Dietrich, 2007). Moreover, depressive symptoms have the potential to escalate into a major depressive disorder (i.e., major depression, clinical depression). Major depressive disorder is one of the most

burdensome health disorders worldwide, affecting the health and wellbeing of 300 million people and as a result, the economic and social prosperity of their communities and nations (World Health Organization [WHO], 2018). The study of depressive symptoms in the context of health disparities and health equity is an essential endeavor in understanding the epidemiology of stigmatized disorders impacting our nation.

Purpose, Significance and Innovation

The purpose of this study is to gain a better understanding of social stressors that aid in the development and maintenance of disparities in depressive symptoms among an array of intersecting marginalized identity statuses (gender, race/ethnicity, sexual orientation). Specifically, I seek to understand the prevalence of depressive symptoms among identity statuses and also the mediating roles of perceived discrimination in the epidemiology of depressive symptoms. Answers to my research questions (see below) may provide further insight on unique social stressors that may exacerbate risk for depression among various marginalized populations, thereby offering important information on the social nature of health disparities overall.

This study has the potential to contribute to existing public health literature in significant and unique ways. For one, this research speaks to unique populations using an intersectionality lens. A narrower focus on intersecting identities allows for public health efforts to be effectively tailored to traditionally marginalized populations, therefore supplementing intersectional research and the literature on health disparities overall. Second, this research moves beyond the study of health disparities on the basis of identity alone. Often, research on health disparities/health inequity involves studying health outcomes as a function of identity status (i.e., sex/gender, race/ethnicity, or sexual orientation). As noted in Chapter 2, this is counterproductive to social justice efforts as it implies health disparities are “consequences to be explained”

ultimately from one's identity. Importantly, health disparities rarely exist as a function of identity alone; rather, they predominately stem from health inequity in one's social environment (CDC, 2019; ODPHP, 2019). Relatedly, this project has the potential to expand the literature on experiences of discrimination among those within unique identity-based subgroups.

Traditionally, discrimination research that uses an intersectional lens has focused on sex/gender differences in experiences of discrimination for sexual *or* racial/ethnic minorities (see Chapter 2). However, this project examines the intersections of three identities (sex/gender, race/ethnicity, sexual orientation), further supplementing Intersectional theory and what is known about health disparities. Finally, this project blends two useful modeling strategies for the research questions at hand. There are multiple approaches to modeling intersectionality quantitatively. Rather than using the master *or* emergent category approach (Bowleg, 2008), this project uses a modeling strategy that blends both approaches, further supplementing this quantitative approach to intersectionality and allowing me to address minority stress stemming from one's single (e.g., woman) and collective (e.g., LB Woman of Color) identities.

Research Questions

- 1) Do disparities in depressive symptoms exist among and/or between marginalized populations (via variables gender, race/ethnicity, and sexual orientation) in the current sample of sexual and racial/ethnic minorities?
- 2) Does an intersectional approach to the classifiers under study—gender, race/ethnicity, and sexual orientation— improve our understanding of disparities in depressive symptoms among and between intersecting marginalized identities?

3) Does an intersectional approach to the classifiers under study improve our understanding of the experiences of discrimination based on one's gender, race/ethnicity and sexual orientation among and between intersecting marginalized identities?

4) Does discrimination attribution on the multiple bases of one's identity—gender and/or race/ethnicity and/or sexual orientation—contribute to the development or maintenance of depressive symptoms among those of multiple (intersecting) marginalized identities?

Theoretical Framework

The Minority Stress Model. Though narratives of discrimination and prejudice toward minority groups are hardly new to United States' history, applications of these experiences to stress and health outcomes in the domain of psychological theory are, unfortunately, relatively recent in contrast (Allison, 1998; Clark, Anderson, Clark, & Williams, 1999; Meyer & Northridge, 2007; Miller & Major, 2000). The Minority Stress Model (Meyer, 2003) is a helpful framework for understanding the ways in which people of marginalized identity statuses may be at a greater risk for negative mental and physical health outcomes. Meyer (2003) posits that the social stress (chronic strain that manifests as a product of an individual's social environment) associated with minority status is indirectly and directly related to health disparities among these populations (see Meyer et al., 2007 for a review). Accordingly, social stress among marginalized populations may manifest as a function of prejudice or discrimination at the individual, interpersonal, institutional, and systemic levels, which may (further) result in lower socioeconomic status, lower health status, limited education, employment, and/or healthcare access, among other negative outcomes (Cavanagh, Wilson, Kavanagh, & Caputi, 2017; Dunlop, Song, Lyons, Manheim & Chang, 2003; Evans & Erickson, 2019; Meyer, 2003). Though originally applied to lesbian, gay and bisexual (LGB) populations, this model can also be applied

to dimensions of race/ethnicity and gender, as well as the intersection of all three identities (see below; Calabrese, Meyer, Overstreet, Haile, & Hansen, 2016; Meyer, 2003, Stojanovski, Zhou, King, Gjorgjiovska, & Mihajlov, 2017). Considering the unique social stressors (i.e., manifestations of discrimination) faced by those of marginalized statuses, the Minority Stress Model (Meyer, 2003) may partially explain the ways in which social stress via perceived discrimination contributes to health disparities in depressive symptoms among those of various marginalized identities in the current societal context.

Finally, it is worth noting that given existing theory and nationwide trends in health disparities (ODPHP, 2019) this proposal only focuses on disparities that operate as a function of sex/gender, race/ethnicity, and sexual orientation. Females/women, People of Color, and sexual minority (LGB) populations are economically, politically, and socially disadvantaged as compared to males/men, and White and heterosexual populations. While these are the identity variables of interest for the current study, I emphasize that health disparities and inequities exist among other facets of identity. For instance, health disparities also exist as a function of socioeconomic status, educational attainment, gender identity (i.e., transgender vs. cisgender populations), ableness, age, religion, and mental health status (ODPHP, 2019; U.S. Department of Health and Human Services [HHS], 2017; Woolf & Braveman, 2011). Put another way, health disparities, for the purposes of this study, generally exist among groups who have experienced heightened discrimination and exclusion in the U.S., which include, but are certainly not limited to, women, People of Color and sexual minorities.

My reasoning for limiting variables in the current proposal to sex/gender, race/ethnicity, and sexual orientation is twofold. First, from a historical perspective, Intersectional theory is most often applied to these three classes of identity because oppressed groups within these

classes of identity have been at the forefront of human rights movements in the United States within the last century (Crenshaw, 1994; Guindon, Green, & Hanna, 2003). In fact, Intersectional theory was born from an “intersection” of the second wave feminism and civil rights movements (Crenshaw, 1989), with a focused dialogue on the intersection of sex/gender and race, specifically. Second, and related, my reasoning stems from the original goals of Intersectional theory: to acknowledge and understand intragroup differences to better address and accommodate those of varying identities. As it stands, intersectionality researchers have significantly advanced this goal; today, intersectional approaches are frequently applied to health research, which has provided a focus to health disparities among unique and historically ignored “intersecting” populations (e.g., GB men vs. LB women, or Women of Color vs. Men of Color; Brooks, 1981; Carr, Szymanski, Taha, West & Kaslow; 2013). However, to further the developments of Intersectional theory, researchers must continue to narrow this approach. While public dialogue has expanded on those of two intersecting identities, comparatively less research exists on those of *three* intersecting identities. Thus, I argue that while this approach is incomprehensive of all of the intersecting identities one may hold, it is worthwhile to narrow my focus to three identity-based subgroups as an important building point for Intersectional theory (Crenshaw, 1989). Still, I acknowledge and account for other identity-based factors, including socioeconomic status, employment status, and age via control variables in my analyses when available.

Key Terminology

This section provides a list of key terms used in this proposal. Some terms will be used interchangeably in this study, as noted.

Bisexual- a sexual orientation that describes a person who is emotionally and sexually attracted to people of their own gender and people of other genders (National LGBT Health Education Center, 2016)

Depressive symptoms- feelings of sadness, worthlessness, and apathy that compromise wellbeing and may lead to the development of major depressive disorder

Determinants of health- factors which influence a particular population's health such as biology, the physical environment, socioeconomic status, legislation, literacy, genetics, etc.

Discrimination- the unjust or prejudicial treatment of people on the grounds of gender, race/ethnicity, sexual orientation, or other facets of identity

Gay- a sexual orientation that describes a person who is emotionally and sexually attracted to people of their own gender. It can be used regardless of gender identity, but is more commonly used to describe men (National LGBT Health Education Center, 2016)

Health disparities- inequalities in health statuses that manifest as a function of unequal social opportunity

Homophobia- prejudice, discrimination, or antagonism based on someone who identifies as LGB or a sexual minority

Intersectionality- the interconnected nature of social categorizations such as race, class, and gender as they apply to a given individual or group, regarded as creating overlapping and interdependent systems of discrimination and disadvantage (Crenshaw, 1989)

Lesbian, gay, bisexual (LGB; also referred to as LB for women and GB for men)- any individual who identifies as lesbian, gay or bisexual; used interchangeably with sexual minority

Lesbian- a sexual orientation that describes a woman who is emotionally and sexually attracted to other women (National LGBT Health Education Center, 2016)

Major Depressive Disorder- a mood disorder that causes persistent feelings of sadness, loss of interest and/or negative affect lasting at least two weeks (American Psychiatric Association, 2017)

Minority Stress- psychosocial strain derived from minority status (Meyer, 2003)

Prejudice- preconceived opinion on a particular group that is not based on reason or actual experience

Privilege- a special right, or an advantage of immunity granted or available only to a particular person or group

Person of Color/People of Color (POC)- a person/people who is/are not non-Hispanic White or predominately of European parentage; used interchangeably with racial/ethnic minority

Racial/ethnic minority- any individual who does not identify as “non-Hispanic White”; used interchangeably with Person/People of Color

Racism- prejudice, discrimination or antagonism directed against someone of a different race (often a POC) based on the belief that another race (often White) is superior

Sexism- prejudice, discrimination or antagonism directed against someone of a different sex/gender (often females/women) based on the belief that another sex/gender (often males/men) is superior

Sexual minority- any individual who does not identify as heterosexual/“straight”; used interchangeably with lesbian, gay, and bisexual (LGB)

Social stress- chronic strain that manifests as a product of an individual’s social environment (Meyer, 2003)

Woman/female- anyone who does not identify as a man/male¹ or otherwise

Research Positionality Statement

It is important that intersectionality researchers situate their research in the context of their own unique identity, biases, values and experiences (Crenshaw, 1989). All ultimately shape the research process, including (but not limited to) “what [the researchers] choose to investigate, the angle of the investigation, the methods judged most adequate for this purpose, the findings considered most appropriate, and the framing and communications of conclusions” (Malterud, 2001). I first acknowledge that I only have true experience living in my own unique identities (i.e., my positionality). Thus, my research cannot fully capture reality for the participants in my study; rather, I can only report and attempt to interpret the quantitative data reported by participants. Moreover, my own identities ultimately influence the way that I model, report and interpret the variables in my study. For example, as I hold identities of White, woman/female, and straight, I am personally familiar with some (sexism) but not all (racism, homophobia) identity-based discrimination. Therefore, much of my knowledge on health disparities and discrimination come from educational or advocacy work— I have a Bachelor’s degree in Psychology with a minor in Women’s Health and Wellness, and two and a half years of graduate training. An educational perspective to intersectionality and health disparities (particularly depressive symptoms) is valuable but ultimately incomprehensive in that it is sourced and

¹Though the distinction between gender and sex is relatively well established in 2019 (sex refers to the sex, male or female, that one was assigned at birth, while gender reflects the gender identity one has or “does” on a spectrum, based on their sex at birth and/or one’s own internal awareness, often depicted as man or women/masculine or feminine; WHO, 2015), such practices were not nearly as established in 2005 when the original study was conducted. The STRIDE (2005) study asks of the gender one identifies with “male” or “female” being the response options. Thus, I wish to clarify that my desire is to study the variable gender, but note that it is often used interchangeably with sex in existing research or terminology (e.g., sexism). When such language is used, please note that I am considering the empirical findings in the context of the gender that one expresses, except when otherwise noted.

filtered through academic research and narrative; thus, I acknowledge that this work cannot comprehensively answer the research questions, despite my very best efforts.

Nonetheless, I believe in the importance of intersectionality and health disparities work. I believe that despite the limitations that accompany my positionality with the research questions, this work must be done. I do not believe that it is practical or appropriate to rely on those with more comprehensive personal experiences with discrimination and/or depressive symptoms to inform this literature. Rather, I feel that it is important to use my privilege and training to supplement this work, while acknowledging my limitations, and relying heavily on the existing narratives and theory presented by those before me (e.g., Crenshaw, 1989; Meyer, 2003). It is my utmost goal to use my position with the research questions responsibly, and ultimately, for the benefit of others. Still, I acknowledge that my position undoubtedly affects the work that I do and the conclusions that I make, despite my efforts to approach this work objectively. My research—particularly my interpretations of the results— should be interpreted (and challenged, when appropriate) accordingly. To conclude, I quote Dr. Toni Morrison, whose words ultimately serve as an inspiration for this work: “When you get these jobs that you have been so brilliantly trained for, just remember that your real job is that if you are free, you need to free somebody else. If you have some power, then your job is to empower somebody else.”

Chapter 2

LITERATURE REVIEW

Given the complexity of health disparities as they manifest at the systems, community, and interpersonal levels, a strong theoretical framework is essential in proposing and testing a causal model to partially explain trajectories of these disparities among intersecting identities. Moreover, as I consider the intersection of marginalized identities in this work it is crucial that I provide a thorough review of the literature and offer sound rationale for each of the variables of interest and their potential relationships in my proposed models.

In order to achieve these goals, I divide the review of the literature into three major subsections. The first section covers the development and maintenance of health disparities in the United States, particularly in the context of prejudice and discrimination via the trajectories supported by the Minority Stress Model (Meyer, 2003). The second section reviews depression broadly, namely, prevalence of major depressive disorder and depressive symptoms, and biopsychosocial influences of depression including stress and identity status. The third section considers intersectionality in the context of health disparities and, in line with Intersectional theory, examines discrimination (in regard to scope and basis) as a potential mediator(s) for health disparities in depressive symptoms.

Section 2.1: Health Disparities in the United States

In the United States, prejudice and discrimination toward women, People of Color, and Lesbian, Gay, and Bisexual, (LGB) individuals has become increasingly salient in the last century, as the country's population continues to diversify and policies give way to more equal rights for those of all identity statuses (Frey, 2018; Stuber, Meyer & Link, 2008; Turner, Ross, Galster, & Yinger, 2002; Whitfield, Walls, Langenderfer-Magruder, & Clark, 2014). In only the

last century, women received the right to vote (U.S. Constitution, 1920); the government passed The Civil Rights Act, preventing employment discrimination due to race, sex, religion or national origin (Civil Rights Act, 1964) and the Fair Housing Act (1968), providing equal housing opportunities regardless of race, religion or national origin; and only in the last five years legalized same-sex marriage (Obergefell v. Hodges, 2015).

Consequently, there is far more work to be done. For example, no federal law exists that prohibits discrimination in the workplace based on sexual orientation. In fact, less than half of states in the U.S. protect sexual minorities from discrimination in their workplaces or educational institutions (American Civil Liberties Union [ACLU], 2019). To be sure, systemic discrimination against sexual minorities extends far beyond major institutions (for examples see Benitez v. North Coast Women's Care Medical Group, 2008; Heller v. Columbia Edgewater Country Club, 2002; Koren v. Ohio Bell Tel. Co., 2012). In regard to discrimination and inequity on the basis of race/ethnicity, there is a significant need for prison and police reform in the U.S. regarding the disproportional incarceration and police violence against of People of Color (National Institutes of Justice, 2013). While Black and Hispanic populations make up roughly a third of the U.S. population, they comprise more than half of U.S. prison inmates (National Association for the Advancement of Colored People [NAACP], 2019). Furthermore, White populations use illicit drugs at similar rates as People of Color, however, they are six times *less* likely to receive imprisonment charges for use. In point of fact, Black populations represent 12.5% of illicit drug users, but 33% of those imprisoned for drug charges (NAACP, 2019). The consequences of this discrimination are systematic. Such charges reduce employment and business opportunities (opportunities that are already limited for People of Color), stable housing, economic security, and educational attainment (NIJ, 2013). Finally, despite almost a century since the advancement

of women's suffrage (which disproportionately benefitted White women compared to Women of Color), women face systematic and interpersonal discrimination in their workplaces, institutions, and homes including pervasive experiences of sexual assault and violence (Me Too, 2018), unequal pay (National Women's Law Center, 2019), and restricted access to reproductive healthcare (Espey, Dennis, & Landy, 2019). Still, numerous populations face many (or all) of these inequities. Despite a century of increasing equity, historically underserved populations continue to experience disadvantage in their socioeconomic status, educational opportunity, and, most notable to the current study, health attainment—often resulting from ongoing prejudice and discrimination on the bases of their identities.

A health disparity is defined as a “type of health difference that is closely linked with social, economic, and/or environmental disadvantage” (ODPHP, 2019). Health disparities often manifest as a product of health inequity, defined as “unequal opportunity for all individuals to reach their health potential that are avoidable, unfair, and unjust” (CDC, 2019). For example, women have a greater risk for stroke, osteoporosis, depression, asthma, kidney disease, and a host of autoimmune diseases (e.g., lupus, fibromyalgia, rheumatoid arthritis; Regitz-Zagrosek, 2012). Women also tend to receive poorer and later diagnostic treatments for health conditions compared to men, which may be due in part to the minimization of women's pain (Kiesel, 2017). Racial/ethnic minorities are significantly more likely to die of cancer, heart disease, hypertension, and diabetes compared to White populations (American Psychological Association [APA], 2019; Institute of Medicine, 2002; Mauer & King, 2007), and lesbian, gay, and bisexual (LGB) populations face higher rates of suicide attempts and completion, substance use, depression, and anxiety, compared to their heterosexual counterparts (D'Augelli, 2002; Meyer, 2003). Moreover, marginalized populations such as these are less likely to receive adequate

communication from their healthcare provider(s) regarding their health status or conditions, indicating a potentially devastating relationship between identity, prejudice, and the healthcare system (Paez, Allen, Beach, Carson, & Cooper, 2009; (National Alliance on Mental Illness [NAMI], 2019). Numerous biopsychosocial influences, including socioeconomic barriers, caregiving load, access to education, social norms, hormones, sexism, racism, and homophobia, interact to maintain health inequities among women and racial/ethnic and sexual minorities further complicating the task of addressing health disparities in the physical and mental health realms.

The United States initiative, “Healthy People 2020” maintains a primary goal to eliminate health disparities among different dimensions of identity including gender, race/ethnicity, and sexual orientation (ODPHP, 2019). This is a crucial (albeit, challenging) goal, as numerous determinants of health interact to create the complex health disparities seen today. Determinants of health are factors that influence an individual’s health, such as biology, the physical environment, socioeconomic status, legislation, literacy, genetics, etc. Most prominent to the current study are *social* determinants of health—that is, aspects in one’s social environment that contribute to health access and, by proxy, health disparities. The following sections serve as a review of social determinants of health most relevant to this study and the study of health inequity overall.

Social determinants of physical and mental health. Though researchers often conceptualize “health” as a product of processes occurring inside the body, social and physical environments overwhelmingly influence health potential. For instance, financial stability, access to healthcare (immunizations, treatment), clean air, sidewalks (i.e. access to outdoor exercise), healthy food, and social support undoubtedly contribute to one’s short and long-term health

(CDC, 2019; ODPHP, 2019). These opportunities are not equally accessible to all populations. For example, racial/ethnic minority groups are more likely to be in poverty and incarcerated (which, to be sure, influence their health opportunities), and are less likely to access healthy food and affordable healthcare (APA, 2019; Institute of Medicine, 2002; Mauer & King, 2007). LGB populations are also less likely to receive quality healthcare (Strutz, Herring & Halpem, 2015) and social support with over 60% of sexual minorities reporting suicidal thoughts, often as a result of feelings of social isolation, hopelessness, and despair related to their identity status in their social context (D’Augelli, Hershberger, & Pilkington, 2001). Access to health opportunities are consistently ill afforded to those of marginalized identity status(es) as a result of centuries of systemic and social inequalities, and thus a closer look at the specific social processes maintaining this inequity is warranted.

The role of discrimination in maintaining health disparities. Discrimination is a predominant social force that plays a prominent role in the development and maintenance of health disparities among marginalized populations at the interpersonal, community, and systemic levels (Institute of Medicine, 2002). At the interpersonal level, discrimination leads to physiological and psychological reactions that can lead to poorer health over time (see Pascoe & Richman, 2009 and Meyer, 2003 for reviews). At the community level, discrimination may manifest in community-wide acceptance of negative cultural or group stereotypes— that is, widely held and oversimplified images or ideas of a group of people— and thus, the targeted individuals of the stereotypes may develop unfavorable self-evaluations, which, in turn, detrimentally affect mental and/or physical health via the experienced mental strain (Williams & Williams-Morris, 2000). Finally, at the systems level, discrimination may manifest in the forms of socioeconomic inequality, limited access to healthcare (in regard to geographic and financial

access), and truncated educational and living opportunities, which overwhelmingly affect racial/ethnic and sexual minorities, and undoubtedly adversely affect health (Brown, O'Rand & Adkins, 2012; Stuber et al., 2008; Williams, & Williams-Morris, 2000). Given the powerful and complex relationships among discrimination, opportunity and health, one must consider social influences within larger systems to best understand the development and maintenance of health disparities among marginalized groups.

Discrimination even within healthcare systems is impactful in maintaining health disparities (Krieger, 1990; Meyer, Schwartz & Frost, 2008). For one, those of marginalized identities (a single marginalized identity or several marginalized identities) are less likely to seek or receive healthcare often due to discriminatory and/or financial barriers related to their identity status. This is particularly true for racial/ethnic minority populations who are far less likely to have health insurance (Sohn, 2017) and more likely face discrimination and bias from their healthcare providers (Paradies, Truong, & Priest, 2014). Women also experience sex/gender-based discrimination in healthcare systems in regard to receiving adequate reproductive care (Reagan, 1997), sexism from doctors (LaVeist, Rolley & Diala, 2003), and via disproportionate invalidation or belittlement of their conditions in cases of chronic pain/disease (Werner & Malterud, 2003). All of these conditions undoubtedly degrade the quality of care received among populations already predisposed to adverse health outcomes. Indeed, the effects seem to be cyclical; sexual minority (i.e., LGB) individuals have a greater risk for numerous adverse health conditions, which is related to their lower odds of accessing healthcare due to discriminatory barriers (Strutz et al., 2015) and the social stress experienced from feelings of loneliness and harassment inside and outside of healthcare systems (Meyer, 2003). As marginalized populations face unique and devastating experiences extending within healthcare systems themselves,

research demands a closer look at the pervasive and insidious social factors maintaining disparities in physical and mental health disorders across the nation.

Importantly, greater attention to the mechanisms contributing to health disparities in the mental healthcare realm is needed, as mental health conditions such as depressive symptoms and clinical depression are already under diagnosed, undertreated, and stigmatized, further limiting access to appropriate treatment for all populations (Corrigan, 2004; NAMI, 2019). Moreover, racial/ethnic and sexual minorities' already limited access to healthcare exacerbates the risk that depressive symptoms will be left untreated among these populations. For example, though non-Hispanic Whites typically have higher rates of depression than racial/ethnic minorities (see below), 40% of non-Hispanic Whites reported not accessing mental health care for their depression, compared to roughly 64% of Latinos, 69% of Asians, and 58% of African-Americans (Alegría et al., 2009). Sexual minority populations also report lower access to mental health treatment, citing fear of discrimination as a significant barrier to seeking help (Steele et al., 2017). Complex relationships between discrimination based on gender, race/ethnicity, and sexual orientation and stigma based on development and treatment of depression warrant more work to examine the epidemiology of depressive symptoms within respective cultural contexts.

Section 2.2: Depressive Symptomatology

Though health disparities exist among an array of physical and mental health conditions (e.g., anxiety, heart disease, diabetes, stroke, substance use disorders), the current study focuses on health disparities in depressive symptoms for a number of reasons. First, given its increasing prevalence in the U.S., there exists a great need to understand the epidemiology of depression. Second, recent theoretical developments (Meyer, 2003) warrant a closer look at minority stress (stress experienced on the base of minority status) as a form of chronic stress, which has been

closely linked to major health conditions such as depression (APA, 2019). Finally, though research exists on disparities regarding depressive symptoms among single marginalized identities and single marginalized identities in the context of discrimination, research is limited on the relationships between intersecting marginalized identities, experiences and attributions of discrimination on the basis of one's marginalized identity(s), and the development of depressive symptoms (see below). The current study intends to shed light on these associations, with the hopes to expand current knowledge on mental health disparities as a whole.

Depressive symptoms are psychological symptoms “that affect how [one] feels, thinks, and handles daily activities such as sleeping, eating, or working” (National Institutes on Mental Health, 2017). Depressive symptoms may manifest in a variety of ways and tend to compromise one's physical, cognitive, and emotional functioning. Generally, depressive symptoms encompass feelings of apathy, fatigue, worthlessness, sadness and lack of interest to engage in pleasurable activities. Left untreated, most severe cases of depressive symptoms— the focus of this study— may escalate to a Major Depressive Disorder (i.e., major depression; a depressive episode that persists nearly every day to last more than two weeks). One in six people will experience major depression in their lifetime with most cases developing in late adolescence and early adulthood (American Psychiatric Association [APA], 2017). Thus, targeting the development of depressive symptoms is an important health endeavor and arguably one of the most effective means to intervene in the progression of a full-blown major depressive disorder.

Prevalence of depressive symptoms. Over 16 million (6.7%) adults experience a major depressive episode each year in the United States (NIMH, 2017). Onset of depressive symptoms is associated with a host of negative outcomes including a higher risk for chronic health conditions, suicidal behaviors, unemployment, an interrupted educational trajectory, higher risk

of divorce, and elevated substance use (see Evans & Erickson, 2019; Kessler, 2011 for reviews). At the societal level, depression accounts for more than 200 billion dollars in U.S. economic burden, and MDD is the second leading cause of disability worldwide (Greenberg et al., 2015; WHO, 2018). In short, depression is detrimental, insidious, and devastatingly widespread, warranting a closer look at its epidemiology in biopsychosocial contexts.

Biopsychosocial Influences of Major Depression. A great deal of work has been conducted to identify the key variables that put an individual at risk for developing depressive symptoms (see Lorant, Deliège, Eaton, Robert, Philippot, and Ansseau, 2003; and Wray et al., 2012 for meta analyses). In this review, I divide these etiological risk factors into two categories: biological risk and environmental risk, as it is important to consider both when attempting to understand the manifestation of depressive symptoms within and between populations. Further, in the current study, a thorough review of biological and environmental risk factors allows for a more precise estimate of the unique variance in depressive symptoms that may be attributed to social stress and more specifically, minority stress. In any case, depression develops as a product of one's unique biological, environmental, and social risk.

Biological risk. Risk for developing major depressive disorder most certainly operates as a function of genetic and psychological influences (NIMH, 2017). For example, when individuals have a first degree relative (i.e., parent or sibling) with major depression, the risk for developing depressive symptomatology is two- to threefold that of someone who does not have immediate family with a history of depression, suggesting a robust influence of genetics (and shared environment, see below) on the development of depressive symptoms (NIMH, 2017). Indeed, heritability for depression is estimated to be around 40%, meaning nearly half of the variance in depression can be attributed to genes alone (see Flint & Kendler, 2014 for a review).

Specifically, genetics contribute to the development in depressive symptoms through their influence on (activation of) the inflammatory response system and the disruption on the transmission of neurotransmitters in the brain (see Dowlati et al., 2009 and Godfrey, Gardner, Kwon, Chea, and Muthukumaraswamy, 2018 for meta-analyses).

Environmental risk. Water pollution, air pollution, and even noise pollution in one's immediate environment may increase risk for developing depression (Nemade & Patricelli, 2019). Lifestyle factors including alcohol/drug abuse, overworking, poor sleep, lack of exercise, or lack of social interaction may also put adults at a greater risk for depressive symptoms (Nemade & Patricelli, 2019). Stress plays a significant role in exacerbating the risk for depression among adolescents and adults (Substance Abuse and Mental Health Services Administration [SAMHSA], 2018). Stress is the physical, mental, or emotional pressure, strain or tension that occurs at either the community or individual level (Dohrenwend, 2000). Stress manifests in many different ways and occurs all across the lifespan. Consequently, among other environmental influences, increased stress levels are clear indicators for the development of severe illnesses like major depression for many populations (see Hammen, 2005 for a review).

Stress does not need to temporally coincide with depressive symptoms in order to constitute as a risk factor. For instance, Adverse Childhood Experiences (ACEs)— stressful or traumatic events occurring in childhood like neglect, abuse, parental divorce, and more— significantly increase the odds for the manifestation of depressive symptoms later in life (SAMHSA, 2018; Von Cheong, Sinnott, Dahly, & Kearney, 2016). Related, risk for depression is often higher among people with current chronic illness or a history of chronic illness, including cancer, HIV/AIDS, diabetes, etc. (which are positively related to acute and chronic stress), suggesting that stressful events may pose significant risks for developing depressive

symptoms in the short- and long-term (NIMH, 2017). While a host of environmental factors may increase one's risk for developing depression, factors that exacerbate mental stress on the individual seem to be especially pertinent across studies (Hammen, 2005; Nemade & Patricelli, 2019; SAMHSA, 2018; Tafet & Bernardini, 2003; Von Cheong et al., 2016).

Depression and Stress. Though many forms of stress (e.g., acute, chronic—see below) have the potential to wreak havoc on individuals' physical and mental health, thereby increasing risk for developing depressive symptoms, not all stress contributes to risk for developing depressive symptoms in the same way (APA, 2019). The following section outlines different forms of stress as environmental risk factors in the context of the current research questions. I first examine acute stress, then chronic stress, and finally, social stress (a form of chronic stress). The latter, in the form of discrimination, is the most applicable to the current study.

Acute stress and depression. While acute, or short-term stress can lead to depressive symptoms, the duration of this form of stress is often not enough to pose severe effects—at least not on its own. Rather, acute stress more often is only a small contributor to the development of depressive symptoms with genetics and brain chemistry playing bigger roles in cases in which acute stress seemed to “trigger” a depressive episode or disorder (Wurtman, 2005). Put another way, while the random car accident or a physically draining work week may temporarily rev up the human stress response, this type of stress is more often short-lasting and people tend to recover once the stressful event or short series of events conclude. Moreover, this form of stress is more likely to be recognized as taxing by the victims of the stressors, as well as workplaces and health care providers of the victims, therefore increasing the likelihood that the stress and the consequences of stress (e.g., missed workdays, physical health challenges, etc.), will be acknowledged, accommodated and/or treated accordingly (APA, 2019).

Chronic stress and depression. Chronic stress, on the other hand, has the potential to play a particularly dangerous role in the risk for developing depressive symptomatology in that it tends to be more unrelenting, subtle and depleting (APA, 2019; Tafet & Bernardini, 2003; Willner, 1997). Chronic, or long-term, stress is different from acute stress in that it continuously and subtly activates the stress response. While a car accident or strenuous activity is temporary, chronic stress, which may manifest via poverty, long-term illness, or dysfunctional family climate, could go on for months or even years systemically and subtly depleting the individual's physiological coping resources (APA, 2019; Blackburn-Munro, & Blackburn-Munro, 2001; Matheson, Moineddin, Dunn, Creatore, Gozdyra, & Glazier, 2006). While humans have been coping with acute stressors since the beginning of time (e.g., outrunning a predator or dealing with temporary food shortages— today's equivalent of a car accident or a stressful work week), the human body is ill-equipped to cope with chronic stress. Under chronic stress the human physiological system suffers from overuse (APA, 2019; Centre for Studies on Human Stress [CSHS], 2017). Indeed, ill effects of chronic stress on the physiological system are related to coronary heart disease, high blood pressure, stroke, and mental health ailments as the stress slowly and persistently exhausts human systems (CSHS, 2017; Mariotti, 2015; Robles, Glaser, & Kiecolt-Glaser, 2005).

Social stress, discrimination, and depression. A particularly insidious form of chronic stress is social stress—that is, components of one's social environment that may put chronic strain on an individual, and further lead to mental and physical anguish (see Mays, Cochran, & Barnes, 2014; Meyer, 2007; Pascoe & Richman, 2009 for reviews). As humans are social beings, social resources like interpersonal relationships and communities often provide support, joy, and a sense of belonging to the individual (Juth & Dickerson, 2013). However, systemic and

sociological forces establish that a positive social influence is not always the case. Anywhere from a quarter to a third of individuals in the U.S. report experiencing discrimination (Boutwell et al, 2017). Thus, researchers and policymakers have urged for a closer look at the potential effects of social stress (specifically, in the forms of prejudice and resulting discrimination) on health outcomes for the millions of people traditionally and negatively affected by years of systematic power and inequality in the United States (Carbado, Crenshaw, Mays, & Tomilson, 2014; Meyer, 2007; Stuber et al., 2008).

A relatively large body of literature provides support for the effect of perceived discrimination on adverse mental health outcomes such as depression. In fact several meta-analyses suggest a robust relationship between perceived discrimination (on the base(s) of one's sex/gender, race/ethnicity or sexual orientation) and health disparities in depressive symptoms (e.g., Britt-Spells, Slebodnik, Sands, & Rollock, 2018; Meyer & Dean, 1998; Paradies et al., 2014; Szymanski & Stewart, 2010). This is somewhat unsurprising, due to the multidimensional and chronic nature of discrimination, which occurs in professional settings, social settings, and even healthcare settings (Williams, Neighbors, & Jackson, 2003). Put another way, one may experience discrimination when shopping, driving, attending social events, buying a house, going to work, riding public transit, applying for a job, and more. Moreover, many of these experiences happen on a daily or weekly basis, indicating that that the stress from discrimination behaves more like chronic stress (as opposed to acute; Kessler, Borges, & Walters, 1999; Thotis, 2010). Indeed, the chronic stress from discrimination can be as detrimental (if not more detrimental) to wellbeing as the chronic stress from losing a job, experiencing divorce, or grief (Kessler et al., 1999). Indeed, perceived discrimination can be isolated as a mediator in the relationship between marginalized identity and health disparities, confirming its role in

exacerbating risk for depressive symptoms (e.g., Fuller-Rowell, Doan, & Eccles, 2012; Fuller-Rowell, Evans, & Ong, 2012; Williams & Mohammed, 2008).

Still, most studies examining discrimination and mental health do so in the context of a singular marginalized identity or subgroup (Paradies, 2006; Williams & Mohammed, 2009; Williams et al., 2003). Fewer studies have looked at the presence of discrimination and mental health outcomes across various identity-based subgroups. The consideration of multiple identity-based subgroups is particularly important, as discrimination (and social stress in general) is unequally distributed across groups, and no two types of discrimination are the same (e.g., experiences of sexism are unique from those of racism; Crenshaw, 1989). Moreover, marginalized groups have varied economic and social resources (see below) to cope with heightened experiences of discrimination (and often, subsequently, adversities like depression), which further complicates addressing the relationships between social stress in the form of discrimination, and the development of health disparities in depressive symptoms. Thus, if possible, research should consider discrimination across multiple identity-based subgroups to best understand the manifestations of health disparities among those with varying marginalized identities.

Depression and Identity Status. The following section reviews the disparities in major depressive disorder among three identity indicators: gender, race/ethnicity, and sexual orientation. Understanding existing health disparities among different facets of identity, respectively, is a key step toward understanding health disparities among complex, intersecting identities. Moreover, this understanding will give way to the further study of the unique discrimination maintaining these disparities.

Depression and sex/gender. Perhaps one of the most widely studied health disparities in regard to depression is that between men and women (see Albert, 2015 for a review). Globally, women have almost twice the prevalence of major depression, with disparities widest within the adolescent and young adulthood years (Kessler, 2003). A number of theories exist regarding sex/gender differences in the manifestation of depression, with major themes including differences in genetics, hormones, cultural norms, and social stress between men and women.

In the biological domain, there is some evidence to suggest that certain genes associated with depression are predominately found in females (Harvard Medical School, 2011). Indeed, because sex/gender differences tend to emerge in early adolescence, female hormonal fluctuations attributed to puberty, oral contraceptives, pregnancy, and menopause may be potential contributors to the onset depressive symptoms through their influence on mood sensitivity and affect (Cyranowski et al., 2000; Rubinow, Schmidt & Roca, 1998; Soares & Zitek, 2008). However, systematic reviews fail to find consistent relationships between these hormonal influences and risk for depression, indicating biological differences only partially, at best, explain major sex/gender differences in the manifestation of depressive symptoms (Kessler, 2003).

On the other hand, the unique social and environmental stressors experienced by women may play a larger role in the development of depression. For example, the chronic, low-grade stress of caregiving, a role women take on more often than men, may put women at a higher risk for depressive symptomatology (Albert, 2015; Leach, Christensen, MacKinnon, Windsor & Butterworth, 2008). Depression is also highly correlated with trauma such as sexual, physical and emotional abuse (Schmidt, 2007). All of these events disproportionately affect women, a phenomenon feminist scholars attribute to masculine based norms of dominance and control and

a long worldwide history of the mistreatment of women (Gerstenberger & Williams, 2012; National Coalition Against Domestic Violence, 2019). Finally, women are far more likely to experience sexism in institutions, their workplace, and their family systems, all of which adversely affect mental health and wellbeing, potentially increasing their risk for depression (Nadal, 2017; Triana, Jayasinghe, Pieper, Delgado, & Li, 2018; Symonds, 1986; WHO, 2019).

In a similar vein, it may be that deeply ingrained masculine and feminine norms contribute to the disparities in depression between men and women. Though women are often negatively stereotyped as a more emotional gender, women and their healthcare providers are more likely to detect and treat depressive symptomatology in themselves/women, which is ultimately helpful. On the other hand, masculine norms of toughness and stoicism may result in men tending to suppress vulnerable emotions (e.g., sadness, hopelessness), thus leading to an under-reporting of depressive symptomatology among men (Winerman, 2005). Similarly, doctors are far less likely to diagnose and treat depression in men compared to women, even when symptomatology is identical via diagnostic tests (WHO, 2019). Men are far more likely to be diagnosed with an externalizing disorder (e.g., alcohol use disorder) than an internalizing disorder such as major depression, indicating potential gender differences in the manifestation of vulnerable and uncomfortable emotions. Because men are less likely to express depressive symptomatology to their families and/or healthcare providers (perhaps due to masculine norms of toughness, etc.), men may cope with this strain via negative, albeit more socially acceptable, externalizing behaviors such as substance misuse, gambling, etc. (Rosenfield, 2000; Wilsnack, Wilsnack, Kristjanson, Vogaltanz-Holm, & Gmel, 2010). Indeed, co-occurring mental health and substance use disorders are more common in men than women (SAMHSA, 2016). Completed suicide is also disproportionately higher among men, further increasing the urgency toward

identifying mental health strain among men (WHO, 2018). Thus, one must account for the unique societal expectations faced by men and women to best understand discrepancies in depression diagnoses and seeking/receiving treatment.

Although there are a number of risk factors contributing to the disproportionate rates of depressive symptoms/depression among women, there are also numerous protective factors shared by women that may prevent the development of depressive symptomatology. For one, social support appears to be particularly protective for the development and severity of depression (Gladstone, Parker, Malhi, & Wilhelm, 2007; Ibarra-Rovillard & Kuiper, 2011). Women, compared to men, tend to have closer and more supportive relationships, and are more likely to offer and receive support during times of emotional/mental distress (Martinez-Hernaez, Carceller-Maicas, Digiacomio, & Ariste, 2016). Interestingly, living alone in adulthood is associated with an increased risk for major depression in men but not women, perhaps further indicating the protective and prominent role of social ties among women and the detrimental effects of potential social isolation among men (Stengenga et al., 2012). Women are also far less likely to engage in heavy substance use (specifically, alcohol use) compared to men perhaps due to the aforementioned gender differences in coping, which may be protective in the development and severity of depressive symptoms among women (Stengenga et al., 2012; SAMHSA, 2016). Finally, women are more likely to receive attention for mental health strain, increasingly the likelihood that symptoms will be acknowledged, diagnosed, and treated, which is ultimately protective for the development of depressive symptoms among women (Harvard Medical School, 2011).

Still, considering the complex roles of biology, sociology, and masculine/feminine norms in depressive symptomatology, it is unlikely that any one of these factors alone contribute to

gender differences in depressive symptomatology and development. More likely is that *combinations* of biological (and specifically in the case of sex, hormonal) social, and environmental factors interact to create the disparity of depressive symptoms and major depression diagnoses that we see between men and women today (Kessler, 2003).

Depression and race/ethnicity. Comparatively, rates of depression among racial/ethnic minority groups tend to be lower than that of non-Hispanic Whites, despite the fact that disadvantaged minority groups often experience higher social adversity, which is related to experiencing depression (Breslau et al., 2006; Compton-Lily, 2002; Dohrenwend, 2000; Franklin, Boyd-Franklin, & Kelly, 2006). Still, findings are somewhat inconclusive (see Barnes, Keyes, & Bates, 2013; Simpson, Krishnan, Kunik, & Ruiz, 2006; U.S. Department of Health and Human Services, 2017 for reviews). For instance, some research posits that rates among racial/ethnic minorities tend to be *higher* than that of non-Hispanic Whites, and interestingly, the Substance Abuse and Mental Health Services Administration (2016) found that adults who identify with two or more races/ethnicities have the highest rates of depression (10.5% as compared to 7.4% of non-Hispanic Whites, 5.0% of Blacks, and 5.6% of Hispanic/Latinx populations). Yet, researchers argue that some of the disparity may be attributed to the fact that most of the instruments used to screen for major depression and depressive symptoms have been historically validated via testing with primarily non-Hispanic White, middle-to-upper-class populations (Moazen-Zadeh & Assari, 2016; Nguyen, Kitner-Triolo, Evans, & Zonderman, 2004).

Further, the race-wealth gap and by proxy, neighborhood disadvantage, undoubtedly contribute to the manifestation of depression among racial minority populations (Simons et al., 2016). For example, Black individuals who live below the poverty level are three times more

likely to report psychological distress than Black people who live above the poverty level (U.S. Department of Health and Human Services, 2017). Furthermore, consider that the average annual income in the United States between the years of 2014-2016 was roughly \$70,000; though, for Black populations, the average hovered around \$50,000 and for Hispanic/Latinx populations, roughly \$60,000. Moreover, Black people own less than three percent of the nation's wealth, despite making up more than 13 percent of the U.S. population (Moore, 2015). Related, while home ownership is arguably one of the most prominent assets one can have towards their financial status, home values in predominantly Black and Hispanic/Latinx neighborhoods are consistently restricted (Brown et al., 2012). Accordingly, wealth and home ownership may at least partially explain health disparities in depression among low-income racial and ethnic minorities, as these minorities (particularly Black and Hispanic/Latinx groups) are also more likely to be under-diagnosed perhaps due to economic strain or access to affordable health care (Mossakowski, 2008).

Still, there are a number of protective factors that may contribute to the “paradoxical” findings of lower rates of depression among People of Color (despite having disproportionately more social and economic stressors; Barnes, Keyes & Bates, 2013). A strong and positive sense of racial/ethnic identity appears to be extremely protective among the development of depressive symptoms (among other various health ailments) for People of Color (Neblett, Rivas-Drake, & Umaña-Taylor, 2012; Smith & Silva, 2011). Similarly, Families of Color who raise their children with forms of “ethnic-racial socialization” such as preparation for bias and negative messages regarding their race, reminders of self-worth, egalitarianism, and cultural socialization may fare better in their mental health outcomes, especially as efforts toward resilience associated with social stress related to their identity have already been established (Hughes et al., 2006; Umaña-

Taylor, Alfaro, Bámaca & Guimond, 2009). Finally, generational differences may exist in depressive symptoms among People of Color, such that those who lived through the civil rights movement and/or experienced more expansive developments in civil rights may exhibit fewer depressive symptoms as a result of these protective experiences of progress (Barnes et al, 2013; Williams & Collins, 1995). Any or all of these factors (among others) may contribute to the “paradox” that often exists among People of Color’s protection against depressive symptomatology, despite the fact that these populations experience more strain overall.

In sum, when it comes to racial/ethnic minority populations, estimating the prevalence of depressive symptoms/MDD diagnoses is complicated in that one must account for demographic differences, but also the socioeconomic, educational and historical context of the person. Further, one must consider that barriers that may increase risk for depression including limited access to healthcare and treatment vary person to person, and do not always conflate risk for depressive symptoms (Simpson et al., 2006; Simons et al., 2016). These challenges should not deter one from this research, but rather, inform best modeling practices. For instance, it would be wise for researchers to consider the scope of discrimination (i.e., breadth of discriminatory acts) that one experiences as it relates to the development of depressive symptoms particularly among those of racial/ethnicity minority, and socioeconomic statuses.

Depression and sexual orientation. More certainly, lesbian, gay, bisexual (LGB) populations have an increased risk for depression, psychological distress, and suicidal ideation, (among other negative mental health outcomes; Fredriksen-Goldsen et al., 2014; Gilman et al., 2001; King et al., 2008; National Institutes of Health [NIH], 2010). For example, LGB youth are four times more likely to attempt suicide compared to heterosexual youth, and LGB populations in general are three to six times more likely to experience depression overall (NAMI, 2016).

Still, only in the last decade (since 2010) have LGB populations received recognition as marginalized populations in which social, environmental, and economic factors may contribute to salient health disparities within these groups (NAMI, 2016). Moreover, due to this lack of recognition many LGB individuals, particularly in older generations, keep hidden their sexual identity indicating potentially restricted estimates and considerations of depressive symptoms among this population (HHS, 2012; NAMI, 2019).

Related, many experts attribute the disproportional health risk in depressive symptoms to the historic social, economic, and political structures that facilitate marginalization of LGB populations in the United States today (see Hafeez, Zeshan, Tahir, Jahan, & Naveed, 2017 and ODPHP, 2019 for reviews). For example, until the early 1970's, "homosexuality" was referenced as a "sociopathic personality disorder" via the Diagnostic and Statistical Manual of Mental Disorders (DSM). While "homosexual" was terminology frequently used in prior decades and by the APA until 1973, the term is generally avoided in current LGB research. In 2006 the Gay and Lesbian Alliance Against Defamation listed it as an offensive term; as such, I will avoid using this language. Consequently, LGB populations to this day experience disproportionately high levels of social stress in the form of discrimination and homophobia compared to their heterosexual peers (Lombardi, Wilchins, Priesing, & Malouf, 2002; Meyer, 2003; Ryan, Huebner, Diaz, & Sanchez, 2009). As such, prejudice against LGB individuals continues to exist in employment, housing, and community settings, and federal law has yet to pass legislation prohibiting discrimination based on sexual orientation, despite the public debate spanning back to the early 1960's (Human Rights Campaign, 2014; Weststrate & McLean, 2010). In sum, despite overwhelming rates of depression and suicidality among LGB populations and attempts

to eradicate injustice contributing to such disparities spanning almost half a century, efforts to address mental health disparities among these groups are relatively recent.

One issue particularly pertinent to LGB populations' mental health is that of bisexual invisibility. Often, prejudice and discrimination toward bisexual populations can be worse than that of lesbian and gay populations due to "double discrimination" from heterosexual and gay and lesbian populations (Barker, Richards, Johnes, Bowes-Catton, & Plowman, 2012). Moreover, advocacy research working for LGB issues often neglects issues and perspective specific to bisexual populations. This is particularly problematic as negative health outcomes including depressive symptoms tend to be most prominent among bisexual populations (compared to heterosexual, lesbian and gay populations; Jorm, Korten, Rodgers, Jacomb & Christensen, 2002). Indeed, bisexual invisibility and biphobia—"negative attitudes, behaviors and structures specifically directed to anyone who is attracted to more than one gender" are related to numerous adverse health outcomes (Barker et al, 2012). Bisexual populations are also at risk for more experiences of discrimination and/or isolation, which can further heighten minority stress and/or decrease the degree of social support the individual receives (Balsam & Mohr, 2007; Carey, 2005; Ochs, 1996). Thus, research concerning LGB issues should acknowledge the added adversity bisexual populations face, while also taking measures to account for bisexuality when discussing findings and recommendations for policy (see Barker et al., 2012 for examples).

Still, despite many sources of adversity among sexual minorities, protective factors exist within the LGB community, which may heighten one's resilience to depressive symptoms. Again, social support appears to be particularly impactful from a resilience perspective in that positive social relationships tend to promote health and wellbeing and alleviate stress (Cohen,

2004). In fact, sexuality-related support (e.g., support groups, Gay Pride) may be particularly protective for sexual minorities, as sexuality can be an “invisible” identity, which can introduce a higher risk for feeling alienated or hopeless (Doty, Willoughby, Lindahl, & Malik, 2010; Grossman, D’Augelli, & Hershberger, 2000; Major, 2006). Related, “outness” (i.e. disclosure) of one’s sexual identity is significantly related to lower rates of depressive symptoms (Ayala & Coleman, 2000). “Outness”, or “coming out” is not a dichotomous outcome (i.e. one is out or not out); people can disclose their identity to close family, coworkers, friends, extended family, among others, but need not disclose their identity to everyone to be considered “out.” Disclosing one’s identity among more of the aforementioned groups appears to be protective for lesbian, gay and bisexual populations, perhaps due to the lack of inner conflict with or suppression of one’s true sexual identity in these spheres (Lewis, Derlega, Berndt, Morris & Rose, 2000; Schrimshaw, Siegel, Downing & Parsons, 2013). Thus, it appears that an openness towards one’s sexual identity and social support (particularly regarding sexual identity) can protect from and alleviate the minority stress experienced by those of LGB identities.

Section 2.3: Considering Intersectionality

Given the notable associations across identity statuses, more recent research gives way to the study of depression between *intersecting* marginalized identities, and specifically in the contexts of minority stress and discrimination. Moreover, those with multiple marginalized identities continue to comprise increasingly more of the U.S. population, suggesting that a singular-identity based approach to health disparities may have many limitations (Jackson, Williams, & VanderWeele, 2016). Thus, building from the existing Minority Stress Model (Meyer, 2003) and Intersectional theory (i.e., intersectionality; Crenshaw, 1989) mental health

disparities must be considered in the context of unique, intersecting marginalized identity statuses and importantly, their respective unique experiences of discrimination.

Intersectionality, one of the key terms derived from this more comprehensive approach to studying health disparities, is a theoretical paradigm derived from feminist theory that is best defined as the interaction between gender, race/ethnicity, sexual orientation, and other identity-based categories of difference (e.g., SES, ableness, etc.; Carbado et al., 2014; Collins, 1990; Crenshaw, 1989). As the manifestation of depressive symptoms is unquestionably diverse among and between minority groups, recent decades of epidemiological and sociological research have lent an intersectional approach to understanding health disparities in depressive symptoms (Calabrese et al., 2015; Chan & Henesy, 2018; Leach et al., 2008). Put another way, qualitative research in particular indicates that LGB individuals, for example, experience stigma, prejudice, and discrimination differently than racial minority individuals (both of which are different from the sexism experienced by women) as a result of the unique prejudices and stereotypes associated with their respective identity statuses in their own cultural contexts (Bowleg, 2008). According to Minority Stress Theory, this discrimination may manifest differently in predicting health disparities. Moreover, many people hold a combination of marginalized identities, which contribute to unique experiences of social stress. Thus, Intersectional theory lends the best approach toward understanding unique experiences and contributors to health disparities in the current societal context.

Intersectional theory proposes a synergistic, rather than independent/additive method to operationalizing dimensions of identity (i.e., sex, race/ethnicity, and sexual orientation) among the individual (Brown et al., 2012). Consider: one's intersectional identity is a large determinant of the power that they hold in social, political, and economic spheres. For example, the stress

associated with being a lesbian is distinct from that of being a gay man in that lesbians must process social stress (e.g., discrimination they face) in terms of their sexual orientation, but also their gender (Brooks, 1981). Related, there exists striking differences between rates of depressive symptoms in Black women (who face racism and sexism) and Black men (who face racism, but not sexism) with rates of 13.85% and 7%, respectively— both higher rates still than that of White women and men, though as aforementioned, comparisons between races/ethnicities vary across studies (Carr, Szymanski, Taha, West & Kaslow; 2013). Of course, this concept becomes even more complex as one considers the synergistic effects of three marginalized identities. Indeed, Black and Hispanic/Latinx LGB individuals may face racism in their LGB communities and homophobia in their racial/ethnic communities, not to mention the added sexism that LB Women of Color also face (Diaz, Ayala, Bein, Jenne, & Marin, 2001; Loiacano, Garnets, & Kimmel, 1993).

Thus, according to Intersectional theory, one with the intersectional identities of LGB, Person of Color (POC), and woman/female arguably holds less power to prosper financially, socially, and politically than one with the intersectional identities of straight, White, and man/male; or LGB, White, and man/male, etc. due to the above-mentioned barriers related to government and policy (Davis, 2008). Likewise, it is often noted in the literature that LB Women of Color experience “triple jeopardy” in the context of their thrice-marginalized statuses in that they are disadvantaged in terms of their sexual orientation, sex/gender, and race/ethnicity— not to mention the multiplicative oppression that comes with holding all three marginalized identities. Though complex, an approach to health disparities based in intersectionality gives way to a more robust understanding of social determinants of health and health disparities related to

unique identities, thus offering potential for more effective interventions toward discriminatory barriers to health.

Intersectionality and the social context. Collins (1990) further operationalizes intersectionality as a matrix of identities, by which one's specific identity in a particular social context may give way to opportunity (i.e. privilege), oppression, or both. Still, it is important to note that as people cannot be reduced to identities, identities, in turn, cannot be reduced to opportunities and oppressors. Rather, in order to best understand the consequences of intersectional identities, their respective, accompanying oppressions and opportunities must be understood in the context of cultural, historical, and sociological structures (Weber, 2004). Indeed, experts in methodological approaches to intersectionality stress that true tests of intersectionality should extend beyond demographic questions alone, as identities such as race are socially constructed and "explain nothing in and of themselves" (Bowleg, 2008; Helms et al., 2005, Weber & Parra-Medina, 2003). Rather, intersectionality research should focus on individuals' *experiences* related to their intersecting identities, such as stress, discrimination, prejudice, stigma, mistreatment, etc. to truly understand the ways in which one's identity(s) contribute to adverse experiences and negative health outcomes (Weber & Parra-Medina, 2003). The current study adheres to recommendations by intersectional theorists and considers not just the role of identity in the development of depressive symptoms, but also relevant perceived discrimination as potential mediator(s) of the relationship between marginalized identity status and depression, thus providing a "true" assessment of development/maintenance of health disparities among those of intersecting marginalized identities.

Discrimination, intersectionality and depressive symptoms. Notably, research parsing the bases of discrimination among those of multiple marginalized identities is comparatively

sparse, though growing. Much of the work in this area parses discrimination on the basis of sexual orientation or racial/ethnic minority status between men and women. For example, perceived discrimination significantly predicts poorer academic performance in Latino boys, but not Latina girls (Alfaro, Umaña-Taylor, Gonzales-Backen, Bámaca, & Zeiders, 2009). On the contrast, perceived discrimination is positively related to cigarette smoking in Hispanic girls but not boys (Lorenzo-Blanco, Unger, Ritt-Olson, Soto, & Baezconde-Garbanati, 2011); interestingly, discrimination is also robustly related to substance use (broadly) among Latina sexual minority women, but not men (Matthews, Aranda, Vargas, & Conrad, 2014). In general, discrimination seems to be more detrimental to mental health among Women of Color than Men of Color (Borrell et al., 2006; Flores et al., 2010), presumably due to their twice-marginalized status (or thrice-marginalized status, if these Women of Color are also sexual minorities). Among LGB People of Color, discrimination on the basis of sexual orientation predicts poor mental health and suicidal ideation, while discrimination on the basis of race/ethnicity predicts only poor mental health (Sutter & Perrin, 2016). Most pertinent to the current study, Black sexual minority women experience more discrimination overall than White sexual minority women (but not Black sexual minority men); these experiences, in turn, predict poorer mental health outcomes among Black sexual minority women, indicating the unique experience of discrimination on the bases of three marginalized statuses may, indeed, be particularly harmful (Calabrese et al., 2015).

It is also important to acknowledge the discrimination and stigma that accompanies depressive symptoms overall. Stigma around mental illness is widely spread, and can be particularly detrimental for those with mental health issues by exacerbating negative symptomatology (e.g., hopelessness, negative self-worth; Corrigan, 2004), or decreasing the

likelihood of seeking treatment (U.S. Department of Health and Human Services, 2001). Identity-based subgroups sometimes differ on their degree of stigma around depressive symptoms. For example, some research suggests Black populations have more negative attitudes towards depression than White populations (Brown et al., 2011). Other research indicates that Latinx populations tend to experience more self-stigma, and are less likely to seek mental health care than White or Black populations (Wong, Collins, Cerully, Seelam, & Roth, 2017). As previously mentioned, there tends to be more stigma surrounding depression diagnoses in men, perhaps due to the untrue assumption that mental health disorders indicate weakness or lack of control (Corrigan, 2004; Chandra & Minkovitz, 2006). While stigma around mental illness is not a variable of interest in this study, it is quite probable that the stigma around mental illness interacts with other forms of discrimination for identity-based subgroups (Brown et al., 2011). Thus, research findings will be interpreted with these considerations in mind.

While extant research is vitally informative, no known research has parsed one's perceived discrimination on the bases of sex/gender and/or race/ethnicity and/or sexual orientation in the development of depressive symptoms among an array of multiply marginalized identity-based subgroups. The current study will add to existing literature on discrimination and health disparities by 1) assessing differences in perceived discrimination among those of single or multiple marginalized identities and 2) testing the potential mediating role that perceived discrimination (both in regard to bases and scope of the discrimination; see below) plays in the development of depressive symptoms among and between intersecting identities.

Modeling Intersectionality

Considering the above review, current research on mental health disparities among marginalized populations is largely informative, but still understandably, limited. While much is

known regarding the manifestation of depressive symptoms among singularly marginalized identities, still more work is needed regarding the intersection of marginalized identities, as one's gender, sexual orientation, and racial/ethnic identities undoubtedly intersect, or "play off" one another (Collins, 1990; Crenshaw, 1989). Further, many recent tests of intersectionality in the context of mental health ignore the unique cultural and personal experiences related to intersecting identities by assessing the effects of identity statuses alone on health outcomes, which is ultimately inconclusive according to existing theory (e.g., Breslau, Kendler, Su, Gaxiola-Aguilar, & Kessler, 2005; Lytle, De Luca, & Blosnich, 2014; Meyer, Dietrich, & Schwartz, 2008; O'Donnell, Meyer & Schwartz, 2010). More specifically, as previously noted, marginalized identity alone does not "cause" disparate health outcomes; being of racial and sexual minority status does not cause poor health. Rather, it is the ensuing social and structural *experiences* related to one's identity status(es) in their own unique cultural context that puts people of marginalized identities at risk for poorer health outcomes (Bowleg, 2008; Meyer, 2003). Per current recommendations, this study will model experiences of discrimination related to marginalized identity status(es) as a mediator(s) of the relationship between identity status and depression, therefore extending beyond the study of health disparities among marginalized identity(s) alone.

This study is unique to intersectionality work in that it takes a quantitative approach to understanding intersectional identities. There are drawbacks and benefits to modeling intersectionality quantitatively. One of the key pitfalls to measuring intersectionality quantitatively is that it often assumes an additive approach to identity, in that participants are asked questions about their identities separately (e.g., experiences as Black and bisexual and a man) rather than their collective identities (e.g., experiences as a Bisexual Black man). Taking an

additive approach to intersectionality research can be problematic in that it assumes one's intersectional identity is merely the collective sum of their individual identities, which is counter to the foundations of intersectionality overall. Intersectional theory is rooted in multidimensionality and interdependence of identities (Collins, 1990; Crenshaw, 1989), but often, quantitative research takes a one-dimensional approach to studying identity by dichotomizing responses to identity-based questions and summing these responses together. This approach is disadvantageous, as it does not fully address the dimensionality of identity in a given subgroup (Bowleg, 2008). Qualitative research, on the other hand, allows respondents to offer more robust, comprehensive experiences of their own identities in their own words (see Bowleg, 2008 for examples). Also, survey/interview questions in qualitative research are open-ended, potentially offering the opportunity to capture more data and perspective of participants' realities (Davis, 2014; Smiet, 2017; Trahan, 2011).

Still, there are benefits to quantitative intersectionality research. While quantitative research does not capture the "richness" of intersectionality (Willig, 2001), the categorization of identities in quantitative research can be advantageous because this method applies a distinct name and a context to groupings of identities. Moreover, quantitative research often involves surveying a broader array of variables, which can ultimately expand the literature on intersectionality in less time (quantitative research is often more time consuming and more narrowly focused; Willig, 2001). Larger sample sizes in quantitative studies can also provide more generalizable research findings, which can result in more consistent conclusions across studies (Choy, 2014; Dudwick, Kuehnast, Jones, & Woolcock, 2006). Finally, quantitative methods do not involve interpretation of data pieces by the researcher (before data analysis), eliminating the potential for bias (Neuman, 2006). For example, the current study employs

previously validated measures to determine the degree of depressive symptoms or discrimination a given participant experiences, as opposed to relying on the researcher's own interpretation, the former of which can be more concrete. While quantitative intersectionality research does not provide the most robust assessment of intersectional experiences, it lends the potential to answer important research questions for unique and specific populations with access to more variables and more participants (Willig, 2001).

Because social identities comprise much more than gender, sexual orientation and race/ethnicity, the first step toward designing any quantitative study of intersectionality is to carefully consider identities of focus, and how “collapsing” such identities may limit interpretation (Warner, 2008). The most obvious indicator for choosing identities is, of course, the research question. Unfortunately, any sort of “collapsing” of identities (e.g., by race/ethnicity, gender, race/ethnicity *and* gender, etc.) inevitably creates a prototype for the group of interest that is limited in its representativeness of its members (Purdie-Vaughns, & Eibach, 2008). For example, people identify with a race/ethnicity, gender, and sexual orientation—but also with a religious affiliation, immigration status, socioeconomic status, age group/generation, ableness, etc. (Warner & Brown, 2011). Thus, researchers must carefully consider quantitative approaches to intersectionality research within the context of the research question, sample, and population acknowledging that the study of such identities, even with covariates, is incomprehensive.

In a similar vein, in identity- and intersectionality-based studies, it is important that researchers carefully choose the comparison group to which all other identities are compared, particularly when considering health disparities (Warner & Brown, 2011). Notably, one should exert caution in modeling a study of marginalized identities as the study of “others” (e.g.,

racial/sexual minorities, and women) against “the norm” (e.g., White, straight, men) in that these studies have the potential to portray experiences of marginalized or “low-status” groups as “effects to be explained” against the White, straight, masculine norm, which is counterproductive to challenging narratives of inequity and inequality (Hegarty & Pratto, 2001). Still, it is often helpful to compare marginalized identities against more privileged identities in the case of epidemiological research, as highlighting manifestations of health disparities may lend understanding to patterns that have historically been ignored (Warner & Brown, 2011). This is, indeed, applicable in the case of the current study as the privileged groups (White, straight, and male) often fare better than marginalized groups in the development of depressive symptoms, especially when considering intersecting marginalized identities (i.e., those who experience “double or triple jeopardy”; Banks & Kohn-Wood, 2002; Evans & Erickson, 2019, Meyer et al., 2008; SAMHSA, 2016). I intend to use straight White men as the primary comparison group in my study to better understand disparities that may be attributed to inhabiting a marginalized identity(s), specifically one’s marginalized gender (female/women), and/or race/ethnicity (person of color), and/or sexual orientation (LGB). As previously noted, social and economic structures in the U.S. are largely made for the straight White man; and thus, this subgroup serves as a useful comparison for health inequities. Still, it is important to note that I explore numerous comparisons to further assess the demographic differences in perceived discrimination and depressive symptoms (see Chapter 3).

Importantly, per Intersectional theory (Bowleg, 2008), I use this project to study dimensions of oppression *and* opportunity (i.e., privilege) in the development of health disparities in depression between groups. Specifically, I study multiply marginalized groups such as LB women of color, but also multiply privileged groups such as straight White men.

Furthermore, I study groups with identities that lend oppression (via discrimination) *and* opportunity (via presumed lack of discrimination) by studying GB White men (oppressed in their sexual orientation but privileged in their race and gender), LB White women (oppressed in their sexual orientation and gender, but privileged in their race), GB men of color (oppressed in their sexual orientation and race, but privileged in their gender), etc. Considering the complex and powerful relationships between identity, social stress, health equity and ultimately health disparities, such approach is appropriate given the current theoretical and sociological context.

Modeling discrimination. Including discrimination in the context of intersectionality research is noteworthy as it provides the means to conceptualize experiences related to one's identity (rather than relying on identity alone to explain disparate outcomes). However, the dimension to which discrimination is studied is equally important. For example, past researchers have studied the frequency of discrimination—that is, how often a participant reports experiencing discrimination on a weekly basis (DeBlaere & Bertsch, 2013; Selvidge, Matthews, & Bridges, 2008). Researchers have also studied scope of discrimination— that is, the different forms of discrimination one has experienced/experiences (e.g., name-calling, fear, distrust, denial of services; Calabrese et al., 2015). Finally, the bases of discrimination can also be closely studied by asking participants what they attribute their experiences of discrimination to (e.g., their gender, race/ethnicity, sexual orientation, physical appearance, etc.). Thus, one should consider best practices for modeling discrimination as a mediator for identity and health disparities given current Intersectional theory and the data provided.

Discrimination across several contexts (i.e., a larger scope of experienced discrimination) can be especially damaging to one's mental health, in that a large scope of discrimination is understandably more pervasive in this situation, compared to discrimination that only occurs in

perhaps one or two unique settings (though *any* discrimination is undoubtedly harmful and is not meant to be trivialized; Schmitt & Branscomb, 2002; Schmitt, Branscomb & Postmes, 2003; Schmitt et al., 2014). Consequently, a large scope of discrimination on multiple *bases* may be synergistically harmful in that an individual is experiencing a relatively large scope of discriminatory acts and these acts are based on multiple aspects of their identity (i.e., more of who they are). Per Intersectional theory, the current study incorporates discrimination scope and bases in understanding the degree to which a (multiply) marginalized individual experiences discrimination and to which of their marginalized identities they attribute this discrimination (e.g., their gender, or race/ethnicity, or sexual orientation or all three). As such, this study examines scope and bases of discrimination as mediators in the relationship between subgroup identity and depressive symptoms.

Current Study

Before stating my analysis plan and hypotheses, it is important to note several methodological limitations of my study. First, due to the sampling strategy used by the principal investigators, I am unable to assess perceived discrimination and depressive symptoms for straight People of Color. Due to the funding and purpose of the original Stress, Identity and Mental Health (STRIDE; Meyer, Frost, Narvaez, & Dietrich, 2006) study, the principal investigators did not sample any straight individuals who were Hispanic or Black with the intention of shedding light on those of multiple marginalized statuses and comparing these findings against reference groups of straight White people (for more information on the motives behind this strategy see Meyer et al., 2006 and Meyer, 2010). It must be noted that this is ultimately a limitation of the study in that it restricts my ability to offer a fully comprehensive test of the independent and intersecting contribution of race/ethnicity to Intersectional theory and

health disparities work. Still, future work would benefit from considering both straight and LGB People of Color in order to provide a more comprehensive intersectional approach. Additionally, the confinements of race/ethnicity to Black, Hispanic/Latinx and White populations in the U.S. fails to account for the unique experiences faced by those of Asian-Americans, American Indians, Alaskan Natives, and those who identify with one or more race/ethnicity in the U.S. Ultimately, these identities, as well as other relevant identities that comprise one's unique experience should be explored in future research with the goal of providing the most inclusive lens to Intersectional theory and health disparities (Bowleg, 2008; Crenshaw, 1989).

Per this dataset, I am able to stratify LGB People of Color into GB Hispanic/Latino men, GB Black men, LB Hispanic/Latina women, and LB Black women to begin investigating the relationship between race/ethnicity, sexual orientation and depressive symptoms. See below and Table 1 for a full list of the eight identity-based subgroups. Finally, Project STRIDE did not parse gender identity (i.e., transgender vs. cisgender). Recall, data collection for project STRIDE occurred in 2005-2006. Only in 2005 did the American Psychological Association appoint a Task Force on Gender Identity and Gender Variance, due to the increasing public awareness of transgender issues (APA, 2019). Thus, due to historical and contextual limitations, Project STRIDE does not measure gender identity, and thus the dimension of sex/gender is limited to male/female in the current study.

Despite these limitations, I chose to test my research questions with the STRIDE data for several reasons. First, Project STRIDE provides relatively recent publicly available data. Given that my research questions are heavily dependent on the degree of discrimination reported by identity-based subgroups, it is important that I use recent data so that I capture the social and political opportunities afforded to minorities today as accurately as possible. Of course, there are

still limitations in using data that is fifteen years old; however, this study is still relatively recent compared to studies of similar nature (e.g., “Detroit Area Study” by Jackson & Williams, 1995; “Research on Minorities” by Debro, 1981). Second, the STRIDE study oversampled participants of sexual and racial minority status, providing adequate power to assess discrimination and depressive symptoms among those with multiple marginalized identities (consider, for example, LB Women of Color make up less than 2% of the general population, but 25% of the STRIDE study; Meyer et al., 2006; The Williams Institute, 2019). Finally, the STRIDE data included all of the variables of interest while some otherwise strong datasets were more limited (e.g., National Longitudinal Survey of Youth did not measure sexual orientation; U.S. Bureau of Labor Statistics, 2015).

Considering the aforementioned goals and limitations, I examine the extent to which discrimination and depressive symptoms vary as a function of marginalized identities that an individual holds and I examine a series of mediation models in which depressive symptoms is the outcome, identity (defined as a categorical variable and represented by a set of dummy codes) is the predictor, and perceived discrimination (separated by basis of discrimination) serve as the mediator(s). In doing so, I break my analyses into three steps. First, I examine the descriptive and bivariate statistics for the variables of interest (see Chapter 3, Measures section). Second, I conduct two Analyses of Covariance (ANCOVA) with post-hoc planned contrasts to assess group differences in total perceived discrimination (attributed to gender, race/ethnicity, and sexual orientation; Model 1) and depressive symptoms (Model 2). Third, I assess a series of mediation and multiple mediation models (using regression analyses) in which I assess the mediating role of discrimination (divided into attribution/basis of discrimination: gender,

race/ethnicity, sexual orientation) in the relationship between subgroup identity and depressive symptoms.

Hypotheses

The current objective of this study is to evaluate health disparities in reported perceived discrimination and depressive symptoms through the lens of Intersectional theory. Based on current research, I divide my hypotheses to reflect my analytic approach (first, ANCOVAs, second, mediation models).

ANCOVA Hypotheses

H1. *Identity-based subgroups will significantly differ in their average reported depressive symptoms controlling for covariates*.*

H1.1. *Support for intersectionality will be found if straight White men report significantly fewer depressive symptoms as compared to the average depressive symptoms of the other seven (marginalized) identity-based subgroups.*

H1.2. *Support for intersectionality will be found if LB Women of Color report significantly more depressive symptoms as compared to the average depressive symptoms of the other six (less marginalized) identity-based subgroups.*

H2. *Identity-based subgroups will significantly differ in their average reported experiences of discrimination (attributed to gender, race/ethnicity, and sexual orientation) controlling for covariates*.*

H2.1. *Support for intersectionality will be found if straight White men report significantly fewer total experiences of discrimination (attributed to gender, race/ethnicity, and sexual orientation) as compared to the average total experiences of discrimination reported by the other seven (marginalized) identity-based subgroups.*

H2.2. *Support for intersectionality will be found if LB Women of Color report significantly more total experiences of discrimination (attributed to gender, race/ethnicity, and sexual orientation) as compared to the average total experiences of discrimination reported by the other six (less marginalized) identity-based subgroups.*

Between discrimination and depressive symptoms, there are 56 possible comparisons to be made among the eight different subgroups of interest; therefore, I propose to take an exploratory approach regarding all other comparisons beyond that of all marginalized groups to straight White men and LB Women of Color to less marginalized groups.

I will find support for intersectionality provided 1) straight White men (with zero marginalized identities) report fewer experiences of discrimination and/or depressive symptoms as compared to the average total discrimination and/or depressive symptoms of the other seven (more marginalized) identity-based subgroups, and/or 2) LB Women of Color (with the most marginalized identities in the current context) report more experiences of discrimination and/or depressive symptoms, as compared to the average total discrimination and/or depressive symptoms of the other six (less marginalized) identity-based subgroups. Regardless of my findings, the next step in my analytic plan is to test for mediation within marginalized identity-based subgroups (who are hypothesized to have more depressive symptoms and experiences of discrimination).

*See methods section for a full list of covariates

Mediation Hypotheses

H3. *Discrimination on the basis of gender will at least partially mediate the effect of being a straight White woman (compared to a straight White man) on reported depressive symptoms. Specifically, straight White women will report more gender-based*

discrimination and, in turn, more gender-based discrimination will be associated with more depressive symptoms.

H4. *Discrimination on the basis of sexual orientation will at least partially mediate the effect of being a GB White man (compared to a straight White man) on reported depressive symptoms. Specifically, GB White men will report more sexual orientation-based discrimination and, in turn, more sexual orientation-based discrimination will be associated with more depressive symptoms.*

H5. *Support for intersectionality will be found if discrimination on the bases of gender **and** sexual orientation both at least partially mediate the effect of being a LB White woman (compared to a straight White man) on reported depressive symptoms.*

Specifically, LB White women will report more sexual orientation- and gender- based discrimination and, in turn, more sexual orientation- and gender- based discrimination will be associated with more depressive symptoms.

H6. *Support for intersectionality will be found if discrimination on the bases of race/ethnicity **and** sexual orientation both at least partially mediate the effect of being a GB Black man (compared to a straight White man) on reported depressive symptoms.*

Specifically, GB Black men will report more sexual orientation- and race/ethnicity-based discrimination and, in turn, more sexual orientation- and race/ethnicity-based discrimination will be associated with more depressive symptoms.

H7. *Support for intersectionality will be found if 1) discrimination on the bases of gender **and** race/ethnicity, OR 2) discrimination on the bases of sexual orientation **and** race/ethnicity, OR 3) discrimination on the bases of sexual orientation **and** gender, OR 4) discrimination on the bases of gender **and** race **and** ethnicity, at least partially mediate*

the effect of being a LB Black woman (compared to a straight White man) on reported depressive symptoms. Specifically, LB Black women will report more gender-, and/or sexual orientation-, and/or race/ethnicity-based discrimination and, in turn, gender-, and/or sexual orientation-, and/or race/ethnicity-based discrimination will be associated with more depressive symptoms.

H8. *Support for intersectionality will be found if discrimination on the bases of race/ethnicity **and** sexual orientation both at least partially mediate the effect of being a GB Latino man (compared to a straight White man) on reported depressive symptoms. Specifically, GB Latino men will report more sexual orientation- and race/ethnicity-based discrimination and, in turn, more sexual orientation- and race/ethnicity-based discrimination will be associated with more depressive symptoms.*

H9. *Support for intersectionality will be found if 1) discrimination on the bases of gender **and** race/ethnicity, OR 2) discrimination on the bases of sexual orientation **and** race/ethnicity, OR 3) discrimination on the bases of sexual orientation **and** gender, OR 4) discrimination on the bases of gender **and** race **and** ethnicity, at least partially mediate the effect of being a LB Latina woman (compared to a straight White man) on reported depressive symptoms. Specifically, LB Latina women will report more gender-, and/or sexual orientation-, and/or race/ethnicity-based discrimination and, in turn, gender-, and/or sexual orientation-, and/or race/ethnicity-based discrimination will be associated with more depressive symptoms.*

Chapter 3

METHODOLOGY

The data in this study come from The Stress, Identity, and Mental Health Study (STRIDE, $N = 524$) based in New York City during the years 2004-2005. STRIDE is a large-scale study funded by the National Institute of Mental Health with a primary goal to examine the relationship between minority identity and mental health outcomes and general wellbeing among primarily marginalized populations. Thus, those of minority status (in regard to their race/ethnicity and/or sexual orientation) are oversampled in this data. A number of other variables relevant to minority health were also examined including identity perceptions, employment, perceived discrimination, social support, and more.

Sampling

Twenty-five researchers utilized venue-based, active-sampling techniques (i.e., actively recruiting participants from venues in the community), immersing themselves in a total of 274 venues and subsequently utilizing snowball sampling (e.g., providing incentives for participant referrals) to ensure a diverse participant pool across 32 different zip codes. The researchers did not utilize any passive recruitment methods (i.e., large-scale advertisement) in this study. Sampling venues included bars, coffee shops, gyms, bookstores, parks and streets, groups (sports, cultural, political groups), and events (e.g., Gay Pride). However, to avoid bias, the researchers did not use bars to sample straight respondents, nor did they use snowball sampling referrals by LGB participants to recruit straight respondents. Researchers later classified venues into 1) general venues- in which members or attendants were the general New York City population, and thereby, mostly heterosexual 2) mixed venues- in which members or attendants were relatively evenly split among LGB and heterosexual identities 3) mostly LGB venues- in

which members were mostly or exclusively of LGB identity. Upon completing a brief eligibility screening, participants engaged in in-person interviewing ($M = 3.82$ hours, $SD = 55.00$ minutes) and were compensated \$60 for their time. Additional details can be found in Meyer et al. (2006).

Participants

Participants were eligible to participate if they 1) self-identified as male/female, 2) self-identified as LGB or straight or used other terms to convey such identification (e.g., queer, heterosexual), 3) self-identified as non-Hispanic White, Black or Hispanic or used other terms to indicate such identification, 4) were between the ages of 18-59, 5) had lived in New York City for at least two years, and 6) spoke English well enough to engage in conversation. In total, 2,289 participants were screened, but 878 participants were not eligible to participate in the study. Of the remaining 1,411 participants, 624 individuals were eligible but oversampled (the principal investigators utilized strict cutoff points in which demographics were distributed so that no sexual or racial/ethnic minority group had significantly more participants than the rest; see Table 1). This left 787 eligible participants. After attrition and aforementioned snowball sampling, the STRIDE study consisted of a total sample of $N = 524$. Participants were evenly split by sex/gender (50% Male), with an average age of 32.24 ($SD = 9.27$). Fifty percent of participants identified as non-Hispanic White, 25% as Black/African-American and 25% as Hispanic/Latinx. The majority of participants identified as gay (34.00%), followed by lesbian (21.20%), straight (17.90%), bisexual (13.50%), heterosexual (6.50%), homosexual (3.10%), queer (2.90%), and other-LGB (1.00%).

Table 1. *Sample Size by Identity-Based Subgroup*

Straight White men ($N = 65$)

Straight White women ($N = 63$)

GB White men ($N = 67$)

LB White women ($N = 67$)

GB Black men ($N = 67$)

LB Black women ($N = 64$)

GB Latino men ($N = 64$)

LB Latina women ($N = 67$)

Total $N = 524$

Note. GB = Gay or Bisexual, LB = Lesbian or Bisexual

Measures

To assess participants' *gender*, participants were asked to indicate their gender, whereby 1 = Male, 2 = Female. To measure *sexual orientation*, participants were asked, “[Do you identify as] Lesbian, gay or bisexual?” (0 = “no”, straight or heterosexual, $N = 128$, 24.4%, 1 = “yes”, lesbian, gay, bisexual, $N = 396$, 75.60%). Participants were able to use other terminology to indicate their sexual orientation (e.g., queer, heterosexual), however they were also asked to identify as LGB or straight. To assess *race/ethnicity* participants were asked, “Which of the following best describes your racial or ethnic background?” (0 = White, 1 = Black/African-American, 2 = Latino/Hispanic). Participants were further split into unique identity-based subgroups (e.g., LB White woman) via dummy coding (see below and Table 1). The principal investigators created one single *identity-based subgroup* variable with eight categories, which serves as a set of the seven dummy-coded subgroups and is the focus of the current study.

The presence of *depressive symptoms* was assessed via the Center for Epidemiologic Studies Depression scale (CES-D; Radloff, 1977), a widely used measure of depressive symptoms with good reliability and validity among diverse populations (Dibble et al, 2012; Roberts & Vernon, 1983). The CES-D consists of 20 items intended to reflect the major features of depression. Participants self-reported depressive symptoms in the last week (e.g., “During the past week, how often did you feel depressed?”) with values ranging from 0 (rarely or none of the time, < 1 day) to 3 (most or all of the time, 5-7 days). The scale for depressive symptoms takes the average of all twenty items for each participant with scores ranging from 0-60, with higher values indicating more or more frequent depressive symptoms; some items were reverse coded so that higher scores reflected more depressive symptoms. The measure demonstrated excellent internal consistency with the original sample ($\alpha = .92$). In the current study, I calculated a

depressive symptoms score for each participant by taking the sum of each participant's scores on all items on the CES-D. Thus, *depressive symptoms* was modeled as a continuous variable in each of my models. Due to a negative (i.e., left) skew, I added one and took the natural log in the (original) variable that included zero. This is noted when relevant.

Everyday discrimination was assessed via an eight-item version of the Everyday Discrimination Scale (EDS) developed by Williams, Yu, Jackson, and Anderson (1997, $\alpha = .88$). The scale was originally developed for Black Americans, but has been widely used among a variety of samples with excellent validity and reliability (Clark et al., 2005; Williams et al., 1997). STRIDE participants responded to eight items on the EDS regarding their experiences, if any, of unfair treatment in their everyday lives (e.g., “How often do you feel that you are treated with less respect than other people are?”; 0 = Never, 1 = Anytime). For each question, if the respondent indicated “Anytime”, they were then asked to indicate whether they attributed this particular experience to an array of identifying variables (“What do you think is the main reason for these experiences?” 1 = Your Gender, 2 = Your Physical Appearance, 3 = Your Sexual Orientation, 4 = Your Race/Ethnicity, 5 = Other). Participants could attribute the experience to any or all of these identities. For each attribution, a “1” was recorded if they felt the discrimination was due to the particular characteristic and a “0” was recorded if they felt the discrimination was not due to the particular characteristic or if they had not experienced that particular type of discrimination at all. Most pertinent to this study are attributions of experienced discrimination to gender, race/ethnicity, and/or sexual orientation. It is worth noting that these discrimination questions were not exclusive to those with marginalized identity statuses. For example, if straight White men reported experiencing discrimination, they could attribute it to their gender and/or sexual orientation and/or race/ethnicity, despite this subgroup

being historically privileged in their gender, sexual orientation, and race/ethnicity.

The principal investigators created and made publicly available variables indicating the total number of discriminatory experiences each participant attributed to their gender (*total discrimination attributed to gender*), race/ethnicity (*total discrimination attributed to race/ethnicity*), and sexual orientation (*total discrimination attributed to sexual orientation*).

Total scores for each of these variables range from 0–8 in which participants could attribute none to all of their discriminatory experiences via the EDS to their gender and/or race/ethnicity and/or sexual orientation. I created another variable denoting the *total discrimination* score which encompasses the total number of discriminatory experiences one attributed to their gender *and* sexual orientation *and* race/ethnicity (total scores ranging from 0–24; i.e., scores 0–8 for each possible attribution). Descriptive statistics for attributions of discrimination (based on gender, sexual orientation, and race/ethnicity) between each of the eight subgroups can be found in Table 2.

Table 2. Preliminary Analyses of Frequency of Discrimination and Discrimination Attribution Between Subgroup

	Total Discrimination			Discrimination Attributed to Sexual Orientation			Discrimination Attributed to Race/Ethnicity			Discrimination Attributed to Gender		
	%	M(SD)	Min/Max	%	M(SD)	Min/Max	%	M(SD)	Min/Max	%	M(SD)	Min/Max
Everyone	87%	5.88(4.66)	0.00-23.00	60%	1.87(2.05)	0.00-8.00	59%	2.35(2.70)	0.00-8.00	54%	1.66(2.02)	0.00-8.00
SWM	57%	2.31(3.50)	0.00-18.00	18%	.34(.83)	0.00-4.00	38%	1.07(1.74)	0.00-7.00	35%	.89(1.67)	0.00-8.00
SWW	87%	4.16(3.15)	0.00-15.00	16%	.33(.97)	0.00-5.00	29%	.65(1.23)	0.00-5.00	86%	.86(.35)	0.00-7.00
GBWM	84%	4.13(3.70)	0.00-17.00	76%	2.58(2.14)	0.00-8.00	41%	.92(1.46)	0.00-6.00	34%	.62(1.14)	0.00-6.00
LBWW	93%	6.40(3.97)	0.00-16.00	78%	2.56(2.07)	0.00-7.00	30%	.73(1.42)	0.00-6.00	81%	3.10(2.19)	0.00-8.00
GBBM	97%	7.76(3.94)	0.00-17.00	76%	2.13(1.90)	0.00-8.00	94%	5.07(2.58)	0.00-8.00	32%	.55(.96)	0.00-4.00
LBBW	94%	8.81(5.1)	0.00-19.00	69%	2.16(2.11)	0.00-7.00	89%	4.34(2.74)	0.00-8.00	78%	2.31(1.94)	0.00-7.00
GBLM	95%	6.03(4.26)	0.00-23.00	80%	2.55(2.01)	0.00-8.00	75%	2.92(2.69)	0.00-8.00	23%	.56(1.46)	0.00-8.00
LBLW	88%	7.39(5.57)	0.00-20.00	69%	2.22(2.19)	0.00-8.00	73%	3.09(2.66)	0.00-8.00	63%	2.07(2.08)	0.00-7.00

Note. Percentages indicate the percent of people in each identity-based subgroup that reported any discrimination (attributed to their sexual orientation, race/ethnicity and gender), any discrimination attributed to their sexual orientation, any discrimination attributed to their race/ethnicity, and discrimination attributed to their gender. SWM = straight White men, SWW = straight White women, GBWM = GB White men, LBWW = LB White women, GBBM = GB Black men, LBBW = LB Black women, GBLM = GB Latino men, LBLW = LB Latina women, GB = gay or bisexual, LB = lesbian or bisexual

In the current study, total discrimination scope (as described in Chapter 2) separated by basis/attribution (i.e., the number of discriminatory experiences an individual reported and attributed to their gender, race/ethnicity and sexual orientation, 0-8 each) served as the mediating variable(s).

A set of control variables was selected due to their potential to affect various path estimates in my analytic models. For instance, depressive symptoms and perceived discrimination tend to vary among those of differing socioeconomic statuses and education levels (with higher SES and educational attainment being protective; Bauldry, 2015; Lorant et al., 2003), employment status (with those who are unemployed being at greater risk; Paul & Moser, 2009). Likewise, socioeconomic status/income, education level, employment status and U.S. citizenship can vary as a function of subgroup (i.e., intersections of gender, race/ethnicity, sexual orientation; see Bensimon 2005; Blau & Kahn, 2006; Breen & Jonsson, 2005; Everett, Rogers, Hummer, & Krueger, 2011; Kuebler, 2013; Murray-Close & Schneebaum, 2018; U.S. Citizenship and Immigration Services, 2018). I acknowledge that some of these variables (e.g., income and education) may be influenced by the identities that I am investigating, and thus some bias in assessing the effect of the identities on discrimination and depressive symptoms is likely introduced by controlling for them (Schisterman, Cole & Platt, 2009). Nonetheless, I deemed that the aforementioned variables were important to control for as potential covariates to further improve the accuracy of results and determine the degree to which various identity factors contribute to the paths in the model, holding constant other variables. Other demographic variables such as age and New York City residency were important to control for due to the potential for these variables to affect the levels of perceived discrimination and depressive symptoms among subgroups (i.e., for those of varying ages and residency statuses to

differentially experience discrimination and depressive symptoms). In total, my covariates included: Participants' ages (numeric response); Education ("What is the highest grade or year of school you completed?" 1= Never attended, 2 = Elementary school, 3 = More than 6 years, but less than high school diploma, 4 = High school diploma, 5 = High school equivalent diploma, 6 = Some college, 7 = Associate's degree, 8 = Bachelor's degree, 9 = Some postgraduate work, 10 = Master's degree, 11 = Doctoral degree); Unemployment status ("[Are you] looking for work/unemployed?" 0 = No, 1 = Yes); How long the participant has been a NYC resident (this variable was included because it was used as a sampling parameter; 0 = Grew up in NYC and never lived elsewhere for more than 5 years 1 = Moved to NYC as an adult); United States citizenship ("Were you born in the United States?" 0 = Yes, 1 = No); and Household Income (0 = \$0, 1 = \$1-\$999 ... 34 = \$1,000,000 or more). Because income was measured as an ordered categorical variable, I created a new variable for the purposes of the descriptive statistics by imputing the midpoint of each ordinal level. The original (ordered categorical) measure was used in all fitted models.

Analytic Considerations

When conducting analyses on intersecting identities within and between groups of people, it is especially important that the analytic plan reflects foundational concepts of Intersectional theory. For example, Warner (2008) stresses that such analyses must not "reduce identity to a summary of social groups in which the person belongs," but rather, acknowledge that identities to social groups *interact* with one another to create unique manifestations of identity within distinct cultural and personal contexts. This approach, of course, demands more complexity. Most intersectional researchers argue that when studying manifestations of social identity, the primary investigator must decide whether to study identity via master categories

and/or emergent categories. The master category approach would involve considering gender, race/ethnicity, and sexual orientation separately, while emergent categories would lend an approach that considers combinations of all three of these identities (Dubrow, 2008). Of course, the emergent approach falls in line with Intersectional theory in that it considers the *intersection* of gender, race/ethnicity, and sexual orientation in the individual.

Considering the data, research questions, and existing theory, I determined the best approach is one that considers the unique experiences related to one's identity(s) in the context of each (intersectional) identity-based subgroup. Put another way, within each identity-based subgroup (e.g., sexual minority Latina women, sexual minority Black men, etc.; see Table 1), I considered discrimination on the bases of one's marginalized identity(s)— that is, discrimination on the basis of gender and/or race/ethnicity and/or sexual orientation— as mediator(s) between their unique intersectional identity (i.e., identity-based subgroup) and reported depressive symptoms. Per current theory, I only assessed discrimination bases when the subgroup was marginalized in that identity facet. For example, I did not assess discrimination on the basis of gender for GB Black Men (though I did assess on the bases of race/ethnicity and sexual orientation), as this group is not marginalized in their gender. Though it is certainly possible that one may experience discrimination on the basis of a privileged identity they possess (in fact, this is true for the sample; see Table 2), I do not wish to assess these relationships at this time. The purpose of this study is to determine societal processes and social stressors that exacerbate predominant health inequities. Thus, the focus of this paper is the type of discrimination that is consistent with the inequitable structural and social dynamics that have been upheld in the United States for centuries. Similar studies with this dataset have successfully employed similar

techniques and made similar decisions to assess the indirect effects that contribute to health disparities (Calabrese et al., 2015).

Analytic Plan

Descriptive and bivariate statistics. I assessed and reported descriptive and bivariate statistics via R (R Development Core Team, 2008) for the sample as a whole and for each identity-based subgroup.

ANCOVA with planned comparisons. I estimated two, one-way ANCOVAs via the “aov()” function in R, in which I examined between-group (i.e., *identity-based subgroup*) differences in *depressive symptoms* (Model 1) and *total discrimination* (Model 2) between the eight subgroups of interest, holding constant my covariates (see Measures section).

Assessing planned comparisons. After modeling differences in *depressive symptoms* and *total discrimination* (based on gender, race/ethnicity, and sexual orientation) as a function of *identity-based subgroup* via two ANCOVA analyses, and assessing significance of the models as a whole (via the omnibus F-test), I compared identity-based subgroup means in regards to Hypotheses 1 and 2 via orthogonal contrasts in R via the contrasts() function. Since I tested a total of four comparisons – specifically, comparisons in depressive symptoms and total discrimination for straight White men compared to the average of the other seven (more marginalized) identity-based subgroups, and comparisons in depressive symptoms and total discrimination for LB Women of Color compared to the average of the other six (less marginalized subgroups)—the chance for making a Type I error was inflated. I adjusted the p-values for multiple comparisons via the Bonferroni correction (Dunn, 1961).

For exploratory purposes, I also calculated the raw means and adjusted means with 95% confidence intervals for depressive symptoms and discrimination for all eight identity-based subgroups.

Checking ANCOVA assumptions. Finally, after conducting the two ANCOVAs and two sets of pairwise comparisons, I tested key assumptions in each model. An ANCOVA test assumes homogeneity (i.e., the variance across the groups are relatively similar) and normality (i.e., the data are normally distributed). I assessed homogeneity via the *residual verses fits plot* method via the `plot()` function in R, and normality via the *Quantile-Quantile plot of residuals* also via the `plot()` function in R—both via the Companion to Applied Regression (“car”) package (Fox & Wiesberg, 2011). I also checked visually that the variability in depressive symptoms and discrimination were similar across groups, once covariates were adjusted.

Mediation analyses. Mediation models are used to determine the degree to which the effect of an antecedent (X) on an outcome variable (Y) is, in part or whole, explained by a mediator variable (M ; Baron & Kenny, 1986; MacKinnon, 2012). Mediation is inherently a causal model. It is important to note that with cross-sectional, non-experimental data, causality cannot be inferred, and thus mediation cannot truly be ascertained. However, I was able to determine if the proposed models are consistent with mediation.

Intersectionality research using methods of assessing indirect effects is particularly advantageous as it allows one to study health disparities in the context of the oppressions that come with different intersectional identities, and thus, this technique lends way to a “true” intersectional approach (Bowleg, 2008; Helms et al., 2005, Weber & Parra-Medina, 2003). In other words, mediation allows for the researcher to extend beyond the study of disparate outcomes based on identity alone. Recall, a gender, race/ethnicity, or sexual orientation does not

subject someone to poor health outcomes. Rather, it is the experiences (e.g., discrimination) that occur as a function of these identities that ultimately contribute to the manifestation of negative outcomes for these marginalized groups. Thus, mediation, and specifically, indirect effects allow researchers to understand the mechanisms by which health disparities are formed/maintained. As such, mediation analyses further supplement health disparity research in that they have the potential to provide specific focal points for intervention, thus better equipping health professionals, workplaces, and organizations for appropriate and effective practices (Jackson, 2017).

I hypothesized that unique marginalized subgroups (represented by a dummy-coded variable to compare each subgroup to straight White men; X) would experience more discrimination related to their marginalized identity(s; that is, discrimination on the basis of gender and/or race/ethnicity and/or sexual orientation; M), which, in turn, would predict more depressive symptoms (Y). This approach resulted in a series of paths to be estimated, namely 1-3 paths for each subgroup (see Table 1 for a list of subgroups), depending on the number of marginalized identities the subgroup possessed according to current literature (see Figure 1, Panels a-g). Therefore, for some mediation models, more than one mediator was assessed; for example, discrimination due to sexual orientation and discrimination due to race/ethnicity when comparing GB Black men to straight White men. Multiple mediators are easily handled. In my models, the mediators were considered in parallel. For models with more than one mediator, each specific indirect effect (i.e., the indirect effect via each mediator) as well as the total indirect effects (i.e., the sum of the specific indirect effects) were calculated. Experiences of discrimination across attribution types were correlated. For example, Black women who experience discrimination as a function of race/ethnicity also experience discrimination as a

function of gender. Preacher and Hayes (2008) indicate that mediators may, indeed, be correlated (not unlike the way predictors are often correlated in multiple regression models). Thus, Preacher and Hayes (2008) stress caution in this setting, however, as each mediator will only be able to capture its unique impact, holding constant all others. I proceeded with caution and tested each mediator individually before adding them together in the full model, as the assessment of parallel mediators provides the best means for examining discrimination as a whole while also parsing apart experiences of discrimination relevant for each identity.

It is important to note that, given the aforementioned literature on marginalized identities and the centuries of existing health disparities (see Chapter 2), it is theoretical and methodologically appropriate to consider identity statuses of female/woman (as opposed to male/men), Black/Latinx (as opposed to White), and LGB (as opposed to straight) as marginalized and thus, predictive of discrimination and/or depressive symptoms (per the model). Further, it is appropriate then to only consider discrimination on the basis of gender for those who identify as female/woman, discrimination on the basis of race/ethnicity for those who identify as Black or Latinx, and discrimination on the basis of sexual orientation for those who identify as LGB (for a full list of relevant marginalized identities within each subgroup, see Table 3). Figure 1 presents the seven mediation models that I tested. For each, the subset of participants that I considered is presented to the left of the diagram, as is the reference group for the dummy-coded indicators to represent identity subgroup.

Table 3. *Marginalized Identities by Subgroup*

	Straight White Men	Straight White Women	GB White Men	LB White Women	GB Black Men	LB Black Women	GB Latino Men	LB Latina Women
Gender	P	M	P	M	P	M	P	M
Race/ Ethnicity	P	P	P	P	M	M	M	M
Sexual Orientation	P	P	M	M	M	M	M	M
Total Marginalized Identities	0	1	1	2	2	3	2	3

Note. GB = gay or bisexual, LB = lesbian or bisexual, P = privileged, M = marginalized

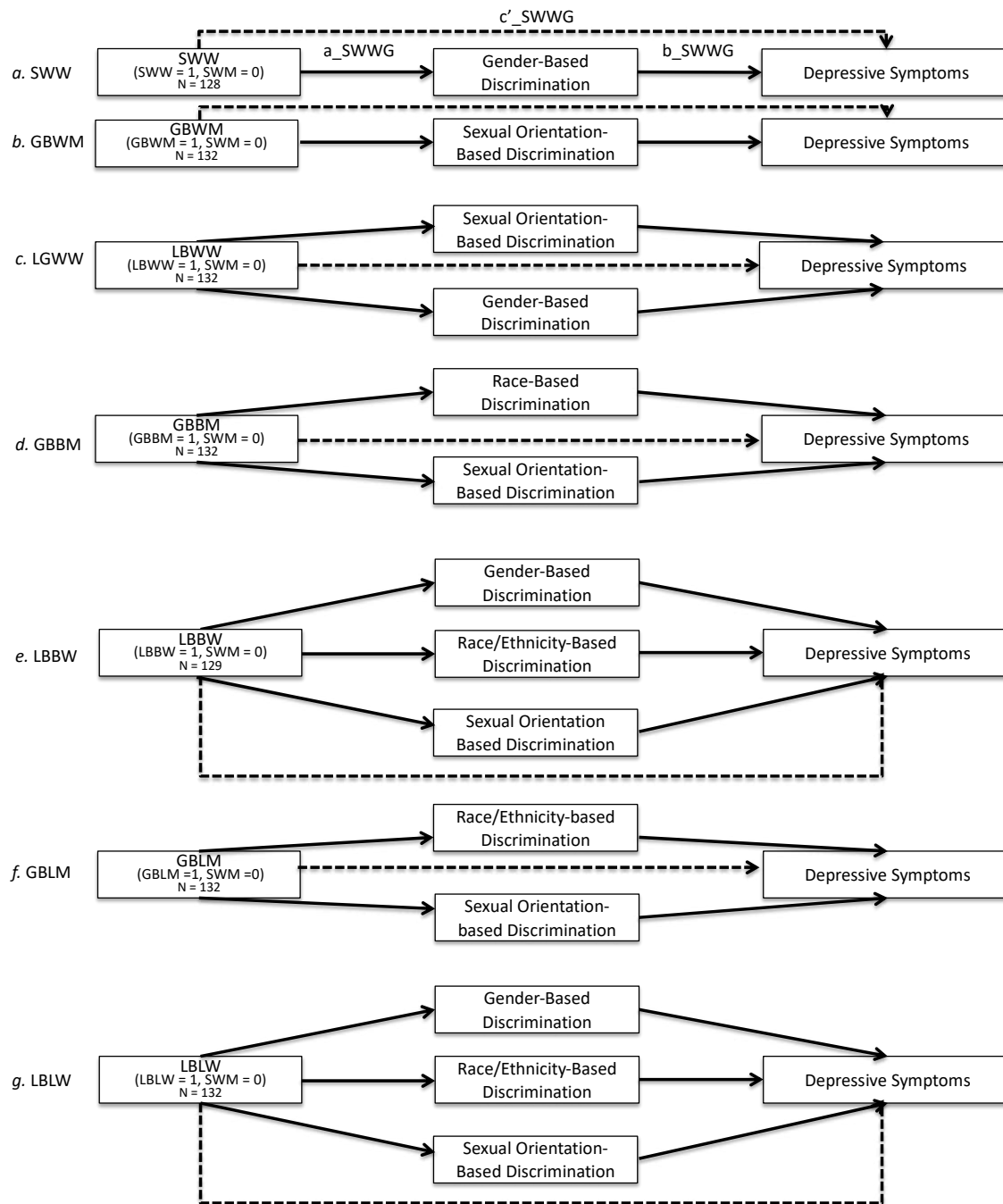


Figure 1. Summary of Mediation Models by Identity Based Subgroup

Note. Though all c paths (total effects) were omitted from this figure for simplicity, each c path was estimated. Dashed lines represent estimation of the c' path. SWM= straight White men; SWW = straight White women; GBWM = GB White men; LBWW = LB White women; GBBM = GB Black men; LBBW = LB Black women; LBLM = GB Latino men; LBLW = LB Latina women; GB = gay or bisexual, LB = lesbian or bisexual.

An important assumption of mediation models is that there is no exposure (in my case identification based on gender, race/ethnicity, or LGB status) by mediator interaction. That is, that the effect of the type of discrimination on depressive symptoms does not vary across identities. Before assessing the mediation models, I examined this assumption by assessing the effect of discrimination on depressive symptoms across all groups. Upon finding substantial variability in the effects, I elected to utilize the techniques for testing mediation in the presence of an exposure-mediator interaction outlined by Valeri and VanderWeele (2013). Specifically, I used a moderated mediation approach, which involved including the mediator by exposure interaction in the mediation model for each subgroup.

Following Valeri and VanderWeele's (2013) guidelines, two sets of regression models were fit. The first regressed the mediator(s) on the specified control variables and the identity indicator. This yielded the a path(s) of the mediation model, that is, the effect of the subgroup on respective discrimination. The second regressed the outcome on the specified control variables and the mediator(s), the identity indicator, and the interaction between the mediator(s) and the identity indicator. Because of the interaction term, it is important to be explicit about the score that represents 0 for each of the variables. For the identity indicator 1 = marginalized identity, 0 = straight White man. For the discrimination measures, 0 represents the lowest possible score (i.e., no reported instances of lifetime discrimination). The regression coefficient associated with the interaction term captured the difference in the b path for the marginalized subgroup as compared to straight White men. Thus, for each mediator, a b path for straight White men and a b path for the marginalized subgroup was estimated. The former consisted of the simple slope for the estimated b path and the latter consisted of the sum of the estimated b path and the mediator-exposure interaction effect. For each mediator, the natural indirect effect was calculated by

multiplying the a path times the marginalized subgroup's b path. Finally, the c' path represents the contrast in depressive symptoms between the marginalized group and straight White men among respondents who reported no discrimination. Ten thousand bootstrap confidence intervals (95% bias-adjusted) for the indirect effect were constructed in order to ascertain statistical significance. The boot package was used (Canty & Ripley, 2019).

Checking mediation assumptions. There are several assumptions that accompany tests of linear regression models used in mediation. I used the car package in R (Fox & Weisberg, 2011) to examine these assumptions. The first were assumptions of linearity and additivity between the predictors (and controls) and the outcomes. To test linearity and additivity, I examined the residual plots and component + residual plots for relevant outcomes against each predictor (and controls) within each regression model. Upon finding significant curvature in the plots, I applied appropriate transformations to the data to assist in interpreting nonlinear relationships (e.g., non-linear transformation), or included appropriate interactions in the models (to remedy additivity). Another important assumption in linear regression is homoscedasticity. I tested this assumption via a non-constant variance score test. Upon finding the models violated this assumption, I applied appropriate remedies, namely, considering additional covariates, appropriate transformations, or using robust standard errors. Finally, I determined if there were problematic outliers by assessing each case's leverage value and Cook's D (Cook, 1977). If an overly influential case was identified, I opted to present the results of my model(s) with and without these case(s).

Missing Data

Preliminary inspection of the data revealed that 14 cases had missing data on one or more of the variables necessary for this study. Given that this represents an extremely small proportion of the full sample (2.6%), these cases were removed prior to analysis.

Power Analysis

To determine whether I had a large enough sample size to detect an effect using the aforementioned models, I used GPower (a power analysis software program) to conduct an a priori power analysis (Faul & Erdfelder, 1992; for a full description of GPower, see Erdfelder, Faul, & Buchner, 1996). Per recommended guidelines, I used a power of $(1 - \beta)$ set at .80 and $\alpha = .05$, two tailed. According to recent meta-analyses, estimated effect sizes among sex/gender and depression, race/ethnicity and depression (for Black and Hispanic populations), sexual orientation and depression, and discrimination (e.g., sexism, racism, homophobia) and depression range from 0.21 to 0.39 (Britt-Spells, Slebodnik, Sands, & Rollock, 2018; Marshal et al., 2011; Paradies, 2006; Salk, Hyde, & Abramson, 2017; Szymanski & Stewart, 2010). Still, important with any power analysis is to maintain a conservative approach, so I opted for an effect size of $f = 0.20$. Within my ANCOVA analysis, considering a total of eight subgroups and seven covariates, my power analysis determined I need a sample size of $N = 416$ to detect an effect, indicating my proposed sample $N = 524$ is adequate. In the case of planned contrasts, $(1 - \beta)$ set at .80 and $\alpha = .05$, and allocation ratios² (N_2/N_1) of 3 and 7, I determined minimum sample sizes of $N = 118$ and $N = 174$ were needed ($N = 30$ and $N = 88$ for an allocation ratio of 3, and $N = 22$ and $N = 152$ for an allocation ratio of 7). Next I turn to power analyses in my mediation model. Fritz & MacKinnon (2007) conducted a simulation study to determine the

²For assessing differences between straight White men ($N = 65$) and all others in the sample ($N = 459$), the allocation ratio is approximately 7. Likewise, for assessing differences between Women of Color ($N = 131$) and all other in the sample ($N = 393$), the allocation ratio is approximately 3.

needed sample size to examine indirect effects under various conditions. It is useful to consider a few examples. If both the *a*- and *b*-paths are moderate in size (standardized beta = .39), 71 people are recommended. If both the *a*- and *b*-paths are small in size (standardized beta = .14), 462 people are needed. Given that my expectations are for moderate effect sizes for all paths, the sample size in the dataset I propose to use, even with the added complexity of multiple mediators, should be adequate. I recognize however that I will be unable to detect small effects with the subsetted data for the mediation models (see Figure 1 for *N*'s). In sum, I concluded that with a sample of $N = 524$, I have adequate power to detect a moderate-sized effect (provided one actually exists in the population) in each of my analyses.

Chapter 4

RESULTS

Descriptive Statistics and Correlations

After omitting cases with missing data relevant to the study ($N = 14$), I conducted descriptive and bivariate statistics. Descriptive statistics can be found in Table 4. Participants' average age was 32.24 years old ($SD = 9.27$). They were evenly split by sex/gender. 76% of participants identified as lesbian, gay or bisexual (LGB; 24% straight). Of those who identified as LGB, 86% (65% total) identified as lesbian or gay, and 14% (11% total) identified as bisexual. 50% of participants identified as White, 25% identified as Black and 25% identified as Hispanic/Latinx. In regard to education, eight percent of participants did not complete high school, 10% completed high school or received a GED, 24% completed some college, 6% completed an Associate's degree, 32% a Bachelor's degree, 4% some post-graduate work, 14% a Master's degree, and 2% a Doctoral degree. Forty-five percent of participants grew up in NYC and never lived anywhere else for more than five years (55% migrated to NYC). Eighty-four percent of participants were U.S. citizens. Sixteen percent of participants were unemployed. Most participants' (16%) annual income fell between \$50,000-\$74,999; the mean income was \$46,046.97 ($SD = \$49,050.99$). Education and income differed by subgroup. Generally, White populations had more education than People of Color (LB White women had the most education, while LB Black women had the least). White populations also generally had more annual income, with the exception of straight White men who had the second to lowest annual income behind GB Latino men and LB Latina women; LB White women had the highest annual income.

Table 4.
Descriptive Statistics and Frequencies for all Variables

Variable	<i>M / %</i>	<i>SD</i>	Min	Max
Age	32.24	9.27	18.00	58.00
Gender				
Male	263 (50%)			
Female	261 (50%)			
Race/Ethnicity				
White	50%			
Black	25%			
Latinx	25%			
Sexual Orientation				
Straight	24%			
Lesbian or Gay	65%			
Bisexual	11%			
Education				
< High School	41 (8%)			
High School/GED	53 (10%)			
Some College	128 (24%)			
Associate's Degree	23 (4%)			
Bachelor's Degree	168 (32%)			
Post-Grad Work	23 (4%)			
Master's Degree	75 (14%)			
Doctoral Degree	13 (2%)			
Total Discrimination	5.88	4.66	0	23.00
Gender-Based Discrimination	1.66	2.02	0	8.00
Race/Ethnicity-Based Discrimination	2.35	2.70	0	8.00
Sexual Orientation-Based Discrimination	1.87	2.05	0	8.00
Depressive Symptoms	13.99	10.95	0	54.00
NYC Residency				
Grew up in NYC	231 (45%)			
Migrated to NYC	292 (55%)			
Unemployed	83 (16%)			
U.S. Citizen	441 (84%)			
Income	\$46,046.97	\$49,050.99	\$0	\$750,000.00

A correlation matrix is provided in Table 5. Demographic variables education, income and age were all positively correlated with one another. Age was also positively correlated with race/ethnicity-based discrimination. Interestingly, education was positively correlated with gender-based discrimination and negatively correlated with race/ethnicity- and sexual orientation-based discrimination and depressive symptoms. Income was negatively correlated with depressive symptoms. All specific forms of discrimination were positively correlated with one another and total discrimination. The strongest correlations were between race/ethnicity-based discrimination and total discrimination ($r(521) = .75, p < .01$) and sexual orientation-based discrimination and total discrimination ($r(521) = .68, p < .01$). Depressive symptoms were positively correlated with total discrimination and sexual-orientation-based discrimination.

Table 5. *Correlation Matrix*
Means, standard deviations, and correlations of all continuous variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Age	32.24	9.27							
2. Education	7.10	2.11	.23 [.15, .31]						
3. Income	46,046.9 7	49,050.9 9	.09 [.00, .18]	.33 [.25, .40]					
4. Total Dis	5.88	4.66	.05 [-.04, .13]	-.03 [-.12, .05]	-.03 [-.12, .06]				
5. Gen Dis	1.66	2.02	.01 [-.08, .10]	.15 [.06, .23]	.02 [-.07, .11]	.61 [.56, .66]			
6. Race/Eth Dis	2.35	2.70	.10 [.01, .18]	-.09 [-.17, -.00]	-.03 [-.12, .06]	.75 [.71, .79]	.14 [.06, .23]		
7. LGB Dis	1.87	2.05	-.03 [-.12, .05]	-.10 [-.19, -.02]	-.05 [-.13, .04]	.68 [.63, .72]	.22 [.14, .30]	.25 [.17, .33]	
8. CESD	13.99	10.95	-.02 [-.10, .07]	-.14 [-.23, -.06]	-.18 [-.26, -.09]	.13 [.05, .21]	.06 [-.02, .15]	.04 [-.05, .13]	.18 [.10, .27]

Note. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% Fisher confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation. 95% confidence intervals that do not include 0 are significant. Education = Educational Attainment, Income = Household Income, Total Dis = Total Discrimination, Gen Dis = Total Gender-Based Discrimination, Race/Eth Dis = Total Race/Ethnicity-Based Discrimination, LGB Dis = Sexual Orientation-Based Discrimination, CESD = Depressive Symptoms, LGB = lesbian, gay or bisexual.

Boxplots. Before estimating my ANCOVA models, I created box plots to visualize depressive symptoms and discrimination (for each type) between subgroups (see Figures 2- 6 below). First, turning to the boxplot for depressive symptoms, it appeared that the distribution was relatively similar across subgroups, with straight White men and GB Latinx men and women subgroups having a larger range and higher medians overall.

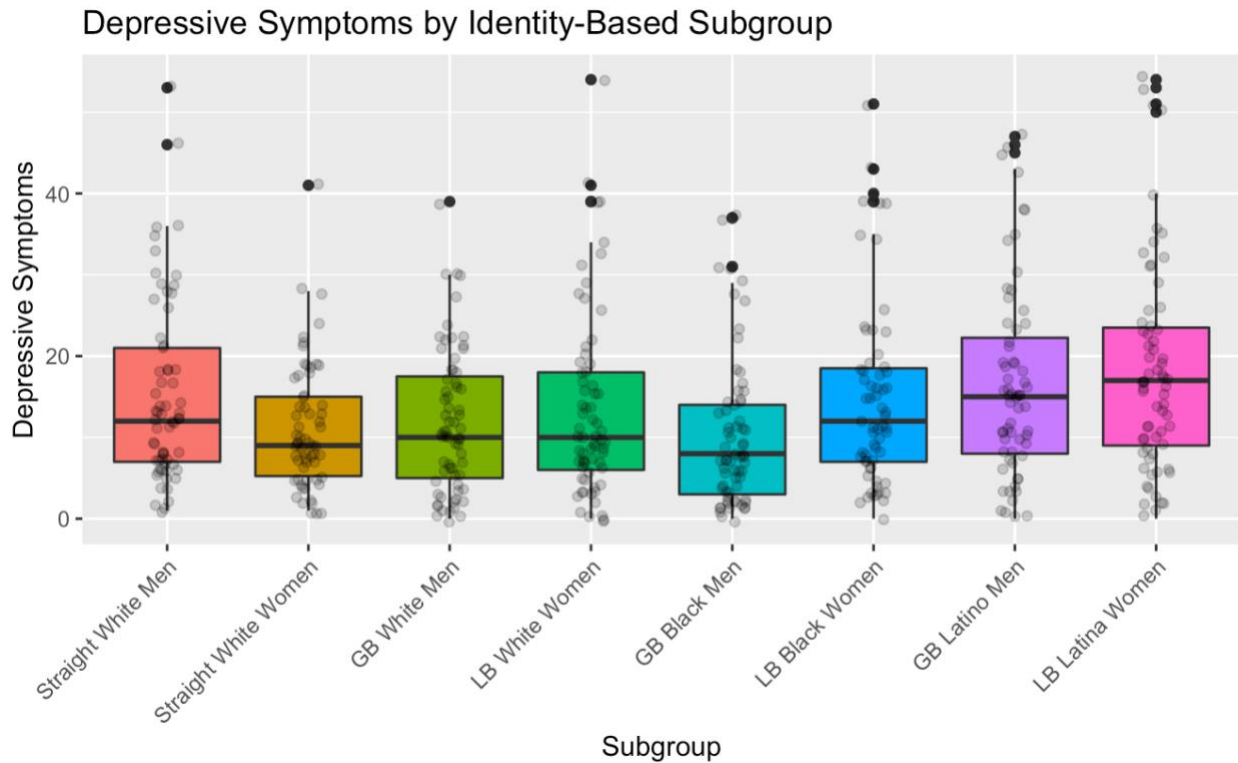


Figure 2. *Depressive Symptoms by Identity-Based Subgroup*

Note. GB = gay or bisexual, LB = lesbian or bisexual

Boxplots for total everyday discrimination indicated that distribution differed more between subgroups in this case. LB Black and Latina women seemed to have the widest interquartile range (IQR) and also the highest medians. Generally, those with more marginalized identities reported more total discrimination (represented by the medians) and more variability (represented by the IQR) in the boxplots. Also, every subgroup had outliers. Straight White men noticeably had the most outliers.

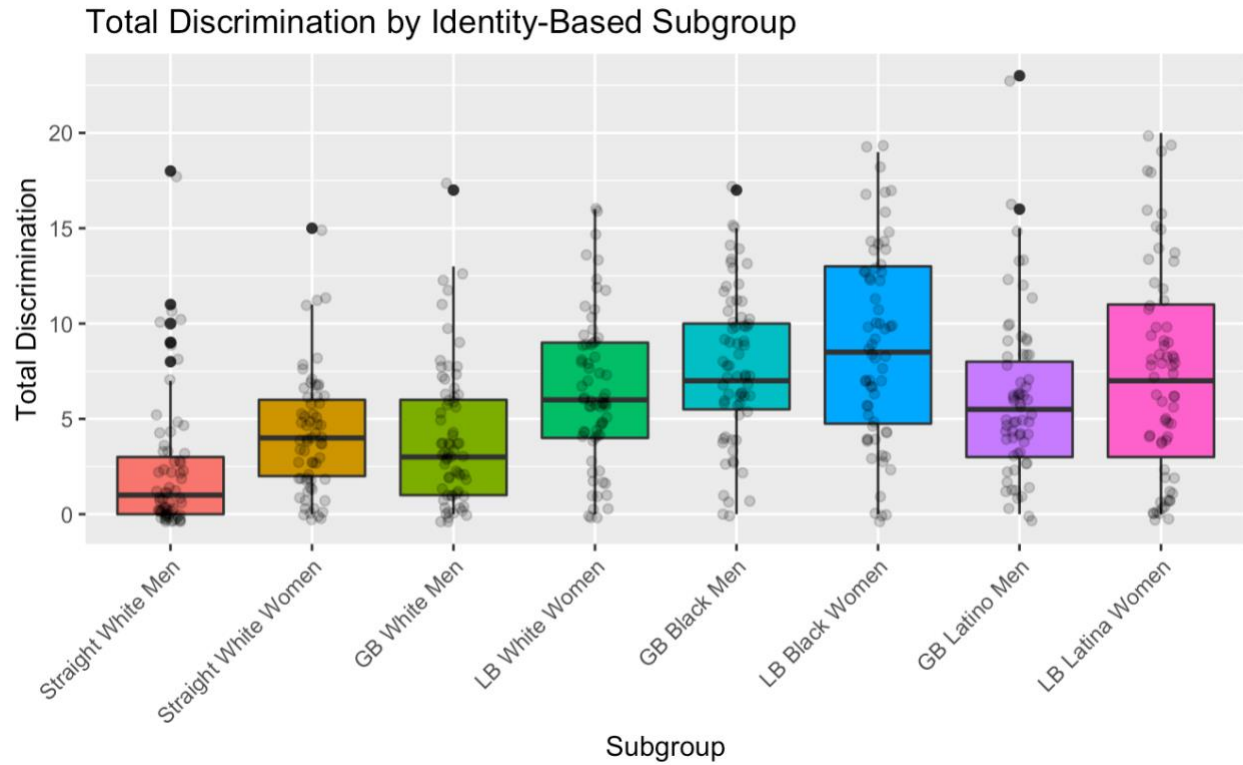


Figure 3. *Total Discrimination by Identity Based Subgroup*

Note. GB = gay or bisexual, LB = lesbian or bisexual

Boxplots for gender-based discrimination indicated that women had higher medians and more variability than men, though interestingly, LB Women of Color appeared to report less gender-based discrimination than LB and straight White women. As expected, men tended to report little gender-based discrimination.

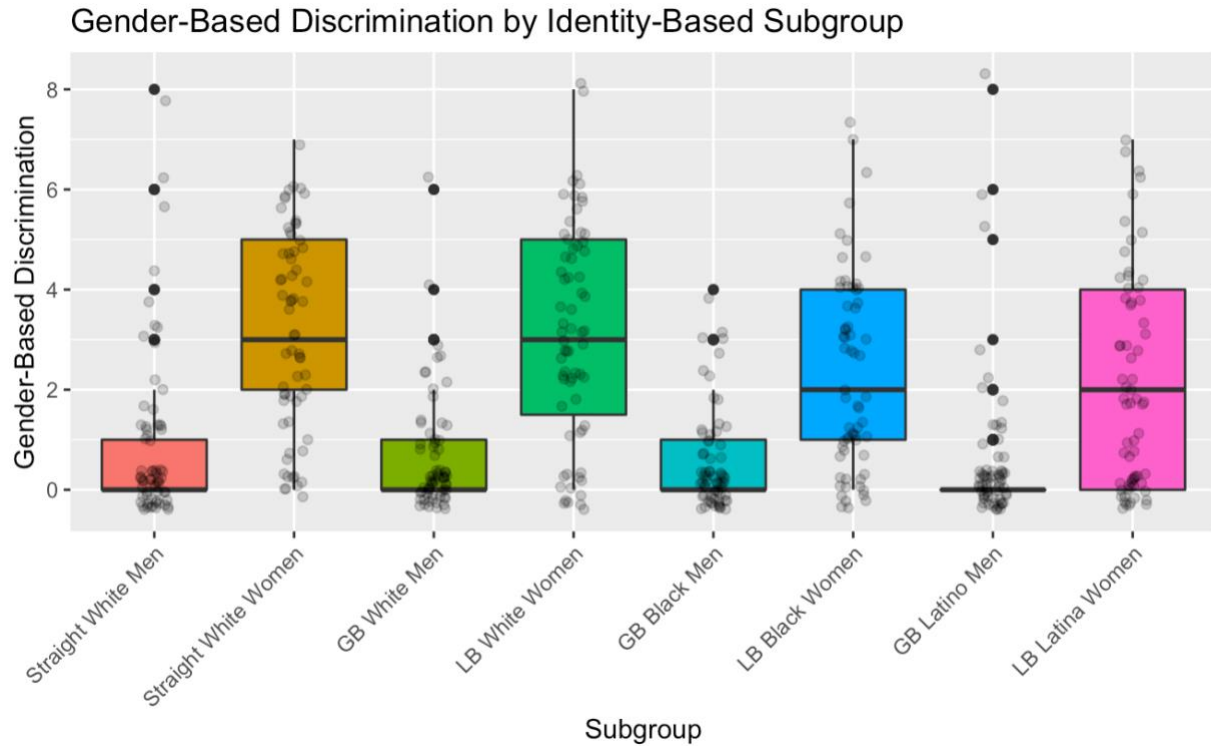


Figure 4. *Gender-Based Discrimination by Identity-Based Subgroup*

Note. GB = gay or bisexual, LB = lesbian or bisexual

Boxplots for race/ethnicity-based discrimination indicated especially large variability among People of Color. People of Color also tended to report more race/ethnicity-based discrimination overall, with GB Black men reporting the most and GB Latinx men the least race/ethnicity-based discrimination. Interestingly, straight White men seemed to have a larger IQR than straight White women and GB White men and women, though outliers were present among all White subgroups.

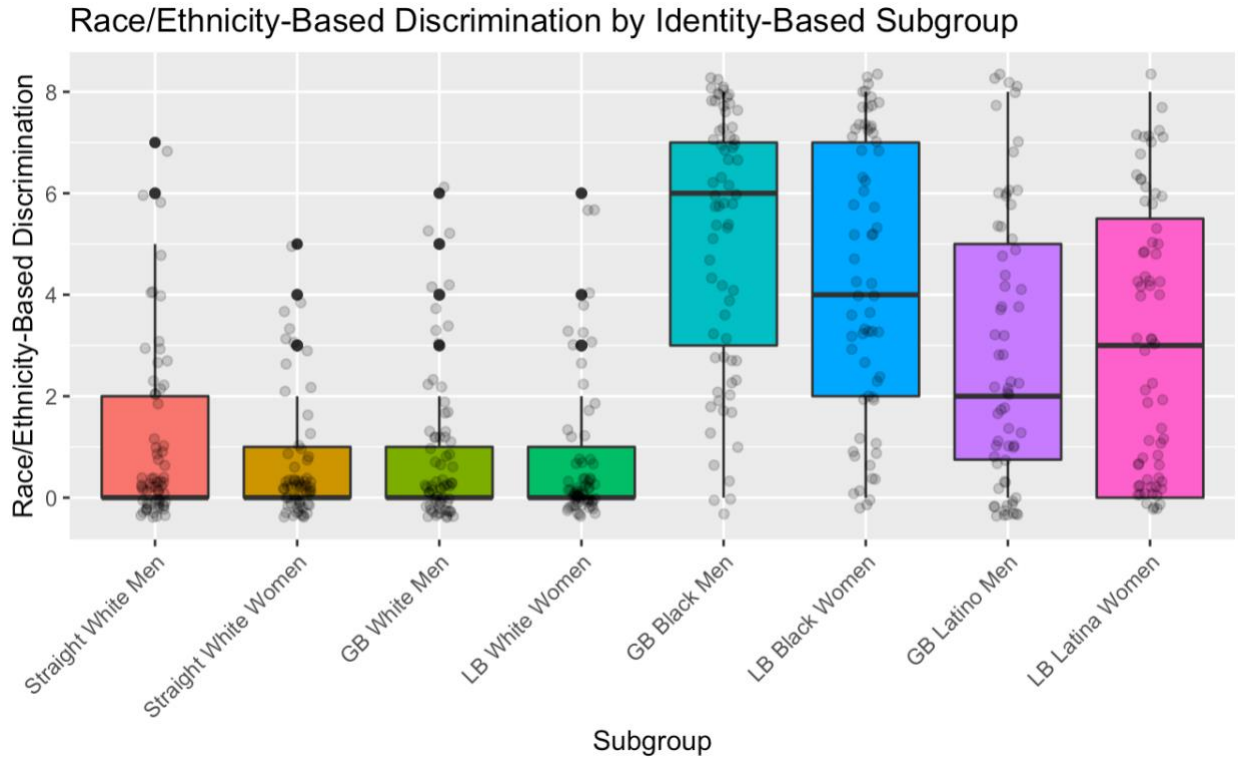


Figure 5. *Race/Ethnicity-Based Discrimination by Identity-Based Subgroup* Note. GB = gay or bisexual, LB = lesbian or bisexual

Boxplots for sexual orientation-based discrimination indicated LGB subgroups reported vastly more discrimination than straight subgroups. LGB Subgroups of Color actually seemed to report less sexual orientation-based discrimination than LGB White subgroups (evidenced by lower medians among these groups).

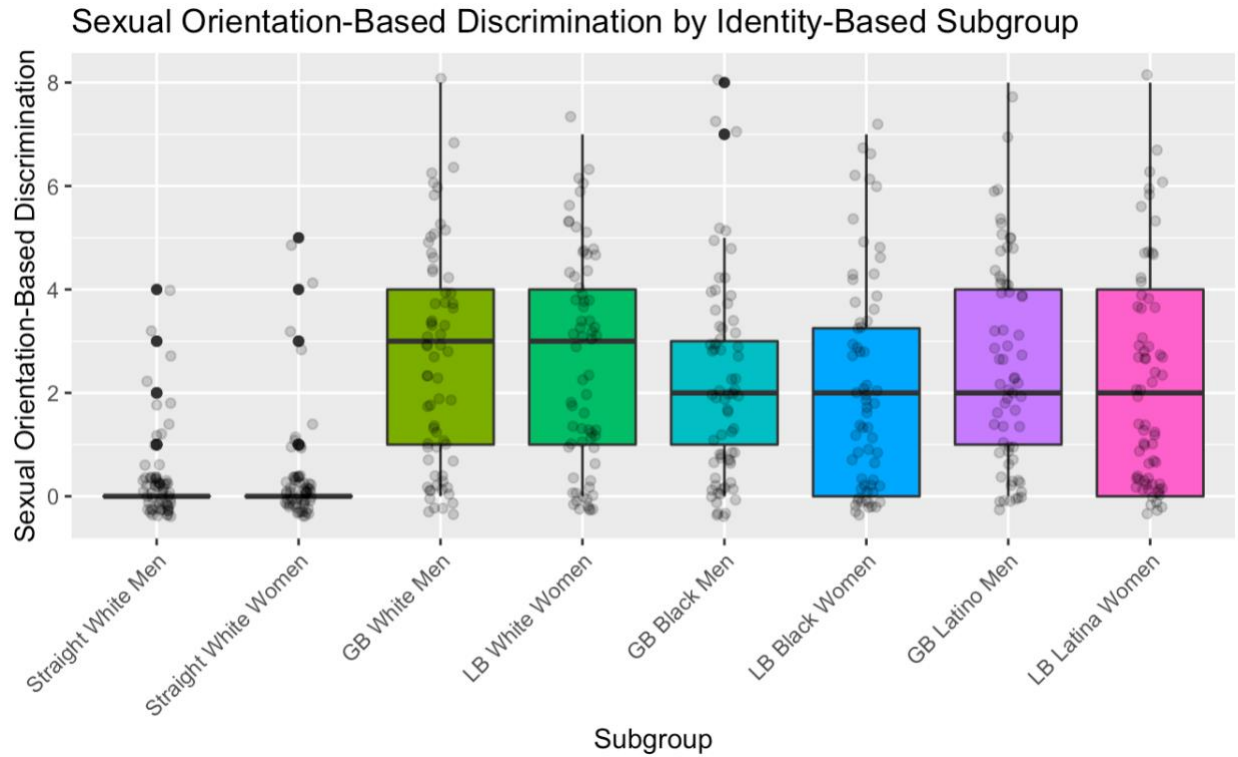


Figure 6. *Sexual Orientation-Based Discrimination by Identity-Based Subgroup.*
 Note. GB = gay or bisexual, LB = lesbian or bisexual

ANCOVAs

I used an analysis of covariance (ANCOVA) to test Hypotheses 1 and 2. Regarding my first hypothesis, that identity-based subgroups would significantly differ in their reported depressive symptoms, depressive symptoms was the dependent variable; the identity subgroup (a factor) was the quasi-independent variable (IV; meaning that subgroup was not assigned, but treated as the predictor variable in these models); controls were modeled as covariates.

Consistent with H1, there were significant differences in depressive symptoms between the eight subgroups ($F(7, 496) = 4.39, p < .001, \text{partial } \eta^2 = .04$). Regarding my second hypothesis, that identity-based subgroups would significantly differ in their reported everyday discrimination, total discrimination was the dependent variable; the identity subgroup (a factor) was the quasi-IV; and controls were modeled as covariates. In line with H2, there were significant differences

in everyday discrimination between the eight subgroups ($F(7, 496) = 16.97, p < .001$, partial $\eta^2 = .18$). Raw and adjusted means for both total discrimination and depressive symptoms across subgroups can be found in Table 6.

Table 6. *Raw and Adjusted* Means for Each Subgroup with 95% CIs*

Subgroup	Raw Mean Discrimination	Adjusted Mean Discrimination
SWM	2.31 [1.28, 3.37]	2.08 [0.80, 3.35]
SWW	4.16 [1.66, 6.65]	3.78 [1.00, 6.56]
GBWM	4.14 [1.66, 6.61]	3.94 [1.17, 6.72]
LBWW	6.40 [3.93, 8.88]	6.07 [3.31, 8.82]
GBBM	7.76 [5.29, 10.23]	7.70 [4.92, 10.47]
LBBW	8.81 [6.32, 11.30]	9.12 [6.34, 12.04]
GBLM	6.03 [3.54, 8.52]	6.39 [3.55, 9.22]
LBLW	7.39 [6.97, 9.86]	7.51 [4.70, 10.32]
Subgroup	Raw Mean CESD	Adjusted Mean CESD
SWM	15.28 [12.65, 17.91]	15.14 [11.95, 18.33]
SWW	11.27 [4.89, 17.66]	11.97 [5.06, 18.99]
GBWM	11.90 [5.59, 18.21]	12.64 [5.69, 19.58]
LBWW	13.48 [7.17, 19.79]	14.02 [7.11, 20.92]
GBBM	10.22 [3.91, 16.53]	9.88 [2.93, 16.84]
LBBW	15.02 [8.65, 21.38]	13.83 [6.69, 20.97]
GBLM	16.63 [10.27, 22.98]	15.47 [8.37, 22.56]
LBLW	18.19 [11.86, 24.50]	17.28 [10.42, 24.50]

Note. SWW = straight White women, GBWM = GB White men, LBWW = LB White women, GBBM = GB Black men, LBBW = LB Black women, GBLM = GB Latino men, LBLW = LB Latina women, GB = gay or bisexual, LB= lesbian or bisexual, CESD = Depressive Symptoms. *Continuous covariates, age, education, and income were held constant at their mean values (see Table 4). Factor covariates were held constant at 0 (0 = “Grew up in New York City”; 0 = “Employed”; 0 = “United States Citizen”)

Raw and adjusted means for total discrimination were relatively similar (each adjusted mean fell within one standard deviation of the raw mean). Relative to straight White men, all subgroups experienced significantly more discrimination before and after adjusting for covariates

($p < .05$). Of all of the covariates, only education significantly predicted discrimination. Each one unit increase in education was associated with a 0.21 unit increase in discrimination ($p = .05$).

Raw and adjusted means for depressive symptoms were also relatively similar (each adjusted mean fell within one standard deviation of the raw mean). Before adjusting for covariates, straight White women ($p < .05$) and GB Black men experienced significantly fewer depressive symptoms ($p < .01$) compared to straight White men; however, after adjusting for covariates, only GB Black men experienced significantly fewer depressive symptoms ($p < .01$). In the ANCOVA, several covariates significantly predicted depressive symptoms.

Unemployment was associated with a 3.32 unit increase in depressive symptoms ($p < .05$) and income was associated with a 0.17 unit decrease in depressive symptoms ($p < .05$).

ANCOVA assumptions. It is important that ANCOVA models do not violate assumptions of homogeneity of variance and normality. I tested the assumption of normality for both models using Quantile-Quantile plots. In the depressive symptoms ANCOVA, the data appeared to be slightly skewed; however, the skewness value did not fall outside the acceptable range of -2.00 to +2.00 (skew = 1.24; Gravetter & Wallnau, 2014; Trochim & Donnelly, 2006). Regarding the discrimination ANCOVA, data appeared to be normally distributed.

I tested the assumption of homogeneity of variance via the *plots()* function in R and via Levene's Test for Homogeneity of Variance (Levene, 1960). Results for Levene's test were non-significant for the depressive symptoms ANCOVA, indicating this model did not violate the assumption of homogeneity of variance. However, significant results for the everyday discrimination ANCOVA indicated that this model did violate the homogeneity of variance assumption. To rectify the issue, I included two interaction coefficients in the ANCOVA model: education x subgroup ($F(7, 482) = 3.19, p < .01, \text{partial } \eta^2 = .02$) and income x subgroup ($F(7,$

482) = 2.77, $p < .01$, partial $\eta^2 = .03$). Both interactions were statistically significant indicating that the inclusion of said interactions were appropriate for the model (Field, 2012). A closer look at the model estimates indicated that the interaction of education x LB Latina women was statistically significant ($b = 0.88$, $p < .05$), indicating that discrimination differed for LB Latina women as a function of their education level. Specifically, among LB Latina women, greater education was associated with greater discrimination. The interactions of income x GB Black men ($b = 0.27$, $p < .01$) and income x LB Black women ($b = 0.31$, $p < .001$) were also statistically significant. While among straight White men, more income was associated with less discrimination, among GB Black men and women there was no protective effect of income, and in fact, greater income was associated with more discrimination. The effect of subgroup remained significant ($F(7, 482) = 16.65$, $p < .001$, partial $\eta^2 = .03$), suggesting that discrimination differs as a function of subgroup, even after adjusting for differential effects of education and income. Additional diagnostic tests indicated that the inclusion of interactions remedied the homogeneity of variance assumption for the discrimination ANCOVA model.

Planned Comparisons

Straight White men vs. marginalized subgroups

Depressive symptoms. Data visualization of depressive symptoms among subgroups can be found via boxplots in Figure 2. To test Hypothesis 1.1, that straight White men would report significantly fewer depressive symptoms compared to the average depressive symptoms of the other seven (marginalized) subgroups, I used estimated contrasts to compare straight White men to all others. Results were non-significant ($F(1, 494) = 1.64$, $p = .20$, partial $\eta^2 = .00$; see also Figure 2). Thus, Hypothesis 1.1 was not supported.

Everyday discrimination. Data visualization of total discrimination in the remedied ANCOVA model can be found via boxplots in Figure 3 (note that results included interaction terms: education x LB Latina women, income x GB Black men, income x LB Black women). I tested Hypothesis 2.1, which posited that straight White men would report significantly fewer total experiences of discrimination (attributed to gender, race/ethnicity and sexual orientation) as compared to the average total experiences of discrimination reported by the other seven (marginalized) identity-based subgroups. Findings indicated that straight White men did experience significantly less everyday discrimination compared to the average of the other seven more marginalized subgroups ($F(1, 460) = 24.35, p < .001, \text{partial } \eta^2 = .02$; see also Figure 3). Hypothesis 2.1 was supported.

LB Women of Color vs. less marginalized subgroups

Depressive symptoms. I next tested Hypothesis 1.2, which posited that LB Women of Color would report significantly more/more frequent depressive symptoms compared to the average total depressive symptoms reported by the other six (less marginalized) identity-based subgroups. Findings indicated that LB Women of Color did experience significantly greater depressive symptoms compared to the average of the other six (less marginalized) subgroups ($F(1, 494) = 14.27, p < .001, \text{partial } \eta^2 = .03$). Thus, Hypothesis 1.2 was supported (see also Figure 2).

Everyday discrimination. Lastly, I tested Hypothesis 2.2, which posited that LB Women of Color would report significantly more total experiences of discrimination (attributed to gender, race/ethnicity and sexual orientation) compared to the average total experiences of discrimination reported by the other six (less marginalized) identity-based subgroups. Findings indicated that LB Women of Color did not experience significantly more everyday

discrimination compared to the average of the other six (less marginalized) subgroups ($F(1, 460) = 6.09, p = .14, \text{partial } \eta^2 = .01$). Hypothesis 2.2 was not supported (see also Figure 3).

Mediation Models

Straight White women. Gender-based discrimination was examined as a potential mediator between subgroup identity straight White women (compared to straight White men) and depressive symptoms. I hypothesized that straight White women compared to straight White men would report significantly more gender-based discrimination (*a* path), and in turn, more gender-based discrimination would be associated with greater depressive symptoms among the marginalized group (*b* path for the marginalized group). I estimated the mediation model depicted in Figure 7.

Natural Indirect Effect:

$SWW \rightarrow \ln(\text{Sex-Based Discrimination}) \rightarrow \ln(\text{CESD}): 0.13 [-0.19, 0.48]$

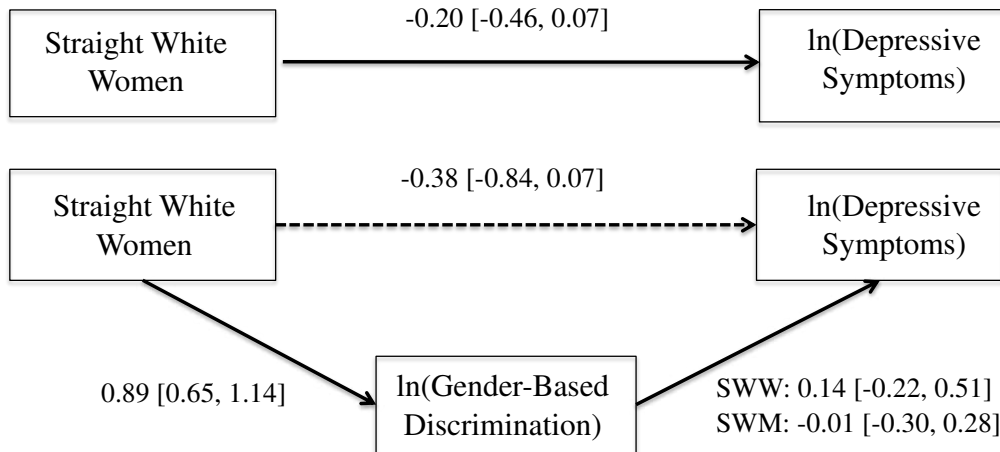


Figure 7. *Mediation model for straight White women compared to straight White men*

Note. SWW = straight White women, ln() indicates the variable was log transformed, CESD = depressive symptoms score. Brackets represent 95% confidence intervals, intervals that do not contain 0 are statistically significant, $p < .05$. The regression coefficient for the *c'* path is the effect when discrimination is held at 0 (no discrimination) for both groups.

Consistent with my hypothesis, straight White women experienced significantly more gender-based discrimination compared to straight White men. However, contrary to my hypothesis, gender-based discrimination was not associated with more depressive symptoms. The natural

indirect effect was not significant, nor was the direct effect (holding gender-based discrimination at 0—no discrimination—for both groups). In sum, while straight White women did appear to experience significantly more gender-based discrimination compared to straight White men, gender-based discrimination was not associated with greater depressive symptoms.

GB White men. Sexual orientation-based discrimination was examined as a potential mediator between subgroup identity GB White men (compared to straight White men) and depressive symptoms. I hypothesized that GB White men, compared to straight White men, would report significantly more sexual orientation-based discrimination (*a* path), and in turn, more sexual orientation-based discrimination would be associated with greater depressive symptoms (*b* path). I estimated the mediation model depicted in Figure

Natural Indirect Effect:

GBWM → *ln(GB-Based Discrimination)* → *ln(CESD)*: 0.26 [-0.03, 0.64]

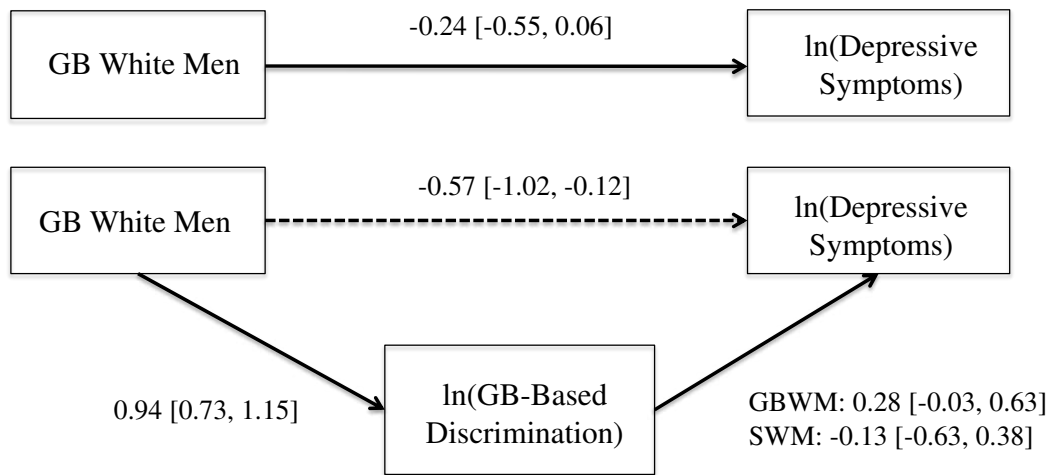


Figure 8. *Mediation model for GB White men compared to straight White men*

Note. GBWM= GB White men, GB = gay, bisexual, *ln()* indicates the variable was log transformed, CESD = depressive symptoms score. Brackets represent 95% confidence intervals, intervals that do not contain 0 are statistically significant, *p* < .05. The regression coefficient for the *c*' path is the effect when discrimination is held at 0 (no discrimination) for both groups.

Consistent with my hypothesis, GB White men experienced significantly more sexual orientation-based discrimination compared to straight White men. However, sexual orientation-

based discrimination was not associated with more depressive symptoms. The indirect effect was not significant. Without accounting for the mediator, GB White men did not experience significantly more depressive symptoms. However, when accounting for the mediator, I found that GB White men experienced significantly fewer depressive symptoms than straight White men when both groups reported no discrimination (and holding constant the control variables). In sum, sexual orientation-based discrimination did not appear to mediate the relationship between GB White men subgroup identity and depressive symptoms. In fact, when holding constant sexual orientation-based discrimination (when both groups reported no discrimination) and covariates, GB White men experienced fewer depressive symptoms than straight White men.

Multiple Mediation Models

LB White women. Sexual orientation- and gender-based discrimination were examined as potential mediators between subgroup identity LB White women, and rates of depressive symptoms. I hypothesized that LB White women, compared to straight White men, would report significantly more sexual orientation-based discrimination (first *a* path) and gender-based discrimination (second *a* path). In turn, more sexual orientation-based discrimination and gender-based discrimination would be associated with more depressive symptoms (first and second *b* paths). I estimated the mediation model depicted in Figure 9.

Specific Natural Indirect Effects:

$LBWW \rightarrow \ln(LB\text{-Based Discrimination}) \rightarrow \ln(CESD)$: 0.20 [-0.09, 0.59]

$LBWW \rightarrow \ln(Gender\text{-Based Discrimination}) \rightarrow \ln(CESD)$: -0.10 [-0.48, 0.26]

Sum of Natural Indirect Effects: 0.10 [-0.15, 0.28]

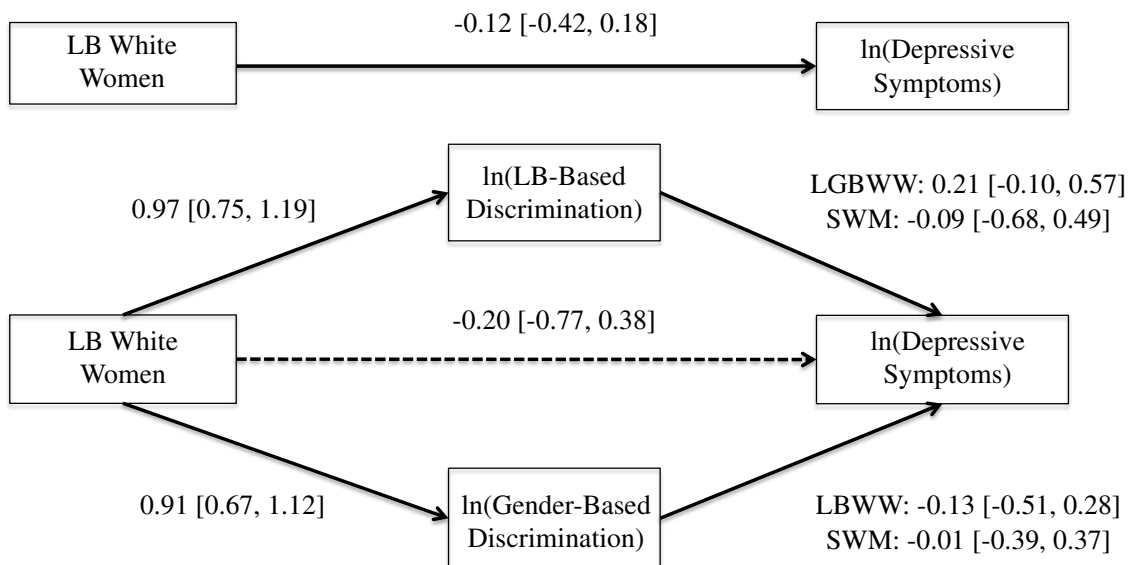


Figure 9. Mediation model for LB White women compared to straight White men

Note. LBWW = LB White women, LB = lesbian, bisexual, ln() indicates the variable was log transformed. CESD = depressive symptoms score. Brackets represent 95% confidence intervals, intervals that do not contain 0 are statistically significant, $p < .05$. The regression coefficient for the c' path is the effect when both forms of discrimination are held at 0 (no discrimination) for both groups.

Consistent with my hypothesis, LB White women experienced significantly more sexual orientation- and gender-based discrimination compared to straight White men. However, neither sexual orientation-based discrimination nor gender-based discrimination were associated with depressive symptoms. Neither specific natural indirect effect—for gender-based discrimination or for sexual orientation-based discrimination—was significant. The sum of the natural indirect effects was also non-significant. Before accounting for the mediators, LB White women did not experience greater depressive symptoms, and this was maintained when accounting for sexual orientation- and gender-based discrimination (holding both forms of discrimination at 0—no discrimination—for both groups), compared to straight White men. In sum, while LB White women did appear to experience significantly more sexual orientation- and gender-based

discrimination compared to straight White men, discrimination was not associated with significantly more depressive symptoms.

GB Black men. Sexual orientation- and race/ethnicity-based discrimination were examined as potential mediators between subgroup identity GB Black men and rates of depressive symptoms. I hypothesized that GB Black men, compared to straight White men, would report significantly more sexual orientation-based discrimination (first *a* path) and race/ethnicity-based discrimination (second *a* path). In turn, more sexual orientation-based discrimination and race/ethnicity-based discrimination would be associated with greater depressive symptoms (first and second *b* paths). I estimated the mediation model depicted in Figure 10.

Specific Natural Indirect Effects:

GBBM → *ln(GB-Based Discrimination)* → *ln(CESD)*: -0.03 [-0.31, 0.26]

GBBM → *Race-Based Discrimination* → *ln(CESD)*: -0.09 [-0.53, 0.33]

Sum of Natural Indirect Effects: -0.12 [-0.56, 0.28]

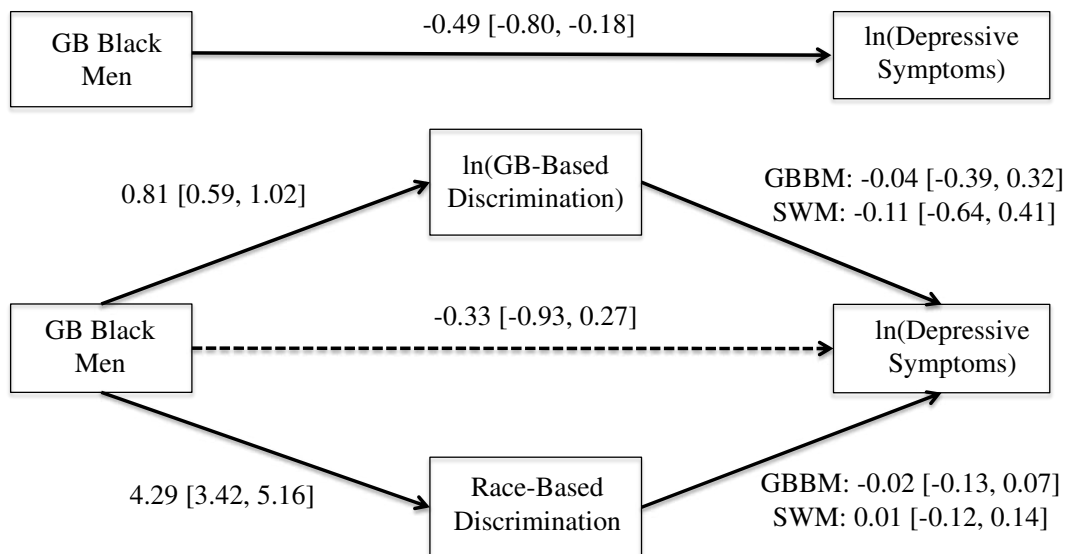


Figure 10. *Mediation model for GB Black men compared to straight White men*

Note. GBBM= GB Black men, GB = gay, bisexual, ln() indicates the variable was log transformed, CESD = depressive symptoms score. Brackets represent 95% confidence intervals, intervals that do not contain 0 are statistically significant, *p* < .05. The regression coefficient for the *c*' path is the effect when both forms of discrimination are held at 0 (no discrimination) for both groups.

Consistent with my hypothesis, GB Black men experienced significantly more sexual orientation- and race/ethnicity-based discrimination compared to straight White men. However, neither sexual orientation- nor race/ethnicity-based discrimination were associated with depressive symptoms. The natural indirect effect for sexual orientation-based discrimination was not significant, nor was the natural indirect effect for race/ethnicity-based discrimination. The sum of the natural indirect effects was also non-significant. Contrary to my hypothesis, GB Black men experienced significantly *fewer* depressive symptoms than straight White men, however this effect was not significant when both groups reported no sexual orientation- and race/ethnicity-based discrimination, holding constant the control variables. In sum, while GB Black men experienced significantly more sexual orientation- and race/ethnicity-based discrimination compared to straight White men, neither sexual orientation-, nor race/ethnicity-based discrimination was associated with more depressive symptoms. Moreover, before accounting for the effects of sexual orientation- and race/ethnicity-based discrimination (both of which were held at 0— no discrimination), GB Black men reported experiencing significantly fewer depressive symptoms than straight White men.

LB Black women. Sexual orientation-, race/ethnicity- and gender-based discrimination were examined as potential mediators between subgroup identity LB Black women and rates of depressive symptoms. I hypothesized that LB Black women, compared to straight White men, would report significantly more sexual orientation-based discrimination (first *a* path), race/ethnicity-based discrimination (second *a* path) and gender-based discrimination (third *a* path). In turn, more sexual orientation-based discrimination, race/ethnicity-based discrimination, and gender-based discrimination would be associated with more depressive symptoms (first, second, and third *b* paths). I estimated the mediation model depicted in Figure 11.

Specific Natural Indirect Effects:

$LBBW \rightarrow \ln(\text{Race-Based Discrimination}) \rightarrow \ln(\text{CESD}): 0.18 [-0.34, 0.66]$

$LBBW \rightarrow \ln(\text{LB-Based Discrimination}) \rightarrow \ln(\text{CESD}): 0.18 [-0.01, 0.48]$

$LBBW \rightarrow \ln(\text{Gender-Based Discrimination}) \rightarrow \ln(\text{CESD}): 0.09 [-0.12, 0.50]$

Sum of Natural Indirect Effects: 0.45 [0.04, 0.91]

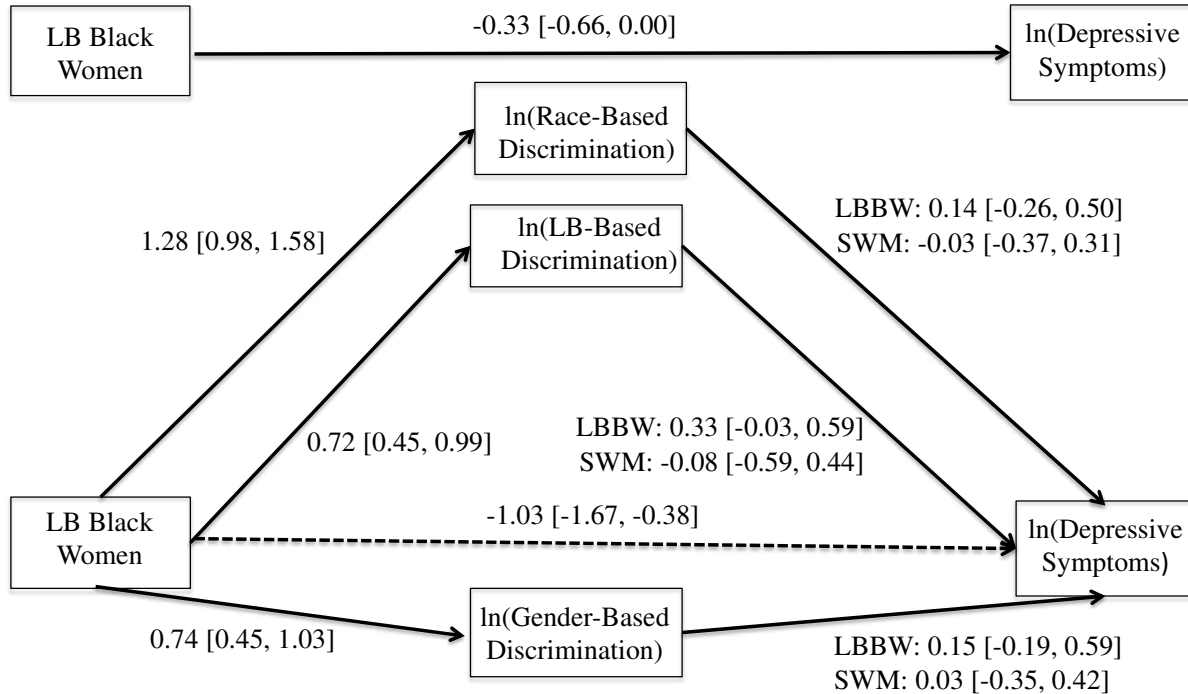


Figure 11. Mediation model for LB Black women compared to straight White men

Note. LBBW= LB Black women, LB = lesbian, bisexual, ln() indicates the variable was log transformed, CESD = depressive symptoms score. Brackets represent 95% confidence intervals, intervals that do not contain 0 are statistically significant, $p < .05$. The regression coefficient for the c' path is the effect when all three forms of discrimination are held at 0 (no discrimination) for both groups.

Consistent with my hypothesis, LB Black women experienced significantly more race/ethnicity-, sexual orientation-, and gender-based discrimination compared to straight White men. However, race/ethnicity-, sexual orientation-, and gender-based discrimination were *not* associated with more depressive symptoms. The natural indirect effects through sexual orientation-, race/ethnicity-, and gender-based discrimination were all non-significant. The sum of the indirect effects, however, was significant. Contrary to my hypothesis, LB Black women did not experience more depressive symptoms overall—in fact, this effect was approaching significance in the opposite direction to what I hypothesized. This effect was significant (in the opposite

direction I hypothesized) when sexual orientation-, race/ethnicity- and gender-based discrimination were all held at 0 (no discrimination) for both groups. In sum, while the b paths and specific natural indirect effects were non-significant, the sum of the natural indirect effects was significant, indicating that collective discrimination facilitates the development of depressive symptoms among LB Black women.³ Moreover, when all three types of discrimination were accounted for (and held at 0 for both groups), LB Black women reported significantly *less/less* frequent depressive symptoms compared to straight White men. This is a case of inconsistent mediation, which occurs when c' is opposite in sign to $a*b$ (Kenny, 2018). In this case, inconsistent mediation may indicate that a third mediating variable exists, which mediates LB Black women's lower rates of depressive symptoms. Additional discussion of this point can be found in the discussion.

GB Latino men. Sexual orientation- and race/ethnicity-based discrimination were examined as potential mediators between subgroup identity GB Latino men and rates of depressive symptoms. I hypothesized that GB Latino men, compared to straight White men would report significantly more sexual orientation-based discrimination (first a path) and race/ethnicity-based discrimination (second a path). In turn, more sexual orientation-based discrimination and race/ethnicity-based discrimination would be associated with more depressive symptoms (first and second b paths). I estimated the mediation model depicted in Figure 12.

³Per Hypothesis 9, I tested all possible combinations of “summed natural indirect effects” including the summed natural indirect effect of sexual orientation and race/ethnicity; sexual orientation and gender; and gender and race/ethnicity. Only the sum of the indirect effects that included all three mediators was significant.

Specific Natural Indirect Effects:

GBLM → *ln(GB-Based Discrimination)* → *ln(CESD)*: 0.23 [-0.06, 0.57]

GBLM → *ln(Race-Based Discrimination)* → *ln(CESD)*: 0.03 [-0.12, 0.24]

Sum of Natural Indirect Effects: 0.26 [-0.06, 0.62]

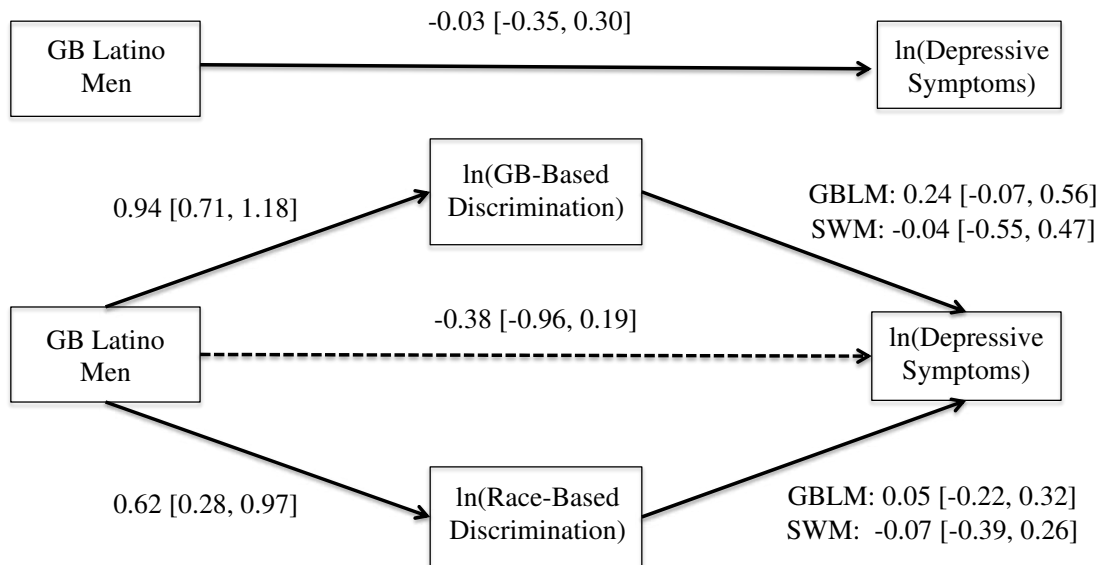


Figure 12. Mediation model for GB Latino men compared to straight White men

Note. GBLM = GB Latino men, GB = gay or bisexual, ln() indicates the variable was log transformed, CESD = depressive symptoms score. Brackets represent 95% confidence intervals, intervals that do not contain 0 are statistically significant, $p < .05$. The regression coefficient for the c' path is the effect when both forms of discrimination are held at 0 (no discrimination) for both groups.

Consistent with my hypothesis, GB Latino men experienced significantly more sexual orientation- and race/ethnicity-based discrimination compared to straight White men. However, neither sexual orientation-, or race/ethnicity-based discrimination was associated with more/frequent depressive symptoms. The natural indirect effects for sexual orientation- and race/ethnicity-based discrimination were not significant. The sum of the natural indirect effects was also not significant. Contrary to my hypothesis, GB Latino men did not experience significantly greater depressive symptoms than straight White men, even when holding sexual orientation- and race/ethnicity-based discrimination at 0 (no discrimination) for both groups. In sum, while GB Latino men did experience significantly more sexual orientation- and

race/ethnicity-based discrimination compared to straight White men, neither form of discrimination was associated with more/more frequent depressive symptoms.

LB Latina women. Sexual orientation-, race/ethnicity- and gender-based discrimination were examined as potential mediators between subgroup identity LB Latina women and depressive symptoms. I hypothesized that LB Latina women, compared to straight White men, would report significantly more sexual orientation-based discrimination (first *a* path), race/ethnicity-based discrimination (second *a* path), and gender-based discrimination (third *a* path). In turn, more sexual orientation-based discrimination, race/ethnicity-based discrimination, and gender-based discrimination would be associated with more depressive symptoms (first, second, and third *b* paths). I estimated the mediation model depicted in Figure 13.

Specific Natural Indirect Effects:

LBLW → *ln*(Race-Based Discrimination) → *ln*(CESD): -0.06 [-0.32, 0.17]

LBLW → *ln*(LGB-Based Discrimination) → *ln*(CESD): 0.05 [-0.30, 0.34]

LBLW → *ln*(Gender-Based Discrimination) → *ln*(CESD): 0.03 [-0.15, 0.28]

Sum of Natural Indirect Effects: 0.02 [-0.24, 0.31]

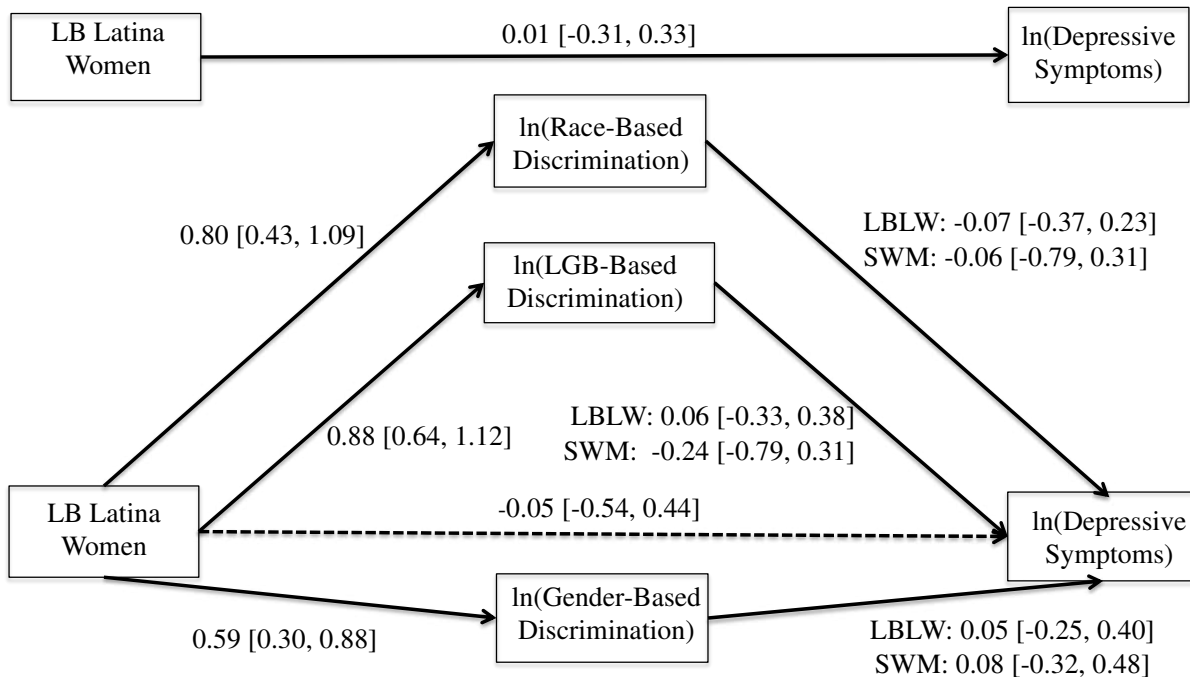


Figure 13. Mediation model for LB Latina women compared to straight White men

Note. LBLW = LB Latina women, LB = lesbian or bisexual, ln() indicates the variable was log transformed, CESD = depressive symptoms score. Brackets represent 95% confidence intervals, intervals that do not contain 0 are statistically significant, $p < .05$. The regression coefficient for the c' path is the effect when all three forms of discrimination are held at 0 (no discrimination) for both groups.

Consistent with my hypothesis, LB Latina women experienced significantly more race/ethnicity-, sexual orientation-, and gender-based discrimination compared to straight White men. Though, race/ethnicity-, sexual orientation- and gender-based discrimination were *not* associated with greater depressive symptoms. The natural indirect effects for race/ethnicity-, sexual orientation-, and gender-based discrimination were not significant. The sum of the natural indirect effects was not significant. Overall, LB Latina women did not experience greater depressive symptoms compared to straight White men even when accounting for sexual orientation-, race/ethnicity and gender-based discrimination (which were held constant at 0—no discrimination— for both LB Latina women and straight White men). In sum, while LB Latina women did appear to experience significantly more sexual orientation-, race/ethnicity-, and gender-based discrimination compared to straight White men, discrimination was not associated with significantly greater depressive symptoms.

Chapter 5

DISCUSSION

Health disparities in the United States primarily stem from unequal opportunity for all individuals to reach their health potential due to avoidable and unjust systemic inequity (i.e., health inequity; ODPHP, 2019). Over the last century, the U.S. populace has diversified considerably, necessitating reform to policy and prevention efforts (Civil Rights Act, 1964; Newport, 2018; Obergefell v. Hodges, 2015; U.S. Census Bureau, 2008; U.S. Constitution, 1920). Despite legislative changes to promote health equity, varying social determinants of health— aspects in one’s environment that contribute to healthcare and status—maintain stark mental health disparities among traditionally marginalized populations including women, sexual minorities and racial/ethnic minorities (APA, 2019; CDC, 2019; D’Augelli et al., 2001; Institute of Medicine, 2002; ODPHP, 2019). As such, social stress is an excellent starting point for understanding the environmental factors that contribute to mental health disparities among these groups. This study examined the role of discrimination in predicting health disparities in depressive symptoms, while drawing heavily from Intersectional theory (Crenshaw, 1989; Meyer, 2003). An intersectional lens to health disparities posits social determinants of health (such as discrimination) differ as a function of one’s unique, *intersecting* identities. Thus, traditional approaches to eliminating health disparities, which typically involve studying inequity as a function of one identity status (e.g., gender differences) may lack critical considerations to best inform policy and provide adequate prevention and treatment for the current U.S. population.

Upon careful review of the literature, I generated a series of hypotheses regarding the etiology of depressive symptoms through experiences of everyday discrimination informed by

the Minority Stress Model (Meyer, 2003). I based each of these hypotheses on theoretical foundations of Intersectionality (Crenshaw, 1989), acknowledging that disparities are best understood in the context of one's many identities—identities that ultimately determine the opportunity and oppression one encounters in daily life (Bowleg, 2008, 2012; Crenshaw, 1989). I placed a special focus on intersecting identities of sex/gender, race/ethnicity and sexual orientation in an effort to further the original goals of intersectional researchers; that is, to narrow the foci of intersectionality-based subgroups. The research on health disparities among these three intersecting identities is much needed (Bostwick et al., 2015; Calabrese, 2015; Carr et al., 2013; Guindon et al., 2003; Holley, Oh, & Thomas, 2019; Remedios & Snyder, 2015; Velez, Watson, Cox, & Flores, 2017). Informed by recent theory in the wake of a diversified populace, this study is the first of its kind to employ a quantitative intersectional approach to understanding disparities in depressive symptoms as a function of discrimination among a diverse range of subpopulations.

To achieve the aforementioned aims, I studied the experiences of eight intersectional identity-based subgroups in the current sample (see Table 1). Hypotheses 1 and 2 posited that participants in identity-based subgroups would differ in their experiences of discrimination and depressive symptoms. More specifically, I proposed that straight White men would experience significantly fewer depressive symptoms (H1.1) and less discrimination on the bases of their privileged sex/gender (male/man), race/ethnicity (White), and sexual orientation (straight; H2.1). In contrast, I posited LB Women of Color would experience significantly more depressive symptoms (H1.2) and more discrimination on the bases of their marginalized sex/gender (female/woman), race/ethnicity (Black or Latina), and sexual orientation (lesbian or bisexual; H2.2). Finally, via a series of mediation models, I proposed that marginalized participants'

depressive symptoms would manifest indirectly through experiences of discrimination on the bases of their respective marginalized identities. While each model had some significant findings, results only partially support my hypotheses informed by Intersectionality (Crenshaw, 1989) and the Minority Stress Model (Meyer, 2003). Notably, marginalized groups experienced more discrimination, but discrimination generally did not predict depressive symptoms. This important finding, in conjunction with my results as a whole, warrants a closer look at minority stress, discrimination, and the empirical and practical implications for health disparities.

Key Comparisons in Depressive Symptoms

I first tested ANCOVAs and planned comparisons in an effort to lay the foundation for my mediation models. In line with Hypothesis 1 and my first research question, I found significant variability in depressive symptoms as a function of the eight identity-based subgroups. Next, I turned to specific planned comparisons in depressive symptoms.

Straight White men and depressive symptoms. Contrary to my hypotheses, straight White men did not report significantly fewer depressive symptoms compared to the average of the other seven subgroups (H1.1). In fact, straight White men reported the third highest depressive symptoms score as a subgroup behind LGB Latinx women and men. This finding is largely inconsistent with the Minority Stress Model (Meyer, 2003) in that straight White men are socially privileged in terms of their social identities. Likewise, this finding is contrary to much of the previously reviewed research on gender, sexual orientation and depressive symptoms, which argue that hormonal, cultural and social factors may put women and LGB populations at greater risk for depressive symptoms relative to men and straight populations (Albert, 2015; Harvard Medical School, 2011; Kessler, 2003; Meyer, 2003; Ryan et al., 2009; Soares & Zitek, 2008). These results may arise from the sampling strategy employed by the investigators of Project

Stride. Though the PIs worked to avoid bias in their sampling, Project STRIDE investigators utilized targeted methods to obtain their sample, which could limit this subsample of straight White men's representativeness to the general population of straight White men (Meyer, 2006). Specifically, straight White men who participated could have been motivated by monetary compensation or social justice efforts offered in this study, as participants were paid and the study was framed as one examining social stressors and coping among minority populations. Also, while I controlled for unemployment and income, 25% (N = 18) of straight White men were unemployed (and non-students) in this sample, relative to roughly 3-5% of White men in the U.S. around this time (Couch & Fairlie, 2010). Likewise, straight White men had the third lowest household income, which is uncharacteristic of this subgroup relative to other populations. Both of these circumstances further limit this group's generalizability and the potential usefulness of my models as a whole. Nonetheless, this overall finding in depressive symptoms contradicts a fundamental thesis to this work that straight White men's relative social privilege may protect them from the development of depressive symptoms and ultimately contribute to the health disparity we see in current literature (Albert, 2015; Cyranowski et al., 2000; Leach et al., 2008, NAMI, 2016; NIH, 2010).

Despite these potential threats to the generalizability of these findings, elevated depressive symptoms among straight White men is not entirely uncommon in the literature. Thus, a number of alternative factors may explain the higher prevalence of depressive symptoms among straight White men in this particular sample (among other similar samples; e.g., Breslau, Aguilar-Gaxiola, Kendler, Williams, & Kessler, 2006; Juster, Smith, Ouellet, Sindi & Lupien, 2013). Current literature indicates inconsistencies in detecting depression/depressive symptoms among men (see Call & Shafer, 2018 for a review). While depressive symptoms are more

prevalent among women, suicide rates are four times higher among men, indicating a discordant relationship between depression diagnoses and depression symptomatology (i.e., suicide; Oliffe & Phillips, 2008). Healthcare professionals are also less likely to detect depressive symptoms among men compared to women, and men are less likely to trust healthcare providers and mental health treatments, which may worsen the disparity between symptomatology, diagnosis, and ultimately, treatment (Addis & Mahalik, 2003; Oliffe & Phillips, 2008). On the other hand, psychopathological- and measurement-related factors may explain higher rates of *detected* depressive symptoms among White populations in this sample. For instance, White people tend to display and identify with more traditional depressive symptomatology (e.g., negative affect, low self-esteem, hopelessness) in the midst of depressive symptoms compared to People of Color (Assari & Lankarani, 2018). Thus, the CES-D used in this research may have been better suited in evaluating depressive symptoms among straight White men in this sample (relative to other subgroups). Indeed, some research on the CES-D indicates that psychometric properties differ for Black and White adolescents (Lu, Lindsey, Irsheid & Nebbitt, 2017). Considering these patterns, future research might examine systemic inequities in detecting and diagnosing depressive symptoms in intersectionally-studied populations, and it is critically important to determine if the results presented here replicate in other studies before trusting that the effects identified in this thesis translate to the population (or if they are specific to this one unique sample).

Still, straight White men avoid many of the social stressors experienced by minority populations as a result of their social privilege, which further begs the question as to what individual factors contribute to higher depressive symptoms in White, straight and male populations (ACLU, 2019; Meyer, 2003; National Women's Law Center, 2019; ODPHP, 2019;

Shapiro, 2006). As it stands, little research exists on the relationship between stress, resilience and depressive symptoms among men— and among straight White men in particular (Barnes et al., 2013; Breslau et al., 2006; Simpson et al., 2006; U.S. Department of Health and Human Services, 2017). However, White people tend to be less resilient to life stressors compared to People of Color (despite People of Color experiencing more life stressors overall), which may also contribute to a higher prevalence of depressive symptoms among this subgroup of straight White men (Assari, 2016; Assari & Lankarani, 2015). Social isolation— a risk factor for depression— disproportionately affects straight men and may put this metropolitan subgroup at greater risk for depressive symptoms (Stengenga et al., 2012). Future work should consider the roles of measurement and social privilege in assessing straight White men’s psychopathology, while identifying additional social stressors that may be unique to straight White men’s development of depressive symptoms mentioned in Chapter 2 (e.g. social isolation, lack of emotional regulation, financial strain).

LB Women of Color and depressive symptoms. In line with my hypothesis and existing theory, LB Women of Color did report significantly more depressive symptoms compared to the average of the other six subgroups (H1.2). This finding supports Crenshaw’s (1989) Intersectional theory, as the multiplicative effect of holding three (as opposed to two or one or zero) marginalized identities may indeed put LB Women of Color at higher risk for health disparities in depressive symptoms (i.e., “triple jeopardy”; Bowleg, 2008; Crenshaw, 1989). Though research of this nature is relatively new (Bowleg et al., 2003), a literature supports the sequelae of triple jeopardy in predicting disparities in depressive symptoms among LB Women of Color. For example, one study found that LB Black women had poorer psychological wellbeing than both LB Black men and LB White women (both of whom hold two marginalized

identities according to this framework; Calabrese et al., 2016). LB Black women also had more/more frequent depressive symptoms than LB Black men (though, LB White women's depressive symptoms were comparable to that of LB Black women; Calabrese et al., 2015). Importantly, this result in conjunction with existing, similar research supports the foundations of the Intersectional and Minority Stress Theories that ultimately drive this work.

LB Latina women appeared to have significantly higher rates of depressive symptoms than the other groups in this sample (see Figure 2). In fact, LB Black women had only the fourth highest average depressive symptoms (fifth, when means were adjusted for covariates; see Table 6), indicating that LB Latina women's depressive symptoms substantially contributed to the significance of this comparison. While some research finds elevated rates of depressive symptoms among LB Latina women relative to sexual minority women of other ethnicities (Arnada et al., 2015; Bowleg, Huang, Brooks, Black & Burkholder, 2003; Ryan, Huebner, Diaz & Sanchez, 2009), findings are somewhat inconclusive (Bostwick, Hughes, Steffen, Veldhuis, & Wilsnack, 2019). Notably, depressive symptoms among LB Latinas may be intrinsically linked to familism and family acceptance (an effect I will further unpack in my discussion of mediation patterns). Nonetheless, this key comparison only confirms the disparity in depressive symptoms between LB Women of Color and less marginalized subgroups in the current sample. These results do not speak to the *mechanisms* that may contribute to disparities among these populations. Thus, I emphasize this disparity is best interpreted alongside additional variables considered in the current thesis. The following section works to achieve this aim by examining disparities in everyday discrimination.

Key comparisons in everyday discrimination.

In line with Hypothesis 2, I found that the eight identity-based subgroups, on average, differed in their reported everyday discrimination (see also Figure 3). This finding laid the groundwork for my subsequent planned comparisons in discrimination between 1) straight White men and the other seven more marginalized subgroups, and 2) LB Women of Color and the other six less marginalized subgroups.

Straight White men and total discrimination. As expected, straight White men reported significantly fewer experiences of total discrimination (on the bases of gender, sexual orientation and race/ethnicity) compared to the average of the other seven marginalized subgroups (H2.1). This finding is supported by much of the literature and theory on minority stress and everyday discrimination, as straight White men are— and have historically been—the dominant subgroup in the United States (Kendall, 2012; Liu, 2017; Meyer, 2003). Straight White men have more economic and social capital than any other group in the U.S. (e.g., ACLU, 2019; Espey et al, 2019; NAACP, 2019; National Women’s Law Center, 2019; NIJ, 2013), and thus unsurprisingly, they experience less interpersonal discrimination than any other group in this sample. Still, it is worth noting that straight White men, as a subgroup, had several more outliers in their reported discrimination relative to other groups (see Figures 3-6). Given their social privilege and the variability in results, future research should qualitatively examine factors that lead to some members of this group’s experiences and reporting of discrimination.

LB Women of Color and total discrimination. In line with my hypothesis, LB Women of Color reported more total everyday discrimination compared to the other six subgroups (H2.2). Similar to H1.2, this finding is supported by many theoretical and empirical works mentioned in this paper (e.g., Bowleg, 2008; 2012; Calabrese et al., 2015; Crenshaw, 1989) given that the LB Women of Color are the only groups marginalized in their sex/gender *and*

race/ethnicity *and* sexual orientation in the current sample. Still, there are several notable patterns in the context of this finding worth discussing. First, GB Men of Color reported slightly more everyday discrimination overall (see Figure 3), mostly on the basis of their race/ethnicity (see Figure 5). While Black men are less likely to report gender-based discrimination than Black women, Black men tend to report more race/ethnicity-based discrimination compared to Black women (Robert, Vines, Kaufman, & James, 2008; Williams et al., 1997). At the systems level, Black men are more likely to be incarcerated and experience police brutality and are less likely to attend college and achieve economic stability compared to Black women, all of which likely (at least partially) result as a function of everyday discrimination (i.e., racism; APA, 2018; Chetty, Hendren, Jones & Porter, 2018; NAACP, 2019). Likewise, while Latina women (like Black women) are more likely to report discrimination in healthcare settings, Latino men (like Black men) are more likely to report discrimination by law enforcement and are more likely to be incarcerated (i.e., National Public Radio, Robert Wood Johnson Foundation and Harvard T.H. Chan School of Public Health, 2017; see also Harnois & Ifatunji, 2010 for a discussion of gendered racism). Thus, despite LB Women of Color holding more marginalized identities, the relative magnitude of race/ethnicity-based discrimination among GB Men of Color accounts for more total discrimination in this group, a finding that is not entirely surprising.

Looking to Figure 4, White women reported more gender-based discrimination than Women of Color. It is possible that Women of Color's perceptions of race/ethnicity-based discrimination makes them less attuned to gender-based discrimination (or sexual orientation-based discrimination), not because the latter forms of discrimination are non-existent, but because discrimination on the basis of their race/ethnicity is more prevalent in the United States (Levin, Sinclair, Veniegas, & Taylor, 2002). Indeed, Women of Color are most likely to attribute

general discrimination to their race/ethnicity (relative to their gender or sexual orientation; Kessler et al., 1999). Also, some stereotype literature suggests that White women's experiences of sexism may take a more negative lens than Women of Colors' such that White women are often stereotyped as passive, weak, fragile and powerless, while Women of Color more often receive "independent", "assertive", and "aggressive" stereotypes (which may be relatively protective; McRae, 2003). Despite these significant findings, Women of Color's experiences of racism, homophobia and sexism are inextricably linked (Bowleg, 2008, Crenshaw, 1989); research on minority stress and the etiology of depressive symptoms would benefit from mixed methods studies, which can capture the full scope of the intersectional experience.

Key Findings of the Mediation Analyses

Mediation Patterns Among and Between Subgroups

Turning to my mediation models, each marginalized subgroup reported significantly more discrimination on all of their respective marginalized identities compared to straight White men. Thus, in concordance with the Minority Stress Model (Meyer, 2003), marginalized subgroups did indeed report experiencing more minority stress (i.e., discrimination). This finding is generally unsurprising, as a host of qualitative and quantitative research corroborates the prevalence of everyday discrimination among women and racial and sexual minority groups (Crenshaw, 1989; Frost, Lehavot, & Meyer, 2015; Meyer, 2003; Paradies, 2006).

On the contrary, despite the prevalence of elevated discrimination among marginalized subgroups (*a* paths), no *b* paths were significant in any of the models, indicating that discrimination did not, in turn, predict depressive symptoms among any of the groups. This is a relatively notable finding for health disparities work and for the Minority Stress Model (Meyer, 2003) as a whole. First, an overarching premise of this work is that discrimination (i.e., social

stress) predicts health disparities; these results suggest that it does not. This finding is contrary to most research published on this topic (Cormack, Stanley, & Harris, 2018; Gayman & Barragan, 2013; Grollman, 2014) including much of Meyer’s work on Minority Stress and health disparities (Meyer, 1995; Meyer, 2003; Meyer, 2007; Meyer, 2010). However, this is not the first study to find a non-significant relationship between discrimination and depressive symptoms among minorities, particularly when income and education—both of which tend to vary as a function of identity in the U.S. as I have previously noted—are accounted for in the modeling strategy (Alvarez-Galvez & Rojas-Garcia; Assari, Lanarani & Caldwell, 2018). Additionally, these non-significant results might speak to important patterns among LGB populations who are “out” (i.e., open about their sexual identity), as the sampling strategy in Project STRIDE utilized targeted sampling and thus required sexual minority populations to be at least somewhat open about their sexual identities. Indeed, “outness” is a predictor of better psychological wellbeing among LGB adults (relative to those who are not “out”; Moe, 2016; Tabaac, Perrin, & Trujillo, 2015, Whitman & Nadal, 2015) and can help foster the added protectiveness of (LGB) community resilience (Meyer, 2015). Overall, despite the comprehensive literature on disparities in depressive symptoms in marginalized populations in the United States, these findings suggest that: 1) disparities between these populations vary among samples (see also Chapter 2 for a review) and/or 2) other mechanisms—mechanisms besides discrimination—predict disparities in depressive symptoms among these groups. In concordance with these prevailing theses, the following sections review common themes and highlight intersectional group differences in discrimination and depressive symptoms in the context of existing literature.

The predominant role of sexual orientation-based discrimination. First, across subgroups, discrimination on the basis of sexual orientation was the only type of discrimination

correlated with depressive symptoms (see Table 5), and still, the correlation was quite modest. Correlations between sexual orientation-based discrimination and depressive symptoms come as little surprise (e.g., see Fredriksen-Goldsen et al., 2014; Gilman et al., 2001; King et al., 2008; National Institutes of Health [NIH], 2010). Sexual minorities comprise a smaller proportion of the U.S. population (4.5%) relative to women (51%) and racial/ethnic minorities (24%), which may contribute to more feelings of isolation for this subgroup (which are certainly related to increased depressive symptoms; U.S. Census Bureau, 2018; Newport, 2018). One must also consider that in the time this survey was administered, same-sex marriage was not yet legal in New York state or nationwide, which may further explain social stress among these populations. Indeed, irrespective of relationship status, health indicators among sexual minorities tend to improve with legislation in support of same-sex marriage (e.g., Hatzenbuehler et al., 2012, Wight, LeBlanc, & Badgett, 2013).

Total effects of identity on depressive symptoms. Before adjusting for the control variables, the effect of having a marginalized identity status on depressive symptoms was significant only for two of the subgroups, and both differences were in the opposite direction of what I expected. Specifically, GB Black men and women reported fewer depressive symptoms than straight White men. These findings are not indicative of a health disparity in depressive symptoms and are contrary to what I expected. This finding could be affected by sampling strategy employed by Project STRIDE (as discussed earlier). In addition, it should be noted that I elected to control for a set of covariates in examining these effects. Some of these covariates, particularly education and income, are likely affected by subgroup membership. By controlling for these variables, I may be explaining away part of the effect that identifying with a marginalized subgroup has on depressive symptoms. Nonetheless, I felt it was important to

include these variables as controls, as I wanted to understand the effect of identity-based discrimination on depressive symptoms, independent from the discrimination that may accompany a minority group member's income and education level. The results should be interpreted in light of this decision.

Direct effects of identity on depressive symptoms independent of discrimination.

Among GB White men, I found evidence for direct effects only (i.e., only a significant c' path), but in the opposite direction of what I hypothesized. Holding constant the control variables and holding discrimination at 0 (i.e., no discrimination), GB White men reported fewer depressive symptoms than straight White men. Although contrary to my expectations, there may be reasons for these paradoxical findings. First, GB White men (in contrast to straight White men) more often share aforementioned protective traits, which may mitigate the risk for developing depressive symptoms overall. For instance, LGB populations more often give and receive more social support and have better emotional regulation and coping skills than straight White men, which could be protective (Garipey, Honkaniemi, & Quesnel-Vallee, 2016; Hall, 2018; Santini, Koyanagi, Tyrovolas, Mason, & Haro, 2015). Also, some researchers argue GB men are more “mental health-literate” (aware at detecting and seeking treatment for mental health disorders in themselves or others) due to the community activism and organization post-HIV epidemic (Körner et al., 2011). It is also worth considering that sexual orientation-based discrimination is possibly one of the relatively few sources of social stress for GB White men compared to other subgroups. Indeed, this group fares relatively well in other social determinants of health, which may otherwise predict depressive symptoms (e.g., SES, racism, sexism, educational attainment, health access; CDC, 2019). On the other hand, sexual orientation is more easily concealable than one's sex/gender or racial/ethnic identity (see for example, Goh, Kort, Thurston, Benson &

Kaiser, 2019), and it may be that some GB White men (perhaps those who “pass” as straight) are afforded many of the social privileges of straight White men. Finally, as is the case in each of my models, this subsample of straight White men was not representative of the population of straight White men (more were unemployed and they had the third lowest income among all groups), which could have contributed to the results. Future research should test whether these findings hold under replication (with a more generalizable sample of straight White men) and consider additional characteristics shared by LGB populations that may protect this group from the development of depressive symptoms.

Inconsistent/Competitive mediation. Among LB Black women there was evidence for inconsistent or competitive mediation (two interchangeable terms, Zhao et al., 2010). In other words, $a*b$ was significant, and c' was significant; however, these paths were significant in opposing (i.e., competing) directions. In scenarios of competitive mediation, the model supports the inclusion of the mediator(s), however, other variables likely contribute to the complex and conflicting relationships between X and Y. In this case, the mediator variable, discrimination, facilitated the relationship between LB Black women and depressive symptoms in the direction expected. However, another variable(s) likely facilitates the *unexpected* (negative) relationship between LB Black women and depressive symptoms when discrimination is held constant (held at 0—no discrimination— for both LB Black women and straight White men). Social support, healthy emotional regulation, cognitive appraisal, or ethnic identity may all contribute to decreased depressive symptoms among LGB, Black and female populations (Cohen, 2004; Martinez-Hernaez et al., 2016; Neblett et al., 2012; Smith & Silva, 2011). Drawing heavily from previously reviewed literature on these moderators, future research rooted in the Minority Stress Model (Meyer, 2003) and Intersectionality (Crenshaw, 1989) should examine other potential

moderating variables that may protect LB Black women from the development of depressive symptoms. Of course, given the very large number of significance tests for indirect effects conducted across all of the mediation models, the fact that just this one indirect effect was significant should be acknowledged.

Nonetheless, it is worth noting that LB Black women were the only group in which mediation was detected. This indirect effect (see Figure 11) is not uncommon in the literature, particularly among work rooted in intersectionality (Calabrese et al., 2015; Crenshaw, 1989; Lewis, Williams, Peppers & Gadson, 2017; Moore, 2012; Walton & Oyewuwo-Gassikia, 2017). For example, in concordance with Intersectional theory, Bostwick, Boyd, Hughes and West (2015) found that social stress (i.e., discrimination) on the basis of more than one identity predicted mental health strain among LB Women of Color. Likewise, stress associated with being a racial and sexual minority appeared to play a role in the development of mental health issues among LB Black women even when gender was not considered (Cochran, Mays, Alegria, Ortega & Takeuchi, 2007; Meyer, Dietrich, & Schwartz, 2008). Overall, it appears that the triple jeopardy hypothesis may be salient among LB Black women relative to other groups, and that it holds under quantitative data analysis, but only in terms of an indirect effect of identity on depressive symptoms via discrimination (holding constant control variables). Interestingly, when I removed the control variables from the mediation models, the sum of the natural indirect effects was non-significant. Thus, the control variables—most notably income and education—could play a salient role in the indirect effect of LB Black women’s identity on depressive symptoms through discrimination. Moreover, this result may indicate a case of “unnecessary adjustment” by which including control variables (namely, income and education) biases the effect of identity on discrimination and depressive symptoms (Schisterman, Cole & Platt, 2009). Given this

finding, future work should consider income and educational attainment as potential mediators in the development of depressive symptoms among marginalized groups. Overall, this result highlights the importance of Crenshaw's (1989) work in outlining the unique intersection of race/ethnicity, sexual orientation and sex/gender among LB Black women, ultimately underscoring the need for intersectional approaches in future works.

Other notable findings related to the general lack of indirect effects. Contrary to my hypotheses, all but one of the fitted mediation models failed to identify any indirect effects. Notably, straight White women, LB White women, GB Latino men, and LB Latina women had no significant paths at all beyond the consistently significant *a* paths. GB White men had a significant direct effect (see above), and GB Black men had a significant total effect (both in opposite directions to what I hypothesized). I use this section to further unpack these complex findings.

First, contrary to much of the research on gender differences, straight White women did not have higher rates of depressive symptoms than straight White men. Once again, the sampling strategy could play a role in this discrepancy such that Project STRIDE used targeted (i.e., nonrandom) sampling. Likewise, participants in this sample presumably had the time, scope, and interest to participate in Project STRIDE, a project framed as an effort to describe and explore prejudice and stress among minority group members. Most White populations (even White women) do not consider themselves minorities, and thus, it is possible that an interest in the monetary compensation or general social justice efforts motivated these White persons' participation, thereby limiting generalizability to straight White populations as a whole. Straight White men's unemployment and income (though controlled for) also could have played a role in resulting non-significant findings, as a nontrivial proportion of straight White men (25%) were

unemployed, relative to straight White women (5%), and unemployment (and the lack of income that often accompanies unemployment) is consistently associated with depressive symptoms (Paul, 2009). A number of aforementioned protective factors could also play a role in this discrepancy. Straight White women are generally more likely to give and receive social support, seek and receive treatment for depression, and practice healthy emotional regulation and coping skills compared to straight White men, which may be particularly true for this metropolitan sample (Gariepy, Honkaniemi, & Quesnel-Vallee, 2016; Hall, 2018; Santini, Koyanagi, Tyrovolas, Mason, & Haro, 2015). Still, I emphasize that one should consider Project STRIDE's non-representative samples of straight White men in this finding among other findings.

The lack of mediating effects of discrimination in the LGB Latinx models warrant additional attention, as these groups had the highest rates of depressive symptoms. Contrary to my hypotheses, discrimination did not mediate the effect of marginalized identity status for these groups on depressive symptoms because greater discrimination in these groups was not associated with greater depressive symptoms. Speaking first to discrimination, I consider the context of New York City for LGB Latinx samples in this study. New York City is home to 2.5 million Latinos/Latinas (29% of the city's population, which is disproportionately high compared to the rest of the United States; City of New York, 2013), which may protect against the degree of racial/ethnic discrimination these groups experience. Indeed, supportive environments—characterized by social support, mentor-based relationships and strong minority identity—further protect LGB populations from developing psychopathology (Johnson, Leibowitz, Chavez, & Herbet, 2019). The context of this study (the largest, most diverse metropolitan city in the United States) may offer additional support to Latinx populations, which could further protect or mitigate these groups from the ill-effects of social stress (Seery et al., 2013).

Still, LGB Latinx groups had relatively high rates of depressive symptoms. It is likely that there are other variables that drive depressive symptoms or offset the harmful effect of discrimination on depressive symptoms for these groups. Familism—the value toward interdependent families and cultures—tends to be more influential in Latinx/Hispanic communities than White or Black communities (Schwartz, 2007). Familism as a cultural value supports Latinx/Hispanics' health in many ways. However, familism can also negatively impact the wellbeing of LGB Latinx populations through “regulating” or suppressing their sexuality to meet the larger needs of the family or community (e.g., emphasized femininity, hegemonic masculinity, heteronormativity; see below and Arciniega, Anderson, Tovar-Blank & Tracey, 2008). As a result, LGB Latina persons may be less likely to disclose their sexual orientation or denounce homophobia among their family members, both of which are related to more/more frequent depressive symptoms (Muñoz-Laboy, 2008; Rothman, Sullivan, Keyes, & Boehmer, 2012). On a similar note, the majority (70%) of Latinx/Hispanics in the United States identified as Catholic during the time of this survey. Though U.S. dioceses and parishes certainly vary in their acceptance of sexual minorities, Catholicism has traditionally denounced same-sex marriage and relations (Human Rights Campaign, 2019). In fact, the U.S. Conference of Catholic Bishops has yet to pass policy protecting sexual minorities from discrimination in the church including denying these groups membership, though work in this area to pass needed protections seems to be progressing (Human Rights Campaign, 2019). Thus, cultural and familial factors unique to Latinx populations may explain the higher rates of depressive symptoms among this population that were not facilitated by discrimination.

Finally, though I did not observe any mediational patterns among GB Black men, the total direct effect was significant and in the opposite direction of what I hypothesized, indicating

that GB Black men experienced significantly less/less frequent depressive symptoms than straight White men in this study. Historically and today, Black men (and especially GB Black men) experience more adversity in their day-to-day lives (Brown et al., 2012; Movement Advancement Project and Center for American Progress, 2016; Sohn, 2017), and GB Black men in this sample experienced more race/ethnicity-based discrimination than any other group. However, paradoxically, this adversity (i.e., social stress, in the case of the current study) does not always predict depressive symptoms (among other health ailments; Brown & Tylka, 2011; Sue & Sue, 2008). In fact, this adversity may make this group more resilient (thus protecting GB Black men against the development of depressive symptoms). Socioeconomic status and neighborhood disadvantage often contribute to differential patterns in depressive symptoms among Black men, and these variables would be worth exploring further in future studies (Simons et al., 2016; U.S. Department of Health and Human Services, 2017). Future research should continue to examine factors that make GB Black men resilient to depressive symptoms relative to straight White men.

Implications for Intersectionality Theory

Importantly, experiences of discrimination vary contextually, and one universal experience or manifestation of discrimination does not and cannot encompass the experiences of many people in any one intersectional group. Moreover, Intersectional theory suggests that discrimination— just like identity— may be best understood from an intersectional lens. Discrimination on the bases of gender, sexual orientation, and race/ethnicity are interdependent of one another, and thus, should be optimally modeled as “intersectional discrimination” in future studies (Moradi & Subich, 2003). Indeed, in the current study, gender-, race/ethnicity-, and sexual orientation-based discrimination were highly correlated, necessitating the need for

discrimination measures to address intersectionality in their items; such efforts are promising for the future of health disparities work (e.g., The Intersectional Discrimination Index; Scheim & Bauer, 2019). Similarly, these results offer important insight on the measurement and theoretical conceptualization of intersectionality. Discrimination mediated depressive symptoms among LB Black women, but not GB Black men, LB White women, or even LB Latina women; a pattern that speaks to the true interdependence and multidimensionality of intersectional identities (Collins, 1990). These findings underscore a foundational assumption in intersectionality work—that LB Women of Color’s (and specifically LB Black women’s) social stress differs substantially from that of sexual minorities, People of Color (Blacks), or women in their individual subgroups (Bowleg, 2012). There remain many nuances to modeling and analyzing intersectional work, and this study is no exception. However, this work offers an important quantitative contribution to Intersectional theory by highlighting group differences among the relationships between discrimination and mental health strain. Importantly, this work speaks to the integrity of “triple jeopardy” and intersectionality among LB Black women from a quantitative perspective (Bowleg, 2012; Collins, 1990; Crenshaw, 1989). The current paper innovatively addresses disparities in depressive symptoms through a wide intersectional lens via quantitative methods. Future health disparities research should triangulate these findings by exploring the ways in which intersectional subgroups qualitatively differ in their experiences of discrimination and depressive symptoms, ideally in conjunction with quantitative methods.

Limitations

These results should be understood in the context of multiple limitations. First, given the relative newness of intersectionality as a subfield and construct, researchers caution modeling intersectional identities from a quantitative perspective (Bowleg, 2008; Warner & Shields, 2013).

Quantitative methodology has the potential to condense one's intersectional identity to a collective sum of identities, which, as previously noted, can be counterproductive (Purdie-Vaughns, & Eibach, 2008). A quantitative approach lacks the "richness" of qualitative research in that it prevents participants from discussing facets of their identity in their own words and conceptualizations. Some people conceptualize their identities separately ("I am a woman, Black, and a member of the LGB community") while others conceptualize their identities collectively ("I am a LB Women of Color"; Bowleg, 2008; Crenshaw, 1989; Davis, 2014). Though less discussed in the literature, this is also likely the case upon discussing one's experiences of discrimination. For example, people of multiple marginalized identities may attribute discrimination to their individual identities (i.e., attributing discrimination to their race/ethnicity, gender, or sexual orientation, respectively). Others may attribute an experience of discrimination to their intersectional identity(s) (i.e., attributing discrimination to identities as a lesbian, Black woman, LB Woman of Color, etc.; Balsam, Molina, Beadsnell, Simoni, & Walters, 2011). Related, closed-ended questions do not allow for participants to express other intersectional identities such as someone who is chronically ill, a first-generation college student, single parent, etc. In the current research, there is a limited scope to which participants can identify their race/ethnicity, which is a major limitation. The U.S. population is comprised of far more races/ethnicities than White, Black or Hispanic/Latinx (U.S. Census Bureau, 2008). Inclusions of racial identities such as Asian American, American Indian or Alaska Native, and Native Hawaiian or Other Pacific Islander, as well as differentiating between Hispanic and Latinx populations, would have supplemented the STRIDE data and research questions grounded in Intersectional theory. Also, although I control for variables such as income, educational attainment, etc., these pieces of identity are not methodologically considered as primary facets in

my identity-based subgroups. I was careful to create identity-based subgroups on the bases of gender/sex, race/ethnicity and sexual orientation in an effort to advance intersectional and health disparities research; however, these eight identity-based subgroups are certainly limited in their representativeness of intersectional populations. As a final note on this matter, I emphasize that quantitative research involves “collapsing” identities, which creates a prototype of the identity-based-subgroup in question. A breadth of diversity exists within identity-based subgroups (Bowleg, 2008). Participants in the STRIDE study are far more than a summary of their combined intersectional identities, and qualitative methodology would have allowed participants to identify themselves on their own terms. Ultimately, I emphasize that these identity-based subgroups are people in my study who share identities, and thus *may* share similar experiences. However, each participant embodies their own unique experiences and characteristics, which should not be overlooked.

There are other drawbacks to using a quantitative approach to study intersectionality. Intersectional theory indicates that multiple minority stress (i.e., double jeopardy, triple jeopardy) is more than the sum of racism, sexism, and homophobia experienced by those of single marginalized identities (e.g., straight Black men, straight White women, White GB men). Rather, the racism, sexism, and homophobia that LB Black women experience, for example, are likely inextricably related. Thus, measuring multiple minority stress with a measure originally validated for racism only among Black populations limits the measurability of intersectional discrimination (Williams et al., 1997). There are a limited number of measures to assess the intertwined experiences sexism, racism or homophobia among those of multiple marginalized identities (Scheim & Bauer, 2019), though future work would benefit from these developments as quantitative intersectional research continues to advance. Measures to assess discrimination on

the basis of two marginalized identities have proved promising, though they are not without their drawbacks (e.g., Balsam et al., 2014; see Morrison, Bishop, Morrison, & Parker-Taneo, 2015 for a review). Future research might incorporate several measures of discrimination in an effort to identify social experiences most detrimental for a variety of groups and further this measurement endeavor. Finally, the Everyday Discrimination Scale (Williams, 1997) asks about lifetime discrimination, while the CES-D (Radloff, 1977) asks about depressive symptoms in the past week. This potential discrepancy between the time of recall for the mediator variable and outcome variable could certainly affect the strength of the path I intended to measure. A measure that taps into more recent discrimination may better predict depressive symptoms by eliminating the potential lag in discrimination's effect on depressive symptoms or vice versa. Future research should use measures that survey recent experiences in discrimination upon evaluating current health conditions (see Shariff-Marco et al., 2011 for a review). In sum, quantitative intersectionality research has the potential to expand the work on health disparities to fit the needs of a continuously diverse population using larger sample sizes and potentially, a wider scope of variables. However, the abovementioned limitations to quantitative intersectionality research should be appropriately noted and rectified, if possible, in order to best serve future work.

A major limitation to this dataset is the overall lack of straight People of Color in the sample, thus disallowing a true test of intersecting gender/sex, race/ethnicity, and sexual orientation identities. Principal investigators of the STRIDE study stressed that the funding and purpose of STRIDE was to provide insight on those with multiple marginalized identities, and as such LGB People of Color comprise half of the sample. Such a large sample of LGB People of Color is rare in existing datasets and thus a major asset to the STRIDE study (Meyer et al.,

2006). Still, the addition of straight People of Color would have further supplemented the data and current research question in allowing me to examine important experiences among this unique subgroup, while comparing this data to subgroups who are differentially impacted by health inequity. Importantly, said inclusions would have further improved the generalizability of the study's finding for health disparities efforts. Finally, Project STRIDE did not allow participants to identify their gender identity per current APA standards, which advise that studies survey participants' gender identity as cisgender or transgender and man, woman, or non-conforming/non-binary (APA, 2019). Though it is impossible to know whether this proportion of individuals would yield enough power to detect effects of gender identity on discrimination and depressive symptoms in the STRIDE data, the acknowledgement of gender identity would have provided a more comprehensive perspective on one's intersectional identities and experiences in the STRIDE sample.

Beyond identity, there are a number of biopsychosocial variables that I do not and cannot account for in my study that could be contributing to depressive symptoms among participants. Biological factors such as genetics and heritability and environmental factors such as water, air and noise pollution may increase the risk for developing depressive symptoms— particularly in a region like New York City (Nemade & Patricelli, 2019). Likewise, while I was careful to ground this work in theory (the Minority Stress Model; Meyer, 2003), minority stress varies from person to person as a function of their experiences, and a number of other social stressors contribute to the development depressive symptoms. The current research fails to account for childhood stress/trauma, stress from burnout/overwork, or stress accompanying chronic illness, relationship issues, poor health or sleep, caregiving strain, parenthood, family strain, etc. all of which can contribute to risk for depressive symptoms (Kessler, 2003; see also Chapter 2). Thus, this

research is a starting point for understanding social discrimination and depressive symptoms among marginalized groups, but it is certainly not all encompassing.

The current research uses mediation analyses on cross-sectional, non-experimental data. While I interpreted my findings in the context of current mediation literature for cross-sectional data, I emphasize that causality and true mediation cannot be ascertained from the current analyses. My models can only be interpreted in terms of being consistent or inconsistent with mediation, and thus provide a starting point for determining the sequelae of depressive symptoms among marginalized populations.

The data from Project STRIDE are almost 15 years old. Thus, while the research questions are important and relevant, one must take caution upon generalizing these findings to today's population and current societal context. First, the STRIDE sample was collected with targeted (nonrandom) methods, and thus the LGB sample in this study predominately represents sexual minority adults who are open (i.e., "out") about their sexual identity. Thus, this sample may not generalize to the larger population of sexual minority adults— some of whom are not open about their sexual identity. Likewise, the straight populations in this study were also not selected randomly and may poorly represent the (White) straight populations in the United States. Most notably, straight White men in this study are not representative of their general population in that a disproportionate number was unemployed, and income among this group was relatively low compared to other groups. Relatedly, since the collection of this data, federal legislation passed the right to same-sex marriage, the United States has undergone two leadership changes, and the U.S. experienced the Great Recession, all of which could differentially affect the levels of discrimination and depressive symptoms minorities experience today. Likewise, more people are seeking mental health care as organizations work to eliminate the stigma around

mental illness (e.g., Make it OK, 2019; National Alliance for Mental Illness [NAMI], 2017), which may contribute to higher *reported* rates of depressive symptoms but also more treatment (Corrigan, 2004; WHO, 2018). Finally, social variables unique to the last 15 years include the boom of social media and the legalization of marijuana, both of which differentially affect populations and contribute to the epidemiology of depressive symptoms (see Lev-Ran et al., 2014 and Wongkoblaph, Vadillo, & Curcin, 2017 for reviews). The literature on health disparities in depressive symptoms is continuously developing and changing as a function of society's transformations; this research should be interpreted accordingly.

Future Directions

This research advances psychology's applications of intersectionality through addressing key health disparities in depressive symptoms among unique identity-based subgroups. Future research should employ quantitative methods in this study in conjunction with qualitative research to gain a fuller perspective of discrimination and depressive symptoms among unique marginalized populations. Indeed, researchers have begun prioritizing mixed methodologies in health disparities research in order to best address problems facing the nation (Creswell, Klassen, Plano Clark, & Smith, 2011). Future research should apply mixed methods approaches to gather demographic and disparities data, while obtaining individuals' qualitative experiences with discrimination and depressive symptoms to further supplement this field (e.g., Hunting, 2014; Ikram et al., 2016; Tummala-Narra & Clausdis, 2013).

Mixed methods research may also aid psychology's growing understanding of intersectional *discrimination*, thus advancing policy and health prevention efforts nationwide. A host of research suggests that discrimination among those of multiple marginalized identities is best understood intersectionally; for example, discrimination faced by lesbians is best understood

on the basis of their lesbian identity than their gender and sexual orientation identities separately, as is the case in the current study. While the Equal Employment Opportunity Commission defines intersectional discrimination as “[occurring] when someone is discriminated against because of the combination of two or more protected bases (e.g., national origin and race)” few instruments currently exist to adequately measure this complex construct (Atrey, 2018; U.S. Equal Employment Opportunity Commission, n.d.; Morrison et al., 2016; Scheim & Bauer, 2019). Research based in social psychology and health disparities should continue to develop an understanding and operationalization of intersectional discrimination particularly among racial and sexual minority populations.

Results from this study point to a greater need for research on the resiliency to discrimination (and minority stress in general) among those with intersecting marginalized identities. Indeed, Meyer (2003) posits that understanding “the mechanisms through which stressors related to prejudice and discrimination affect mental health” is essential for this line of research. As minority stress is unique to marginalized populations, it is reasonable that the resilience to minority stress is also unique to these populations. A myriad of research exists regarding racial and sexual minority groups’ resilience to discrimination, including research that draws heavily from the Minority Stress Model (see Bowleg et al., 2003; Crocker & Major, 1989; Hatzenbuehler, 2009; King, 2005; Sue & Sue, 2008; Williams & Mohammed, 2009). However, previously mentioned protective factors such as social support and emotional regulation should be studied from an *intersectional* framework to further refine the field’s knowledge on social and health disparities.

Finally, future studies should employ intersectional approaches that extend beyond the identities in the current study. Racial and ethnic identities beyond White, Hispanic/Latinx, and

Black would be an excellent starting point for expanding the current research. Gender identity, ableness, socioeconomic status, immigration status, and educational attainment all undoubtedly influence depressive symptoms, among other health outcomes (see Abraído-Lanza et al., 2016; Turner & Noh, 1988; Vasquez et al., 2011; Witcomb, Bouman, Claes, Crawford, & Arcelus, 2018). Future research should examine the ways in which these identities intersect to influence experiences of discrimination and depressive symptoms. Combinations of intersecting identities are extensive, and there is no real way to integrate each person's unique experience into the broader research narrative on health disparities and discrimination (Bowleg, 2008; Warner & Shields, 2013). Still, researchers urge the importance of exploring intersectional experiences as a way to ethically and justly further the work in prevention, intervention, and treatment realms of the health disparities research (Rogers & Kelly, 2011; Sue & Sue, 2008). Strategic attempts to illuminate health disparities using an intersectional lens provide the potential for a society that achieves health equity, and thus, such endeavors should continue in the social sciences.

Conclusion

An intersectional approach to health disparities is ultimately an effort to promote social justice. The current research extends beyond traditional approaches to health disparities research—that is, studying disparities as a function of one or two identities—to examine intersectional marginalized identities and the integrally complex experiences that accompany these identities. The findings from this study confirm that current psychological and epidemiological efforts towards targeting and eliminating health disparities are far from complete. In an effort to fill such gaps, I was inspired to design a thesis that took a more nuanced method to understanding health disparities in depressive symptoms. Though many of my results were not in line with my expectations, and the extent to which these findings can be generalized

is unknown, this work might serve as a framework for carrying out future investigations.

Enacted, such efforts have the potential to create a healthier and more equitable society for all.

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