EXAMINING GROUP DIFFERENCES IN HEALTH AND DEPRESSION AMONG SEXUAL AND GENDER DIVERSE INDIVIDUALS: AN INTERSECTIONAL APPROACH

by

AUSTIN CODY FOLGER

A DISSERTATION

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Student: Austin Folger

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This dissertation has been accepted and approved in partial fulfillment of the requirements for the Doctor of Philosophy degree in the Department of Counseling Psychology and Human Services by:

Dr. Nichole Kelly	Chairperson and Advisor
Dr. Jess Cronce	Core Member
Dr. Elizabeth Budd	Core Member
Dr. John Seeley	Institutional Representative

and

Dr. Krista Chronister	Vice Provost of Graduate Studies

Original approval signatures are on file with the University of Oregon Division of Graduate Studies.

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DISSERTATION ABSTRACT

Austin Cody Folger

Doctor of Philosophy

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Sexual and gender diverse (SGD) individuals experience significant health disparities; yet, little is known about the unique risks of the individuals within this diverse community, particularly at the intersection of sexual, gender, racial, and ethnic identities. The present study aimed to examine differences in depression, suicidal ideation, and chronic health conditions (CHCs) at the intersection of SGD and ethnic and racial identities. Qualtrics Panels recruited 1329 U.S. adults from various SGD subgroups (389 cisgender heterosexual, 289 cisgender bisexual, 219 cisgender gay, 157 cisgender lesbian, and 275 cisgender gender diverse adults) and racial and ethnic subgroups (415 non-Hispanic White, 387 Hispanic or Latinx, 268 Black or African American, 252 Multiracial adults). Participants completed online surveys. After adjusting for income, education, and age, SGD adults had higher depressive symptoms and were more likely to experience suicidal ideation frequently and have CHCs compared to non-SGD adults (*ps* < .05). There were important variations within SGD and racial and ethnic subgroups suggesting that bisexual, gender diverse, and multiracial adults experience worse mental and/or physical health compared to cisgender, heterosexual respondents. The study findings and extant research underscore the need to examine how health disparity risk varies across SGD subgroups as certain groups may be at

greater risk and these risks may vary based on the outcome being examined. There also appears to be a complicated interaction between SGD status, race, and ethnicity. Future research elucidating risk for health disparities should take an intersectional approach to more effectively direct research and intervention.

CURRICULUM VITAE

NAME OF AUTHOR: Austin Cody Folger

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene
University of Florida, Gainesville

DEGREES AWARDED:

Doctor of Philosophy, Counseling Psychology, 2024, University of Oregon
Master of Science, Counseling, Family, and Human Services, 2021, University of Oregon
Bachelor of Science, Psychology, 2016, University of Florida

AREAS OF SPECIAL INTEREST:

Sexual and Gender Diverse Populations
Health Disparities
Discrimination and Minority Stress
Intersectionality

PERFESIONAL EXPERIENCE:

Graduate Instructor, Counseling, Family, and Human Services, University of Oregon, Eugene, OR 2020-2023

Interventionist, University of Oregon, Comprehensive Adaptive Multisite Prevention of

University Student Suicide

Extern, Silverman Psychological Services, 2022-2023

Extern, Strong Integrated Behavioral Health, 2021-2022

Extern, University of Oregon Counseling Center, 2019-2020

Practicum Intern, University of Oregon Child and Family Clinic, 2020-2021

Practicum Intern, University of Oregon Counseling Center, 2019-2020

GRANTS, AWARDS, AND HONORS:

University of Oregon, Internal Grant, *Examining Substance Use, Depressive Symptoms, and Suicidality among Racially and Ethnically Diverse Sexual and Gender Minorities: An Intersectional Approach to Understanding Health Disparities.*

PUBLICATIONS:

Luther, G., Folger, A. C., Kelly, N. R. (2021). Body dissatisfaction and ethnic identity are associated with loss of control eating among young adult African American men. *Eating Behaviors*. Advanced Online Publication

Ehlinger, P. P., Folger, A. C., & Cronce, J. (2021). A qualitative analysis of transgender and gender non-conforming students' experiences of gender-based discrimination and intersections with alcohol use. *Psychology of Addictive Behaviors, 36*(2), 197–208.

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CHAPTER I

INTRODUCTION

Prevalence of Health Disparities

Sexual and gender diverse (SGD) individuals is a term used to represent the communities of people who do not identify as heterosexual and/or cisgender.[1] As such, SGD refers to individuals with diverse sexual orientations, including gay, lesbian, and bisexual identities, as well as individuals with diverse gender identities, including transgender,[2] gender non-conforming, and non-binary.[3] Although members of the larger SGD community have a long and ongoing history of oppression and marginalization in the United States (Meyer, 2003), they were only recently recognized as a group at elevated risk for experiencing health disparities. In the Healthy People 2020 guidelines, SGD communities were identified as high-risk and high priority for documenting and intervening with health disparities (U.S. Department of Health and Human Services, 2012). As a result of these guidelines, funding for health research has increasingly been directed towards studies that investigate the disparities that these vulnerable communities experience.

With growing scientific attention, it has become evident that individuals with diverse sexual orientations experience worse physical health outcomes when compared to their heterosexual peers. Specifically, gay and bisexual men, across the lifespan, are at higher risk for cardiovascular disease, cancer, and human immunodeficiency virus (HIV) when compared to

[1]Cisgender" refers to individuals whose gender identity matches sex assigned at birth.

[2] Transgender" refers to individuals whose gender identity differs from their sex assigned at birth.

[3] Gender non-conforming" and "non-binary" refer to individuals who reject the binary view of gender (i.e., man/woman, masculinity/femininity).

their heterosexual peers (Boehmer et al., 2014; Centers for Disease Control and Prevention, 2017; Fredriksen-Goldsen et al., 2017). Similarly, lesbian and bisexual women are at higher risk for a number of chronic health conditions (CHCs), including breast cancer, asthma, arthritis, and cardiovascular diseases compared to heterosexual woman (Austin et al., 2012; Boehmer et al., 2014; Dibble et al., 2004; Fredriksen-Goldsen et al., 2017). Although investigations of health disparities among those with diverse gender identities is much less prevalent, a similar pattern is observed in extant data. Specifically, transgender individuals experience higher rates of CHCs (e.g., asthma) than their cisgender peers (Abramovich et al., 2020).

The differences in mental health outcomes between SGD adults and their cisgender and heterosexual counterparts are astounding. A systematic review examining 476 research studies demonstrated that gay, lesbian, and bisexual adults are 1.5 times more likely to be diagnosed with anxiety and depressive disorders (King et al., 2008). These authors also found that gay, lesbian, and bisexual individuals are approximately twice as likely to attempt suicide compared to their heterosexual peers. A more recent study identified elevated rates of suicidal ideation and more frequent suicide attempts among cisgender lesbian, gay, bisexual, pansexual, queer, and asexual individuals when compared to the general population (Lyons et al., 2022). Moreover, a national survey of transgender adults found that a shocking 51% of transgender adults indicated that they had attempted suicide within the last year (Herman, et al., 2019)

Variations in the Experience of Health Disparities Across Subgroups

While research has documented the profound physical and mental health disparities SGD individuals experience, limited research has investigated whether there are meaningful variations in these experiences within specific SGD subgroups. In many cases, extant research combines members of different SGD communities into a single group due to inadequate sample sizes and

associated concerns with the ability to detect statistically significant findings (Smalley et al., 2016). In a systematic review, 82% of studies related to the health of SGD individuals combined bisexual, gay, and lesbian individuals into a single group (Kaestle & Ivory, 2012). This is particularly concerning given that research is beginning to show that bisexual individuals may be at an increased risk for various outcomes when compared to their gay and lesbian counterparts. Indeed, in one of the first studies to recognize that there may be meaningful variations in health behaviors by sexual orientation, Smalley and colleagues (2016) found that bisexual adults are significantly more likely to engage in substance use relative to their gay, lesbian, transgender, gender non-conforming, and heterosexual peers. Similarly, a recent meta-analysis found that, among bisexual, lesbian, and gay individuals, bisexuals individuals reported the highest rates of suicidal ideation and attempts (Salway et al., 2019).

Theoretical Underpinnings of Health Disparities

Minority Stress Model

The minority stress model was originally developed to explain mental health disparities within the SGD community (Meyer, 2003) and since has been expanded upon to better explain minority stress among gender diverse individuals (Tan et al., 2020). This model specifies that SGD individuals experience unique and significant sources of stress specific to their minoritized status. Thus, it was proposed that chronic exposure to minority-related stress processes contribute to the disproportionate, deleterious physical and mental health outcomes these communities experience, primarily through acute and chronic neurobiological changes observed in response to discrimination (Berger & Samyai, 2015; Busse et al., 2017; Figueroa et al., 2021; Huebner et al., 2021; Marsland et al., 2017; Wardecker et al., 2021).

One particular minority stress experience has received significant empirical attention—identity-related interpersonal discrimination, which refers to the mistreatment of an individual because of one or more identities they hold. Nadal et al. (2010) identified eight forms of sexual and gender identity-related forms of discrimination or microaggressions that occur across a variety of settings, including (a) the use of derogatory heterosexist language, (b) enforcement of expectations that SGD individuals must conform to heterosexual norms (e.g., "acting straight"), (c) stereotyping, (d) exotification (e.g., SGD individuals are asked intrusive questions about their sex life or genitalia), (e) expressing overt disapproval towards SGD individuals, (f) denial of the presence of heterosexism, (g) assuming SGD individuals are "sexual deviants," and (h) experience of hate crimes or threatening behavior (e.g., being physically or verbally assaulted due to identity). Specific to gender diverse individuals, Puckett et al (2023) described forms of minority stress, such as misgendering through incorrect pronoun use, deadnaming (i.e., referring to someone by their name given at birth rather than their chosen name), invalidation of gender identity, and body policing (e.g., not being allowed in certain gendered spaces due to their sex assigned at birth).

Among SGD adults, greater exposure to these and similar experiences of discrimination are associated with higher depressive symptomology (Herek et al., 1999; Swim et al., 2009), lower physical and mental quality of life (Walch et al., 2016), and almost three times higher chance of having a CHC (Frost et al., 2015). One meta-analysis examining 105 studies including "gender and racial minorities"[4] also found that discrimination was associated with worse health

[4] The use of the term "minority" can be seen as a deficit-based approach to identifying a population that experiences marginalization. However, certain communities are beginning to move away from this term, and this approach, to view their identities as a strength. For example, transgender, gender non-conforming, and gender non-binary individuals often refer to themselves as "gender diverse" or "gender expansive." The authors recommend and utilize the use of this term to reflect the language used in these communities. In certain cases, in this paper, the term "minority" is used as it was reference specifically in cited research.

outcomes, particularly related to mental health (Carter et al., 2019). Importantly, another study found the differences in mental health outcomes between SGD and non-SGD adults disappeared when the analyses controlled for discrimination, suggesting that discrimination is one of the primary factors contributing to extant mental health disparities between these groups (Mason & Lewis, 2015).

Berger and Samyai (2015) posed a neurobiological model that explains how discrimination, specifically related to race, affects health. The authors discussed the impact that instances of discrimination have on the hypothalamic-pituitary-adrenal (HPA) axis, leading to changes in neural mechanisms that ultimately lead to an increased risk for certain physical and mental health conditions. Specifically, exposure to a discriminatory event may generate physiological/emotional arousal, which, in turn, activates the HPA axis, leading to the release of cortisol, a hormone commonly associated with stress that can negatively affect the body and brain (e.g., metabolic, immune, cognitive, mood, and behavioral changes; Berger & Sarnyai, 2015). Chronic over-activation of the HPA axis and release of cortisol eventually causes various biological systems to collapse and lead to the overproduction or underproduction of insulin, glucose, cholesterol, visceral fat, immune responses, and triglycerides, leading the individual to be more susceptible to stress-related diseases and cognitive impairment (Juster et al., 2010) A systematic review of 27 studies provide evidence that discrimination is associated with significant changes in HPA axis activity (Busse et al., 2017). This phenomenon may also be relevant to the health of SGD individuals as these communities also experience chronic discrimination (Meyer, 2003).

Recent research has begun to demonstrate that this model explaining the neurobiological mechanisms by which discrimination may affect health is, indeed, applicable to SGD

communities. For example, a correlational study found that more exposure to SGD-related stressors was associated with higher levels of cortisol among lesbian, gay, bisexual, and transgender participants (Figueroa et al., 2021). In an experimental study including a social stress task (Huebner et al., 2021), lesbian, gay and bisexual adults were exposed to a confederate who held either negative or positive beliefs regarding non-heteronormative relationships. The participants had their salivary cortisol measured at baseline and after exposure to the confederate. The study found that cortisol only significantly increased when exposed to the prejudiced confederate. In addition, they found that participants had higher blood pressure and heart rate during this condition. The study provided evidence that discrimination may negatively impact multiple health systems.

Discrimination's impact on biological markers other than cortisol has been investigated among SGD individuals. Specifically, C-reactive protein (CRP) and interleukin-6 (IL-6), which are both markers of systemic inflammation, have been linked to experiences with social stress (Marsland et al., 2017). The onset of various CHCs, including cardiovascular disease, diabetes, and cancer, have been linked to increased levels of both CRP and IL-6 (Hodge et al., 2005; Pradhan et al., 2001; Stoner et al., 2013). Wardecker et al. (2021) examined differences in CRP and IL-6 between sexual diverse (i.e., gay, lesbian, and bisexual) and heterosexual adults. They found that the sexual diverse adults had higher levels of CRP and IL-6 than their heterosexual counterparts and that these differences were mediated by experiences with discrimination.

Based on the minority stress model, those from certain SGD subgroups may experience increased health risks due to the additional and unique sources of identity-specific stress that they experience. For example, Smalley et al. (2016) made the argument that cisgender bisexual individuals are at higher risk for maladaptive coping strategies due to the multiple forms of

minority stress that they experience. The reality of a bisexual identity is frequently denied and more likely to be perceived as "sexually deviant" not only from heterosexual individuals but also from other SGD subgroups (Dodge et al., 2012, 2016; Herek, 2002; Israel & Mohr, 2004). Additionally, there has been a history of transphobia and discriminatory practices towards gender diverse populations from cisgender gay and lesbian individuals. Transgender individuals, for example, have been excluded from and publicly denounced by gay and lesbian organizations, spaces, and communities (Weiss, 2003). Thus, based on the minority stress model (Meyer, 2003), the elevated rates of minority stress cisgender bisexual and transgender adults face place them at a higher risk for poor physical and mental health outcomes compared to other SGD subgroups.

The minority stress model originally did not examine the influence of possessing multiple marginalized identities on the experience of health disparities. Although, the minority stress model may inherently suggest that those with multiple marginalized identities experience more minority stress and, thus, worse outcomes. For example, SGD individuals of color would be exposed to more minority stress, including both heterosexism and racism, than their White SGD peers (Beale, 1970) and, as a result, experience worse physical and mental health outcomes. This hypothesis is consistent with the *double jeopardy* phenomenon (Beale 1970).

Double Jeopardy Hypothesis

The double jeopardy hypothesis proposes that people with more than one marginalized identity experience higher levels of minority stress (e.g., discrimination) and that this compounding stigma is associated with worse health outcomes (Beale, 1970). Some research has supported this hypothesis. For instance, Grollman (2014) found that individuals with two or more marginalized identities experienced higher levels of depressive symptoms, worse physical

health, and more physical impairments than those holding one marginalized identity. Furthermore, Shangani et al. (2020) investigated if rates of exposure to stigma differed among SGD individuals with various racial and ethnic identities. The results revealed that sexual diverse individuals who were also African American/Black or Hispanic/Latinx experienced more stigma (i.e., heterosexism, racism) compared to sexual diverse individuals who were non-Hispanic White. Given these findings, and considering minority stress theory (Meyer, 2003; Tan et al., 2020), this increased exposure to minority stress for SGD individuals of color should result in poorer health outcomes compared to their heterosexual, cisgender, non-Hispanic/Latinx White counterparts.

Intersectionality Theory

The first academic publication articulating intersectionality theory was made by Kimberlé Crenshaw (1991), although intersectionality had been discussed by other Black/African American historical figures since the mid-19th century (Bowleg, 2012). The theory posits that multiple identities, such as sexual, gender, racial, and ethnic identity, interact with one another to influence an individual's psychological and interpersonal experiences (Bowleg, 2012; Crenshaw, 1991; Hancock, 2007) and must be considered collectively to understand how systems of oppression operate on an individual (Crenshaw, 1991).

Intersectional scholars have cautioned against an "additive" approach to considering the impact of multiply marginalized identities on the experience of health disparities, such as the double jeopardy hypothesis, noting that these identities should not be treated independently as they may uniquely interact with each other in a way that may ultimately be protective (Bauer et al., 2021; Bowleg, 2008; Browne & Misra, 2003; Hancock, 2007; Mahendran et al., 2022). Instead, marginalized identities should be considered jointly to understand health risk.

Importantly, some scholars have rejected the double jeopardy hypothesis (Greene, 1995; Moradi et al., 2010; Stepakoff & Bowleg, 1998), citing, instead, a more intersectional and resilience-oriented model to understanding minority stress and its impact on health.

Resilience Hypothesis

The resilience hypothesis posits that those who have multiple marginalized identities may demonstrate resilience in the face of discrimination because they are inoculated against minority stress due to their ability to cope better when they experience multiple forms of discrimination (Greene, 1995; Moradi et al., 2010; Stepakoff & Bowleg, 1998). Greene (1995) specifically suggests that belonging to one or multiple marginalized groups positively affects the "development of psychological resilience and vulnerability," (p. 243) because their early racial socialization contributed to the development of coping skills that strengthened their ability to effectively navigate later instances of both racism and heterosexism.

Some research provides evidence for this resilience hypothesis. Moradi et al. (2010), for example, examined the relationship between perceived stigma and internalized homophobia, which refers to the negative cognitive self-evaluations and self-hatred that SGD individuals develop towards themselves due to the bias and discrimination they experience (Meyer & Dean, 1998). The degree to which SGD individuals internalize the biases that underlie homophobia and transphobia is thought to be one of the primary mechanisms linking interpersonal discrimination with negative mental and physical health outcomes (Newcomb & Mutanski, 2010). Moradi et al. (2010) found a weaker relationship between perceived stigma and internalized homophobia among racially and ethnically diverse SGD individuals when compared to their non-Hispanic White peers. Another study found that racially and ethnically diverse SGD women did not report worse health outcomes than non-Hispanic White SGD women (Bowleg et al., 2003). Qualitative

data also suggest that racially and ethnically diverse individuals who are also part of the SGD community tend to actively minimize the effect that instances of discrimination have on them, use their religiosity for coping, and engage in efforts to practice self-acceptance and perseverance (Adams et al., 2005; Bowleg et al., 2003; Wilson & Miller, 2002). These coping strategies to mitigate the impact of racism could potentially generalize to help SGD people of color cope with instances of SGD-related discrimination.

The Current Study

Clearly, additional research is needed to understand the complexity of intersectionality and how it influences the health and well-being of SGD individuals with diverse racial and ethnic identities. It appears that, in certain cases, possessing multiple marginalized identities results in exacerbated health disparities. Simultaneously, there is research, although limited, suggesting that certain combinations of identities may result in resilience and protective coping strategies that mitigate the potential health disparities often linked with experiencing multiple forms of minority stress. Research is needed to identify in what cases, or for which combination of marginalized identities, there is increased risk for or protection against CHCs to help create tailored interventions that are more effective at targeting the specific health needs of certain high-risk communities.

To that end, the purpose of the current study is to take an intersectional approach to understanding the physical and mental health of SGD adults. In a well-powered sample of racially and ethnically diverse adults, this study will examine whether there are differences in the depressive symptoms and health of SGD individuals and non-SGD individuals, while also exploring if there are differences in these same variables across SGD and racial and ethnic subgroups. The specific hypotheses for this proposed study are as follows: (H1) SGD individuals

will report higher depressive symptoms, greater suicidal ideation, and more CHCs than non-SGD individuals; (H2) among SGD individuals, some SGD subgroups, particularly cisgender, bisexual and transgender individuals, will report higher depressive symptoms, greater suicidal ideations, and more CHC than other subgroups; and (H3) SGD individuals of color will endorse more depressive symptoms, greater suicidal ideation, and more CHCs than their White SGD peers; (H4) higher levels of discrimination will be associated with higher depression/suicide symptoms and more CHCs among SGD individuals; and (H5) the strength of this association between discrimination and the outcome variables will vary based on SGD subgroup and for SGD individuals of color. No *a priori* hypotheses were made regarding the direction of the proposed associations between discrimination and the outcome variables across SGD subgroups based on sexual and gender identity and based on race and ethnicity given the presence of conflicting hypotheses and supporting data regarding the health and well-being of those with more than one marginalized identity.

CHAPTER II

METHODS

Participants and Procedures

The goal of the current study was to use online surveys to investigate the mental and physical health and health behaviors of a large sample of adults with diverse SGD, racial and ethnic identities. Approval for the proposed study was obtained from the Institutional Review Board at the University of Oregon. Qualtrics Panels was utilized to recruit participants for the proposed study. Qualtrics Panels collaborates with over 20 online panel providers to provide researchers with large samples of individuals using various recruitment strategies (e.g., social media marketing). These individuals agreed to be on a contact list for ongoing survey completion for research studies. Qualtrics Panels is able to target people with specific identities for recruitment, as they maintain psycho-demographic profiles of all interested individuals in their databases. For the proposed study, potentially eligible participants were sent an email from Qualtrics Panels inviting them to complete a survey. This email also included details regarding compensation for survey completion. If individuals were interested in participating, they then were directed to a website describing the study's purpose, expected completion time, and risks/benefits of participating. Individuals were then instructed to respond affirmatively or negatively to a survey item to provide their consent to participate in the current study. Individuals who gave their consent were then directed to the study survey.

The first items on the current study's survey were used to capture eligibility. To be considered eligible for the current study individuals had to meet the following criteria: (1) $\geq$ 18 years of age; (2) endorse verbal and written fluency in English; (2) identify as cisgender heterosexual, cisgender gay, cisgender lesbian, cisgender bisexual, and/or gender diverse

(i.e., transgender, agender, gender non-binary, gender non-conforming); (4) identify as non-Hispanic White, Hispanic/Latinx, Black/African American, and/or Multiracial; and (5) currently live in the United States. Exclusion criteria related to race and ethnicity were intentionally selected in an effort to balance available resources (i.e., financial support) with statistical power and impact. Specifically, these racial and ethnic group represent the largest communities of color in the U.S. (US Census Bureau, 2020). With adequate sample sizes for well-powered analyses, findings regarding these communities offer the greatest potential impact. The limitations of this approach in terms of minimizing generalizability to other minoritized communities in the United States will be discussed. Survey respondents who met eligibility criteria were then directed to the full study survey, which was estimated to take participants approximately 30 minutes to complete. Once completed, Qualtrics Panels compensated respondents for their time with points that can be accrued and exchanged for various incentives that may be offered by Qualtrics Panels at any given time.

Qualtrics Panels utilizes a plethora of strategies to ensure quality data for the proposed study. First, they institute a validity item imbedded in the survey to assess participants' attention to the survey (i.e., "Do you commit to thoughtfully provide your best answers to each question in this survey?"). Respondents had to select "I will provide my best answers," or they were excluded from the study. An algorithm is also included to screen out participants that complete the survey in less than two minutes and anyone who responds in a pattern that appears to be random or robotic. Participants were also excluded from the study if they completed less than 80% of the survey (Dong & Peng, 2013). The following surveys were used to evaluate the current study's hypotheses.

Measures

Demographic and CHC Information

Information was gathered on the following: (a) race and ethnicity; (b) age; (c) sexual orientation; (d) gender identity; (e) current presence of various CHCs and associated risk factors, including type 2 diabetes, hypertension, heart disease, stroke, sleep apnea, acid reflux, hyperthyroidism, cancer, HIV, high cholesterol, and insomnia; (f) annual income; and (g) education level. Response options for most of these items are reported in Table 1, when describing the study sample.

Table 1.

Descriptive Data for the Full Study Sample (N =1329)

Sexual and Gender Identity	*n*	%
Cisgender Heterosexual	389	29.3%
Cisgender Bisexual	289	21.7%
Cisgender Gay	219	16.5%
Cisgender Lesbian	157	11.8%
Gender Diverse[1]	275	20.7%
Cisgender Man	491	36.9%
Cisgender Woman	563	42.4%
Race and Ethnicity		
Non-Hispanic White or European American	415	31.2%
Hispanic or Latino/a/x	387	29.1%
African American or Black	268	20.2%
Multiracial	252	19.0%

Table 1. Continued

Descriptive Data for the Full Study Sample (N =1329)

Racial and Ethnic SGD	*n*	%
Non-Hispanic White or European American SGD	290	21.8%
Hispanic or Latino/a/x SGD	277	20.8%
African American or Black SGD	206	15.5%
Multiracial SGD	164	12.3%
Highest Education Level Completed		
High school/GED or less	392	29.5%
Technical School or 2-year degree	279	21.0%
Currently enrolled in a or completed a 4-year college degree	432	32.5%
Currently enrolled in or completed a professional or graduate degree	226	17.0%
Annual Income		
Less than 19K	291	22.0%
20K-39K	304	23.0%
40K-59K	256	19.4%
60K – 79K	179	13.6%
80K – 99K	102	7.7%
100K or more	188	14.3%
Age (years)	*M* = 40.62	*SD* = 20.51
Depressive Symptoms	*M* = 18.44	*SD* = 15.02

Table 1. Continued

Descriptive Data for the Full Study Sample (N =1329)

Suicidal Ideation[2]	*n*	%
Frequent	423	31.9%
Infrequent	904	68.1%
Chronic Health Conditions[3]	*M* = 2.23	*SD* = 1.55
High BMI	300	22.6%
High Blood Pressure	300	22.6%
High Cholesterol	277	20.8%
Type 2 Diabetes	129	9.7%
Sleep Apnea	100	7.5%
Heart Disease	39	2.9%
Stroke	10	0.8%
Cancer	52	3.9%
GERD (Acid Reflux)	134	10.1%
Depression	448	33.7%
Anxiety	516	38.8%
Eating Disorder	103	7.8%
Insomnia	188	14.1%
Hypothyroidism	48	3.6%
Congestive Heart Disease	9	0.7%

Note. M = mean; *SD* = standard deviation; SGD = sexual and gender diverse; BMI= body mass index (High BMI was defined as being diagnosed by a provider as "overweight" and "obese"); GERD = gastroesophageal reflux disease. [1]"Gender diverse" refers to individuals who do not identify as cisgender, including transgender, gender non-conforming, and non-binary individuals. [2]Infrequent suicidal ideation = *never* or *rarely*; frequent suicidal ideation = *sometimes*, *often*, or *very often.* [3]Values provided for each condition indicate the number and percentage of participants that reported the presence of a particular condition.

Depressive Symptoms

Depressive symptomology was assessed using the 21-item Beck Depression Inventory-II (Beck et al., 1996). A total sum score was calculated, with higher scores indicating greater depressive symptom severity. The psychometrics of the measure have been validated across many studies and diverse samples, including racially and ethnically diverse adults (Joe et al., 2008; Wang & Gorenstein, 2013). For the current study, Cronbach's alpha values for the items that comprise the total score for this measure across the subgroups of interest in this study ranged from .94 to .97, indicating good estimated internal consistency.

Suicidal Ideation

Suicidal ideation was assessed with one item from the Suicidal Behaviors Questionnaire-Revised (Osman et al., 2001). Although the measure comprises four items, only the item that assessed suicidal ideation ("How often have you thought about killing yourself in the past year?") was included in this study. Participants were asked to respond to this item on a 5-point Likert-type scale from 1 (*never*) to 5 (*very often, 5 or more times*). The creators of the scale note that using only one item of the scale is common and appropriate (Osman et al., 2001). Based on past research (Osman et al., 2001), suicidal ideation was repurposed into a categorical variable, for which participants were coded as having either "infrequent" suicidal ideation (i.e., *never or rarely*) or "frequent" suicidal ideation present *(i.e, sometimes, often, or very often).* This decision was supported by response options in the current study's sample; 68.1% of the sample endorsed suicidal ideation as occurring *never* or *rarely* and 31.8% endorsed it as occurring *sometimes, often,* or *very often*.

Discrimination

The 9-item Everyday Discrimination Scale (EDS; Kershaw et al., 2016) was used to assess experiences with discrimination. Respondents were asked to indicate how often they experience certain instances of discrimination (e.g., "You receive poorer service than other people at restaurants or stores) on a Likert-type scale ranging from 1 (*almost every day*) to 6 (*never*). An average score was calculated, and higher scores indicate more instances of everyday discrimination. Previous research has documented high internal consistency for the items that comprise the EDS's total score (α=.88; Kershaw et al., 2016) and validity of the measured has been confirmed among a national sample of adults (Berenbon, 2020). Rather than using a measure that captures discrimination related to specific identities (e.g., SGD-related victimization), this general measure of discrimination was chosen to facilitate within and across group comparisons. Estimated internal consistency of the EDS survey items were high among the subgroups examined in this study (α = .91 -.96).

Data Analytic Plan

Power analyses were conducted for all hypotheses using a power convention of 0.80 and an alpha level of 0.05 (Stefano, 2003). Effect sizes (i.e., Cohen's *f*) for all dependent variables of interest ranged from .05 to .35 in prior studies (Feinstein et al., 2012; Fredriksen-Goldsen et al., 2017; Frost et al., 2015; House et al., 2011; King et al., 2008). Results of the power analyses indicate that a sample size of 1,286 would be adequate to detect the anticipated effect sizes for all study hypotheses, including main and interaction effects.

For the current study, the hypotheses include three different types of dependent variables: depressive symptoms (continuous variable); suicidal ideation (binary categorical variable); and CHCs (count variable). Given the nature of these dependent variables, several statistical approaches were used to test for the potential presence of group differences. Analyses of

covariance (ANCOVA) and linear regression models were used for depressive symptoms, Binary Logistic regression models were used for suicidal ideation, and Poisson regression models were used for CHCs. For the CHC count variable, a negative binomial model was also considered. After evaluating the Akaike's Information Criterion values of both models, it was evident that the negative binomial model did not provide a better model fit than Poisson. Additionally, there was not overdispersion in the dependent variable; thus, Poisson regression was employed (Payne et al., 2018).

Across the models, the independent variable differed based on the study hypothesis. For the first hypothesis, differences in depressive symptoms, suicidal ideation and CHCs (dependent variables) between non-SGD and SGD (independent variable) were evaluated. In the second hypothesis, analyses were used to assess differences in the dependent variables across six groups, including non-SGD and SGD subgroups (i.e., cisgender heterosexual, cisgender bisexual, cisgender gay, cisgender lesbian, and gender diverse respondents). For these analyses, SGD subgroups were coded to differentiate between sexual identity and gender identity. Specifically, while gender diverse respondents could also identify with a diverse sexual orientation (e.g., identify as both gender non-conforming and bisexual), these individuals were coded into only the gender diverse group. The third hypothesis examined differences in outcomes among SGD communities of color, using the following groups as independent variables: non-Hispanic White SGD, Black SGD, Hispanic SGD, and Multiracial SGD. Then for the second and third hypothesis, post-hoc comparisons were completed to identify whether there were statistically significant differences in each of the dependent variables across identified subgroups. The fourth hypothesis examined the link between discrimination (independent variable) and the dependent variables within the full SGD sample. Lastly, for the fifth hypothesis, the link between

discrimination and each of the dependent variables was examined within each individual subgroup of SGD individuals and among racial and ethnic SGD subgroups. Effect sizes were used to evaluate whether the strength of these associations appeared to meaningfully differ across subgroups.

Income (Arno et al., 2011), education (Muennig et al., 2009), and age (Bränström et al., 2016) have all been linked to mental and physical health disparities; thus, they were included as covariates in all models. Given the number of statistical models conducted, and to reduce the probability that significant findings were due to chance, Benjamini-Hochberg p-corrections were applied and reported within each family of statistical analyses. The following effect sizes were reported: (1) partial eta squared for ANCOVA models (small = .01, medium = 0.06, large = .14; Cohen, 1992); (2) Cohen's *d* for pairwise comparisons (small = .2, medium = .5, and large = .8; Cohen, 1992); (3) standardized mean differences (SMDs) for Poisson models (small = .2, medium = .5, large = .8; Cohen, 1992); and (4) Cohen's f^2 for regression models (small = .02; medium = .15, large = .35; Cohen, 1998). IBM SPSS Statistics V. 25 (IBM Corp, 2017) was used for all analyses.

CHAPTER III

RESULTS

Preliminary Analyses and Participants

The final sample consisted of 1,329 adults (M_{age} = 40.62±20.51 years). Regarding SGD identity details, the present study consisted of 389 cisgender, heterosexual (29.3%), 289 cisgender, bisexual (21.7%), 219 cisgender, gay (16.5%), 157 cisgender, lesbian (11.8%), and 275 (20.7%) gender diverse adults (i.e., transgender, agender, gender non-binary, gender non-conforming; 23.6% heterosexual, 47.3% bisexual, 15.6% gay, and 13.5% lesbian). In addition to gender diverse respondents, 491 (36.9%) were cisgender men and 563 (42.4%) were cisgender women. Across the full sample, 415 were non-Hispanic White or European American (31.2%), 387 were Hispanic or Latinx (29.1%), 268 were African American or Black (20.2%), and 252 were Multiracial (19.0%). At the intersection of race, ethnicity, sexual identity, and gender identity, 333 (25.1%) were non-Hispanic White or European American SGD, 321 (24.2%) were Hispanic or Latinx SGD, 237 (17.8%) were African American or Black SGD, and 164 (12.3%) were Multiracial. See Table 1 for additional descriptive information and Table 2 for correlations among all variables of interest within the full sample. Given that all variables were missing less than 5% of responses, listwise deletion was employed, an approach considered appropriate for small amounts of missing data (Buhi, 2008).

Table 2.

Correlations among Covariates, Depressive Symptoms, Suicidal Ideation, and Chronic Health Conditions in the Full Study Sample (N=1329)

		1	2	3	4	5
1	Age					
2	Income	.27**				
3	Education	.13**	.29**			
4	Depressive Symptoms	-.50**	-.15**	-.07*		
5	Suicidal Ideation	.11	-.04	-.02	.61**	
6	Chronic Health Conditions	<.001	-.06*	.04	.28**	.19**

Note: Spearman's correlations were reported for count and categorical variables; Pearson's r correlations were reported for continuous variables *p< 0.05; **p< 0.01.

H1: Differences in Depressive Symptoms and Health between Non-SGD and SGD Adults

After controlling for age, income, and education, there was a significant difference between non-SGD participants and SGD participants for depressive symptoms [F(1, 1296) = 39.39, p < 0.001, η^2 = .03]. Specifically, non-SGD participants had lower depressive symptoms participants (*EMM* = 14.86, *SE* = .66) than SGD individuals (Estimated Marginal Mean *[EMM]* = 19.99, *SE* = .43). Additionally, non-SGD individuals were significantly less likely to report frequent suicidal ideation compared to SGD participants (p < .001, OR = .52, 95% CI = .39 - .73). Among non-SGD respondents, 68 individuals (17.5%) reported frequent suicidal ideation. Among SGD respondents, 355 (37.8%) reported frequent suicidal ideation. Non-SGD participants also had significantly fewer current CHCs than SGD participants (p < .001, IRR = .795, SMD = .32).

H2: Differences in Depressive Symptoms and Health across SGD Subgroups

After adjusting for age, income, and education, there was a significant difference in depressive symptoms across cisgender heterosexual, cisgender gay, cisgender bisexual, cisgender lesbian, and gender diverse respondents [$F(4, 1293) = 12.01$, $p < 0.001$, partial $\eta^2 = .04$]. Compared to cisgender heterosexual respondents (*EMM* = 14.68, *SE* = .68), cisgender, bisexual (*EMM* = 21.13, *SE* = .79, *d* = .49), cisgender lesbian (*EMM* = 19.36, *SE* = .1.05, *d* = .36), and gender diverse respondents (*EMM* = 21.01, *SE* = .80, *d* = .48) had significantly higher depressive symptoms (*ps* < .01). Cisgender gay men did not significantly differ from cisgender heterosexual respondents (*EMM* = 17.93, *SE* = .91, *p* = .08, *d* = .24). See Figure 1 and Table 3 for full results.

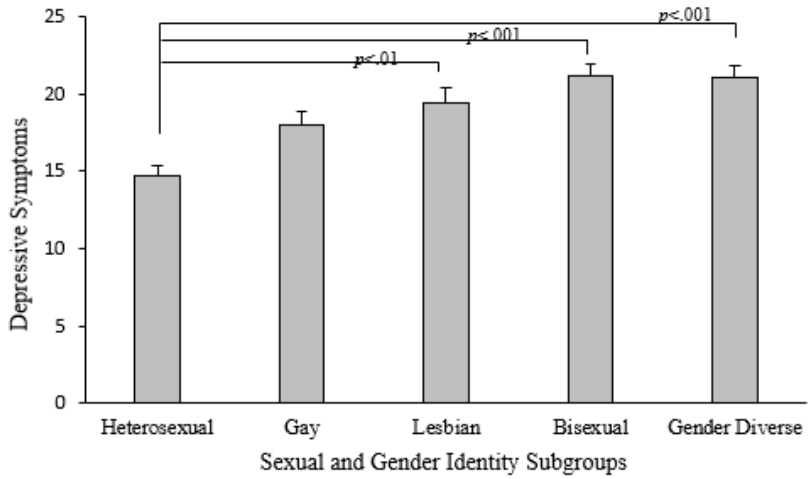

Figure 1. Differences in depressive symptoms across sexual and gender diverse subgroups using estimated marginal means (*EMM*), $F(4, 1293) = 12.01$, $p < 0.001$, $\eta^2 = .04$. After adjusting for age, income and education, compared to cisgender heterosexual respondents (*EMM* = 14.68, *SE* = .68), cisgender, bisexual (*EMM* = 21.13, *SE* = .79, *d* = .49), cisgender lesbian (*EMM* = 19.36, *SE* = .1.05, *d* = .36), and gender diverse respondents (*EMM* = 21.01, *SE* = .80, *d* = .48) had significantly higher depressive symptoms (*ps* < .01). Cisgender gay men did not significantly differ from cisgender heterosexual respondents (*EMM* = 17.93, *SE* = .91, *p* = .08, *d* = .24).

Table 3.

Adjusted Pairwise Comparisons of Depressive Symptoms Across Specific Sexual and Gender Diverse Subgroups

Reference Group	Comparison Group	Mean Difference	Standard Error	*p* value	*d*[1]
Heterosexual	Bisexual	-6.45	1.07	<.001	.49
	Gay	-3.25	1.10	.08	.24
	Lesbian	-4.68	1.26	<.01	.36
	Gender Diverse	-6.33	1.08	<.001	.48
Bisexual	Heterosexual	6.45	1.07	<.001	.49
	Gay	3.20	1.24	.18	.24
	Lesbian	1.77	1.30	1.00	.14
	Gender Diverse	.13	1.09	1.00	.01
Gay	Heterosexual	3.25	1.10	.08	.24
	Bisexual	-3.20	1.24	.18	.24
	Lesbian	-1.43	1.40	1.00	.11
	Gender Diverse	-3.08	1.25	.22	.23
Lesbian	Heterosexual	4.68	1.26	<.01	.36
	Bisexual	-1.77	1.30	1.00	.14
	Gay	1.43	1.40	1.00	.11
	Gender Diverse	-1.64	1.31	1.00	.12

Note: [1]Cohen's *d,* small = .2, medium = .5, large = .8.

Compared to cisgender heterosexual respondents, cisgender gay (p = .02, OR = 1.80, 95% CI 1.16 – 2.81), cisgender bisexual (p < .01, OR = 1.91, 95% CI 1.31-2.80), and gender diverse (p < .001, OR = 2.34, 95% CI 1.60-3.43) respondents were more likely to endorse frequent suicidal ideation. Cisgender lesbian respondents and heterosexual respondents did not significantly vary from one another in their report of suicidal ideation (p = .33, OR = 1.28, 95% CI .80-2.03). There was only one significant difference within SGD subgroups; gender diverse individuals were significantly more likely to endorse frequent suicidal ideation compared to cisgender lesbian respondents (p = .02, OR = 1.83, 95% CI 1.18-2.85). The frequency of suicidal ideation endorsement across all these subgroups are reported here: 68 (17.5%) heterosexual individuals, 124 (42.9%) cisgender bisexual individuals, 52 (23.7%) cisgender gay men, 47

(29.3%) cisgender lesbian women, and 133 (48.4%) gender diverse individuals reported frequent suicidal ideation.

After controlling for age, income, and education, gender diverse ($p < .001$; IRR = 1.26, SMD = .33), cisgender bisexual (p <.01, IRR = 1.41, SMD = .52), cisgender gay ($p = .01$, IRR = 1.18, SMD = .22), and cisgender lesbian ($p < .001$, IRR = 1.35, SMD = .45) respondents endorsed significantly more CHCs compared to heterosexual individuals. Cisgender bisexual individuals were more likely to report more current CHCs than cisgender gay individuals ($p = .01$, IRR = 1.20, SMD = .27). There were no other statistically significant variations in CHCs across cisgender gay, cisgender bisexual, cisgender lesbian, and gender diverse adults.

H3: Differences in Depressive Symptoms and Health across SGD Subgroups by Race and Ethnicity

After adjusting for age, income, and education, there were statistically significant differences in depressive symptoms among SGD respondents based on race and ethnicity [$F(3, 913) = 5.64$, $p = .001$, partial $\eta^2 = .02$]. Follow-up -pairwise comparisons revealed that, overall, Black/African American SGD (*EMM* = 18.10, *SE* = .98), Hispanic/Latinx SGD (*EMM* = 22.25, *SE* = .86), and Multiracial SGD adults (*EMM* = 23.54, *SE* = 1.09) did not significantly differ from their non-Hispanic White SGD peers (*EMM* = 15.39, *SD* = 14.71) in their self-reported depressive symptoms (*p*s = .29 - .99; Refer to Table 4 and Figure 2 for details). However, amongst SGD subgroups of color, Black/African American SGD reported significantly less depressive symptoms than both Hispanic/Latinx SGD ($p = .02$, $d = .30$) and Multiracial SGD ($p < .01$, $d = .39$). Hispanic/Latinx SGD and Multiracial SGD did not significantly differ from one another in their depressive symptoms ($p = .92$, $d = .09$).

Table 4.

Pairwise Comparisons of Depressive Symptoms Across Specific Racial or Ethnic Subgroups among Sexual and Gender Diverse Respondents

Reference Group	Comparison Group	Mean Difference	Standard Error	Significance	*d*[1]
White SGD	Hispanic SGD	-.92	1.37	.99	.06
	Black SGD	3.23	1.43	.28	.21
	Multiracial SGD	-2.21	1.52	.92	.15
Hispanic SGD	Black SGD	4.15	1.26	.02	.30
	Multiracial SGD	-1.29	1.34	.99	.09
	White SGD	.92	1.37	.99	.06
Black SGD	Hispanic SGD	-4.15	1.34	.02	.30
	Multiracial SGD	-5.44	1.43	<.01	.39
	White SGD	-3.23	1.43	.28	.21

Note: SGD = Sexual and Gender Diverse; [1]Cohen's *d*, small = .2, medium = .5, large = .8.

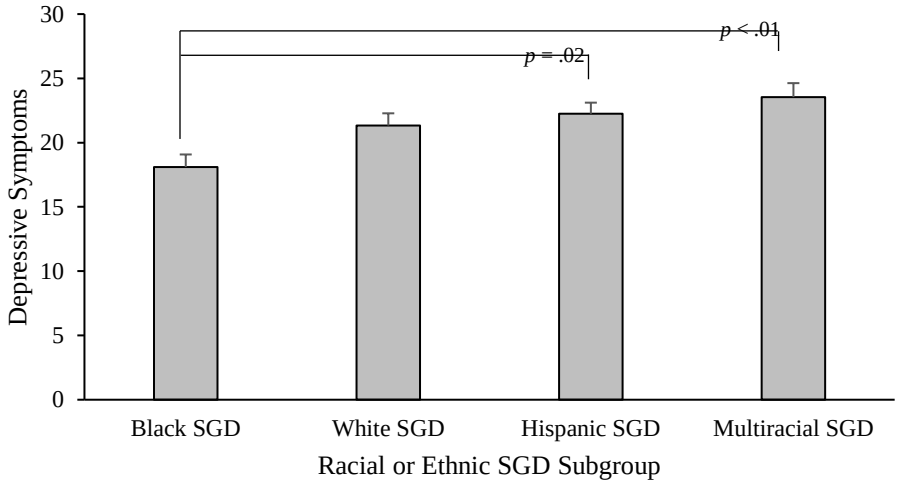

Figure 2. Differences in depressive symptoms across racial and ethnic SGD subgroups using estimated marginal means (EMM). After adjusting for age, income, and education, there were statistically significant differences in depressive symptoms among SGD respondents based on race and ethnicity, F(3, 913) = 5.64, p = .001, η^2 = .02. Specifically, Black/African American SGD (*EMM* = 18.10, *SE* = .98), Hispanic/Latinx SGD (*EMM* = 22.25, *SE* = .86), and Multiracial SGD adults (*EMM* = 23.54, *SE* = 1.09) did not significantly differ from their non-Hispanic White SGD peers (*EMM* = 15.39, *SD* = 14.71) in their self-reported depressive symptoms (*ps* = .29 - .99). However, amongst SGD subgroups of color, Black/African American SGD reported significantly less depressive symptoms than both Hispanic/Latinx SGD (p = .02, d = .30) and Multiracial SGD (p < .01, d = .39). Hispanic/Latinx SGD and Multiracial SGD did not significantly differ from one another in depressive symptoms (p = .92, d = .09).

After adjusting for age, income, and education, there were no significant differences in suicidal ideation frequency among SGD racial and ethnic subgroups (*ps* = .24 - .82). A total of 79 (27.2%) non-Hispanic White SGD, 112 (40.4%) Hispanic/Latinx SGD, 87 (42.2%) Black/African American SGD, and 77 (47.0%) Multiracial SGD endorsed frequent suicidal ideation.

After adjusting for age, income, and education, Multiracial SGD adults endorsed more current CHCs than both non-Hispanic White SGD (p = .04, IRR = 1.17, SMD = .26) and Hispanic/Latinx SGD (p <.001, IRR = 1.26, SMD = .38). Additionally, Black/African American SGD adults reported fewer CHCs than non-Hispanic White SGD (p = .01, IRR = .81, SMD = .29), Hispanic/Latinx SGD (p = .04, IRR = .87, SMD = .19), and Multiracial SGD (p < . 001, IRR = .69, SMD = .61). Hispanic/Latinx SGD did not significantly differ from non-Hispanic White SGD in their report of CHCs (p = .26, IRR = .93, SMD = .11).

H4: Discrimination and Health Within the Full SGD Sample

Within the full sample of SGD adults, discrimination was significantly and positively associated with depressive symptoms after controlling for age, income, and education (p < .001, f^2 = .17). Discrimination was also positively associated with frequency of suicidal ideation (p < .001, OR = 1.07) and CHCs (p < .001, SMD = .01).

H5: Discrimination and Health Across SGD Subgroups

After adjusting for age, income, and education, there was a significant and positive association between discrimination and depressive symptoms within all SGD subgroups (Refer to Figure 3), including bisexual (p<.001, f^2 = .29), gay (p < .001, f^2 = .12), lesbian (p < .001, f^2 = .19), and gender diverse participants (p < .001, f^2 = .17). Effects sizes for the adjusted association

between discrimination and depressive symptoms were medium for most SGD subgroups, except for bisexual respondents, who demonstrated a medium-to-large effect.

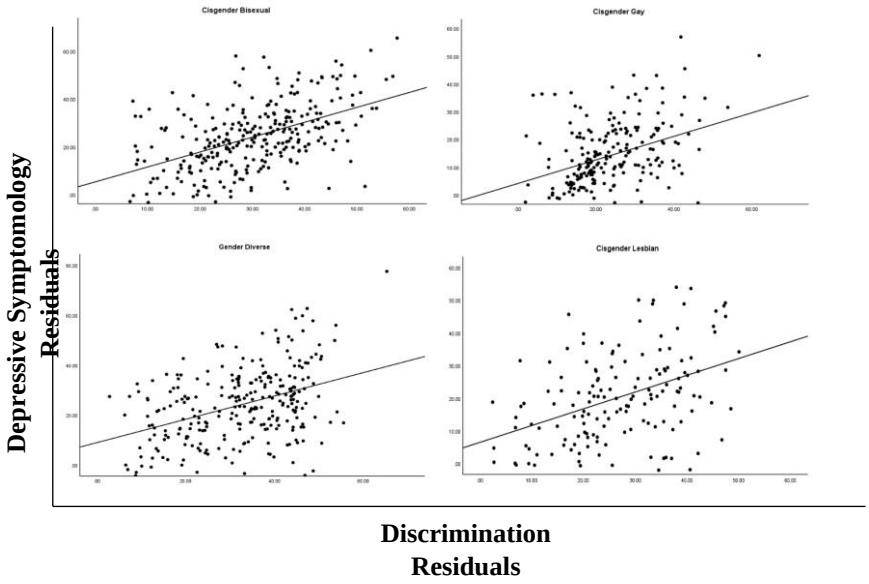

Figure 3. Associations among discrimination and depressive symptoms using unstandardized residuals. After adjusting for age, income, and education, there was a significant and positive association between discrimination and depressive symptoms within all SGD subgroups including cisgender bisexual (p<.001, f^2 = .29), cisgender gay (p < .001, f^2 = .12), cisgender lesbian (p < .001, f^2 = .19), and gender diverse participants (p < .001, f^2 = .17).

For frequency of suicidal ideation, discrimination was positively associated with a greater likelihood of endorsing frequent suicidal ideation among bisexual (p < .01, OR = 1.07), gay (p < .001, OR = 1.06), lesbian (p < .001, OR = 1.11), and gender diverse (p < .001, OR – 1.07) participants after adjusting for age, income, and education.

After adjusting for age, income, and education, discrimination was positively associated with more CHC's among bisexual (p < .001, SMD = .02), lesbian (p = .01, SMD = .01), and gender diverse (p < .001, SMD = .02) participants. Effect sizes across these three groups were small. There was not a statistically significant association between discrimination and CHCs among gay adults (p = .20).

H5: Discrimination and Health Across Racial and Ethnic SGD Subgroups

After adjusting for age, income, and education, discrimination was significantly and positively associated with depressive symptoms among non-Hispanic White SGD ($p < .001$, $f^2 = .18$), Hispanic/Latinx SGD ($p < .001$, $f^2 = .34$), Black/African American SGD ($p < .001$, f2 = .11), and Multiracial SGD ($p < .001$, $f^2 = .15$) participants (Refer to Figure 4). Generally, effect sizes were medium across subgroups, except for Hispanic/Latinx SGD adults, who exhibited a large effect size.

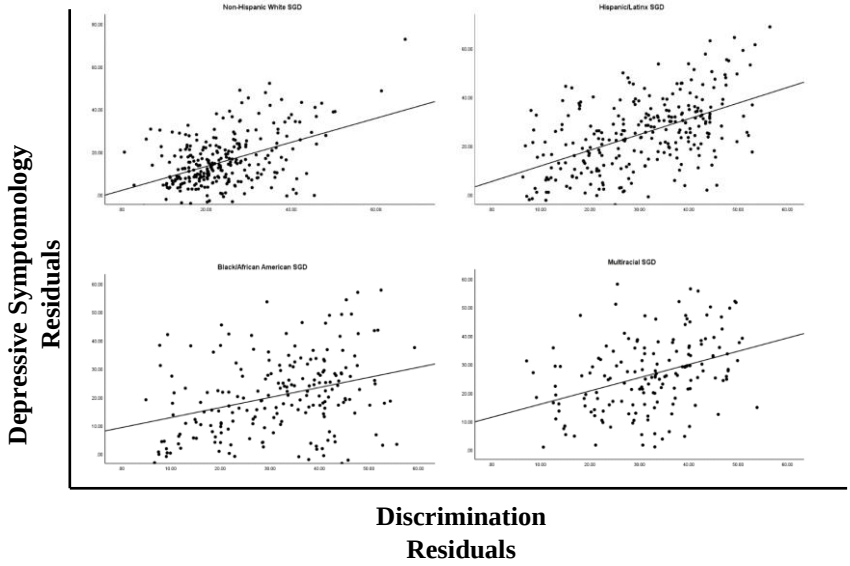

Figure 4. SGD = Sexual and Gender Diverse. Associations among discrimination and depressive symptoms using unstandardized residuals. After adjusting for age, income, and education, discrimination was significantly and positively associated with depressive symptoms among non-Hispanic White SGD ($p < .001$, $f^2 = .18$), Hispanic/Latinx SGD ($p < .001$, $f^2 = .34$), Black/African American SGD ($p < .001$, $f^2 = .11$), and Multiracial SGD ($p < .001$, $f^2 = .15$) participants.

After adjusting for age, income, and education, more experiences with discrimination were associated with a greater likelihood of endorsing frequent suicidal ideation among non-Hispanic White SGD ($p < .001$, OR = .1.09), Hispanic/Latinx SGD ($p < .001$, OR = 1.08),

Black/African American SGD ($p < .001$, OR = 1.06), and Multiracial SGD ($p < .001$, OR = 1.07) participants.

Lastly, greater discrimination was associated with more CHCs among Hispanic/Latinx SGD ($p < .001$, SMD = .02), Black/African American SGD ($p < .01$, SMD = .01), and Multiracial SGD ($p < .001$, SMD = .02) participants, after adjusting for age, income, and education. Effect sizes were small across subgroups. Among non-Hispanic White SGD, discrimination was not associated with CHCs ($p = .99$).

CHAPTER IV

DISCUSSION

While research has documented the health disparities that SGD individuals experience(Fredriksen-Goldsen et al., 2017; King et al., 2008; Lyons et al., 2022), extant research has a long history of collapsing members of these communities into a single group (Kaestle & Ivory, 2012), masking important risk and protective factors at the intersection of specific sexual, gender, racial, and ethnic identities. The purpose of the current study was to expand the health disparities literature by: (a) examining the health and well-being of specific SGD samples; (b) exploring whether these associations further vary by race and ethnicity; and (c) evaluating within group links with discrimination. In the following sections, a summary of the results by general SGD status, across SGD subgroups, and across SGD communities of color will be provided. Then, a discussion of potential mechanisms and moderators driving variations in health and well-being will follow.

Summary of Results

SGD Versus Non-SGD

Overall, SGD adults in the current study reported higher depressive symptoms and were more likely to endorse frequent suicidal ideation and more CHCs compared to non-SGD adults. Additionally, discrimination was positively associated with depressive symptoms, frequency of suicidal ideation, and number of CHCs among SGD adults.

Discrimination and Health Across SGD Subgroups

Importantly, data from the current study indicate that there are meaningful variations in physical and mental well-being within the diverse SGD community. Specifically, cisgender bisexual adults reported more CHCs than cisgender gay men, and a greater percentage of gender

diverse adults reported frequent suicidal ideation than cisgender lesbian women. Meanwhile, cisgender gay men and cisgender lesbian women did not significantly differ from their heterosexual counterparts in several ways. Cisgender gay men, for example, did not significantly differ from cisgender heterosexual adults in their average depressive symptoms, and cisgender lesbian women did not differ in their likelihood of endorsing frequent suicidal ideation compared to cisgender heterosexual adults. Interestingly, a greater proportion of gay men reported frequent suicidal ideation compared to heterosexual adults, despite not differing in their self-reported depressive symptoms.

When examining associations with discrimination within SGD subgroups, generally, discrimination was positively associated with depressive symptoms, frequency of suicidal ideation, and number of CHCs. Surprisingly, there was not a statistically significant association between discrimination and CHCs among gay men. There were also some meaningful variations in the strength of these associations across SGD subgroups. Specifically, there appeared to be a stronger association between discrimination and depressive symptoms for cisgender bisexual adults relative to all other SGD subgroups.

Discrimination and Health Across Racial and Ethnic SGD Subgroups

Regarding differences in depressive symptoms and health across racial and ethnic SGD subgroups, severity also appeared to vary widely based on the specific health variable being examined. Depressive symptoms and frequency of suicidal ideation did not meaningfully differ between non-Hispanic White SGD adults and SGD adults of color. However, Multiracial SGD adults did report more current CHCs than non-Hispanic White and Hispanic/Latinx SGD adults.

Interestingly, the results suggest that Black/African American SGD adults may be at lower risk for disparities compared to non-Hispanic White, Hispanic/Latinx, and Multiracial

SGD adults. Specifically, Black/African American SGD adults reported lower depressive symptoms than Hispanic/Latinx and Multiracial SGD adults, as well as fewer CHCs than all other racial and ethnic SGD subgroups.

When examining the associations among discrimination and health across racial and ethnic SGD groups, the majority of the time, discrimination was positively associated with depressive symptoms, suicidal ideation frequency, and CHCs. One interesting finding is that the association between discrimination and depressive symptoms appeared to be stronger for Hispanic/Latinx SGD individuals.

Consideration of Shared and Unique Mechanisms, Protective Factors, and Risk Factors

Generally, the current study's pattern of findings is consistent with past research that has combined SGD subgroups into a single group, which highlights the health disparities these communities face (Austin et al., 2012; Boehmer et al., 2014; CDC, 2017; Dibble et al., 2004; Fredrikson-Goldsen et al., 2017; King et al., 2008; Lyons et al., 2002). The minority stress model provides the best explanation and evidence to date for the origin of these health disparities, which posits that experiences with discrimination result in deleterious physical and mental health outcomes among SGD individuals (Meyer, 2003; Tan et al., 2020).

At the same time, it is clear that once health disparity research starts to consider intersecting identities, clearly identifying risks become much more complicated. While theories such as the double jeopardy (Beale, 1970; Grollman, 2014) and resilience hypotheses (Bowleg et al., 2003; Greene, 1995; Moradi et al., 2010; Stepakoff & Bowleg, 1998) have tried to understand how risk may vary based on intersecting identities, the current findings are largely not consistent with either one of these hypotheses. This may be due to group-specific mechanisms, such as protective and risk factors, that vary based on the outcome being examined

and are uniquely driving health disparities among those with diverse sexual, gender, racial, and ethnic identities.

For example, for the non-significant finding between discrimination and CHC's among cisgender gay men, generally, research has shown that cisgender gay men are less likely to have a high BMI (Azagba et al., 2019). This may be linked to the importance that gay culture places on thinness and muscularity (Brewster et al., 2017; Maramara et al., 2018). Desires to be thinner and more muscular are related to engagement in exercise (Maselli et al., 2019), which may serve as an effective strategy for coping with discrimination stress and offers clear benefits toward reducing CHC risk (Anderson & Durstein, 2019; Durstein et al., 2012). At the same time, there are elevated rates of body image concerns, steroid and diet pill use, self-induced vomiting for weight loss, dieting, and fasting among gay men and boys (Calzo, et al., 2017; Nagata et al.,2021). So, these same cultural values may be exacerbating gay men's risk for disordered eating pathology (Brewster et al., 2017; Maramara et al., 2018).

Differences in health and well-being across SGD subgroups may also be an artifact of variations in public attitudes towards certain subgroups. While gay and lesbian adults in the past have experienced higher rates of depressive symptoms and suicidal ideation compared to their cisgender heterosexual peers (King et al., 2008), the increase in societal acceptance of same-sex relationships over time (Twenge et al., 2016) may be leading to decreases in discrimination for these individuals. In turn, the occurrence or severity of depression may be decreasing for cisgender gay and lesbian adults. Interestingly, although, cisgender gay men appear to experience lower average depressive symptoms, they simultaneously report more frequent suicidal ideation than cisgender heterosexual individuals. Thus, the severity of symptoms experienced, when they are present, may be more severe, leading to greater endorsement of

suicidal ideation. Additionally, for the current study, when capturing suicidal ideation and depressive symptoms, different time periods were used as a reference when participants were asked to report on their experience. Specifically, participants reported their depressive symptoms in the last 2 weeks, meanwhile they were asked to report their suicidal ideation over an entire year. This reporting difference may be influencing discrepancies, although further research is needed to confirm this hypothesis.

Even though societal acceptance of same-sex relationships has been improving, society continues to have more negative attitudes towards bisexual and gender diverse adults (Harrison & Michaelson, 2017; Lewis et al., 2017; Smith et al., 2014). These biases, which underlie systematic and interpersonal discrimination, may explain some of the study's findings, which demonstrated that cisgender bisexual and gender diverse individuals had worse outcomes than other SGD subgroups. Specifically, cisgender bisexual individuals endorsed more CHCs than cisgender gay men and there was a stronger association between discrimination and depressive symptoms for cisgender bisexual adults relative to all other SGD subgroups. Gender diverse individuals also reported more frequent suicidal ideation compared to other SGD subgroups, specifically cisgender lesbian woman. Although, cisgender bisexual and gender diverse adults did not differ from SGD subgroups for most outcomes in the study. Thus, risk may vary based on both the specific identity and outcome being examined.

For example, Multiracial SGD individuals reported more CHCs than other racial SGD subgroups. While this finding may be consistent with the double jeopardy hypothesis, this perspective may not best describe the experience of these individuals. Specifically, Multiracial SGD individuals may not be experiencing compounded stigma due to possessing multiple marginalized racial and ethnic identities, rather they may be experiencing unique stigma due to

not identifying, or appearing to identify, with a singular racial and ethnic culture. Thus, the double rejection hypothesis may more clearly explain what appears to be heightened chronic disease risk among Multiracial SGD adults (Shih & Sanchez, 2005). This hypothesis proposes that Multiracial individuals experience discrimination from both majority and minority racial groups (Shih & Sanchez, 2005). Preliminary data also suggest that Multiracial adults experience unique types of discrimination consistent with double rejection, such as being viewed as coming from a "bizarre family" and rejection from other racial groups due to not being mono-racial (Johnston-Guerrero et al., 2020; Nadal et al., 2011). If there is support for this hypothesis in explaining the increased risk for disease among Multiracial SGD adults, it is unclear why the same pattern was not observed for depressive symptoms and suicidal ideation, as, in many racial and ethnic groups, there is a clear link between experiences with discrimination and depression (Herek et al., 1999; Swim et al., 2009).

Broadly speaking, the large variations in findings uncovered across SGD and racial subgroups may exist due to cultural differences that manifest in varying health behaviors and/or coping strategies that exacerbate or mitigate the experience of certain outcomes, such as the emphasis gay culture places on thinness that may drive both exercise and disordered eating, as described above (Brewster et al., 2017; Calzo, et al., 2017; Nagata et al.,2021; Maramara et al., 2018). Future research should continue to explore how health disparity risk varies among SGD communities based on the specific subgroup and outcome being examined and relevant subgroup-specific cultural factors that may be influencing the experience of health disparities.

For example, in the current study, it appeared that Black/African American SGD were at less risk for CHCs and depressive symptoms compared to other racial and ethnic SGD groups. Thus, there may be some aspect of culture or racial socialization that is unique to adults that

identify as both Black/African American and SGD, such as family systems teaching their children and adolescents how to navigate or cope with systems of oppression, particularly instances of racism, that is serving as a protective factor. Qualitative studies suggest that learning strategies to confront prejudice, leverage social support systems, practice self-acceptance, and minimize experience of oppression helps to reduce the impact oppression has on mental and physical well-being among people of color (Adams et al., 2005; Bowleg et al., 2003; Wilson & Miller, 2002). Erving and colleagues (2021) found that, among African American/Black women, coping strategies helped mitigate the relationship between discrimination and depressive symptoms; however, these coping strategies did not mitigate discrimination's impact on physical health. Instead, some coping strategies actually increased the magnitude of the relationship between discrimination and negative health outcomes. Additional quantitative and qualitative research is needed to elucidate what may be racial-specific protective and risk factors as they could be used to inform culturally-responsive interventions aimed at reducing and preventing health disparities experienced across SGD communities.

To that end, regarding the finding that Hispanic/Latinx SGD adults experienced a stronger relationship between discrimination and depressive symptoms, unique cultural factors may be playing a role. Preliminary qualitative research posits that values prevalent in Hispanic/Latinx cultures, particularly *machismo, caballerismo,* and *marianismo*, may be fostering within group discrimination directed towards SGD individuals (Abreu et al., 2019; Gattamorta & Quidly-Rodriguez, 2018). For example, in regard to *machismo,* Hispanic/Latinx men are often taught strict gender roles and to avoid any association with homosexuality (Mayo, 1997), which may result in discrimination towards and rejection of SGD family members. Meanwhile, *caballerismo* and *marianismo* are values related to family, particularly the

importance of contributing to, protecting, and devoting oneself to family (Arciniega et al., 2008; Gil & Vazquez, 1996). Along with these values comes the expectation to contribute to the family lineage through a marriage with someone of the opposite sex; by extension, identifying as SGD may be observed as a barrier to the preservation of important cultural values and, as a result, something to be ashamed of, hidden, and/or changed (e.g., conversion therapy; Gattamorta & Quidley-Rodriguez, 2018). These norms and expectations may also contribute to internalized heterosexism and/or cisgenderism. Altogether, these cultural influences unique to Hispanic/Latinx cultures are likely creating invalidating cultural environments for Hispanic/Latinx SGD, potentially driving the heightened relationship between discrimination and depressive symptoms found in the present study. Studies clarifying whether and how these and other cultural influences relate to the health of Hispanic/Latinx SGD adults are needed.

Strengths and Limitations

A notable strength of this study was the diversity of the sample and the ability of the study to look at between-group differences at the intersection of sexual, gender, racial, and ethnic identity. Additionally, the overall study sample size was quite large and well-powered, allowing for meaningful statistical analyses. However, in the present study, there were subgroups that were still combined or excluded due to difficulties obtaining the necessary sample size to detect meaningful variations in outcomes. Specifically, due to small sample sizes, transgender, gender non-conforming, gender non-binary, and agender individuals were combined into one group. Despite sharing a diverse gender identity, research has shown that experiences of discrimination and health vary across these individual subgroups (Fredriksen-Goldsen et al., 2022; Guy et al., 2020), highlighting the value of and need to examine the health of these communities separately. Initially, the study aimed to gather a large enough sample size to examine these differences.

Difficulties with recruiting from these communities became quickly apparent. Historically, these communities have been subjected to culturally insensitive research practices that have affected their willingness to engage with research (Vincent, 2018). Research and policy should aim to adopt culturally sensitive approaches when working with gender diverse communities to help build better relationships between researchers and these communities, such as conducting research in collaboration with gender diverse communities to address their own identified needs, using gender inclusive language in surveys (see Puckett et al., 2020, and Suen et al., 2020), and adequate compensation for participants' time.

The current study excluded various racial and ethnic identities and focused on the most predominant racial and ethnic subgroups in the United States, which represents another significant limitation of the study. Racial and ethnic SGD subgroups that were not included in the study may also be at heightened risk for health disparities. For example, extant data suggest that Indigenous SGD adults may be at the highest risk for health disparities (Evans-Campbell et al., 2012; Parker et al., 2017), but they were not included in the study. Additionally, the study surveys were not available in Spanish, which limits the generalizability of the findings to Spanish-speaking Hispanic/Latinx SGD populations in the United States. Larger studies that are exhaustive of both SGD subgroups and racial and ethnic subgroups are needed to further enhance understanding of health risk in the U.S. Relatedly, there was an unequal distribution of SGD individuals across the racial and ethnic SGD subgroups that may have affected the results. For example, there was no significant association between discrimination and CHCs among non-Hispanic White SGD adults. However, rather than this being a reflection of race and ethnicity as the potential mechanism, this racial and ethnic SGD group had a higher proportion of cisgender gay men, which was found to not differ in their report of CHCs. Thus, this may reflect the

similar rates of CHCs observed among cisgender gay men compared to cisgender heterosexual participants in the study. When conducting similar intersectional research, future studies should aim to ensure equal distribution of subgroups.

Another weakness of the present study was the measure used to capture discrimination. The Everyday Discrimination Scale (Kershaw et al., 2016) encapsulates a general experience of discrimination. While this was useful for making comparisons across subgroups regarding the experience of discrimination and their links with physical and mental health, it is missing experiences of discrimination that may be unique to specific identities (e.g., gender diverse adults experience of being misgendered; Puckett et al., 2023). These specific and unique forms of discrimination may be more intimately related to health and well-being among marginalized communities. This methodological consideration may account for the mostly small effect sizes observed in the current study. Likewise, discrimination was operationalized as perpetration at the interpersonal level towards SGD. It is necessary to examine the more systemic and institutional levels of discrimination as these are likely to have a more powerful impact on the experience of health disparities for SGD individuals, such as national policies denying gender diverse individuals' access to gender affirming services. Lastly, the study was cross-sectional in nature, meaning the direction of the link between discrimination and health is unknown, although prior longitudinal research suggests these unfair experiences precede and exacerbate reductions in health (Busse et al., 2017; Figueroa et al., 2021; Huebner et al., 2021).

Conclusions

Overall, the current study's findings underscore that continued intervention is needed to address the profound health disparities experienced by SGD individuals. Particularly, policy and intervention should target the persistent discrimination these communities face, not only at the

individual level, but also at the systemic level. Although, some communities within the larger SGD community may benefit from more attention than others. The variations in health outcomes across SGD subgroups in the present study, some of which were unexpected, stress the importance of capturing the heterogeneity of the SGD community in research (i.e., avoiding aggregation of subgroups). While some groups reported experiencing worse health and well-being than others, these findings should not be used to justify focusing exclusively on those at greatest risk among SGD communities. For example, despite the differences in frequency of suicidal ideation across SGD subgroups, a significant proportion of cisgender bisexual (42.9%), cisgender gay men (23.7%), cisgender lesbian women (29.3%), and gender diverse (48.4%) participants endorsed frequent suicidal ideation within the last year. These rates of frequent suicidal ideation endorsement indicate that attention towards SGD individuals and the experience of suicide continues to be needed, along with effective assessment and intervention.

Additionally, scholars have called for an intersectional approach for understanding the health of those with marginalized identities (Bauer et al., 2021; Bowleg, 2012; Mahendran et al., 2022), which would require researchers to be attentive towards and address issues of intersectionality at the initial conceptualization of a research project and employ statistical analyses that can examine multiplicative effects (e.g., multilevel analysis of individual heterogeneity). It appears the effect of having multiple marginalized identities is not as simple as taking an "additive" or "subtractive" approach to understanding disease risk. Elucidated by an intersectional approach, which, as Hancock (2007) states, must be differentiated from "additive" approaches and consider identities jointly, the current study's findings suggest a much more complicated interaction between SGD status, race, and ethnicity. Such an intersectional approach can more effectively direct research and intervention toward reducing persistent health

inequities. Research should also aim to highlight risk and protective factors among these communities, how they might be shared or unique across subgroups, and how they may vary by the health outcome of interest.

APPENDIX A

SUPPLEMENTARY TABLES

Table 5.

Binary Logistic Model of Differences in Suicidal Ideation between SGD and Non-SGD Participants

	OR	95% CI	*p*
Age	.95	(.94 - .96)	<.001
Income	1.05	(1.01 – 1.10)	.02
Education	1.01	(.95 – 1.09)	.68
SGD Status	.53	(.39 - .73)	<.001

Note. SGD = Sexual and Gender Diverse; OR = Odds-ratios reported for main effects. *N* = 1314 due to missing data when running primary analyses.

Table 6.

Poisson Model of Differences in Chronic Health Conditions between SGD and Non-SGD Participants

	IRR	95% CI	*p*	SMD
Age	1.00	(1.00-1.00)	.02	<.01
Income	.98	(.97-1.00)	.01	.02
Education	1.01	(1.00-1.04)	.11	.02
SGD Status	.779	(.71-.85)	<.001	.33

Note. SGD = Sexual and Gender Diverse; SMD = standardized mean differences reported for main effects. *N* = 1316 due to missing data when running primary analyses.

Table 7.

Binary Logistic Model of Differences in Suicidal Ideation across SGD Subgroups with Heterosexual Adults as Comparison Group

	OR	95% CI	*p*
Age	.95	(.94 - .96)	<.001
Income	1.05	(1.01 – 1.10)	.02
Education	1.01	(.95 – 1.08)	.72
Gender Diverse	2.34	(1.60 – 3.43)	<.001
Bisexual	1.91	(1.31 – 2.80)	<.01
Gay	1.80	(1.16 – 2.81)	.02
Lesbian	1.28	(.80 – 2.03)	.33

Note. SGD = Sexual and Gender Diverse; OR = Odds-ratios reported for main effects. *N* = 1314 due to missing data when running primary analyses.

Table 8.

Binary Logistic Model of Differences in Suicidal Ideation across SGD Subgroups with Bisexual Participants as Comparison Group

	OR	95% CI	*p*
Age	.95	(.94 - .96)	<.001
Income	1.05	(1.01 – 1.10)	.02
Education	1.01	(.95 – 1.08)	.72
Heterosexual	.52	(.36 - .77)	<.01
Gender Diverse	1.22	(.86 – 1.73)	.33
Gay	.94	(.61 – 1.46)	.79
Lesbian	.67	(.43 – 1.04)	.14

Note. SGD = Sexual and Gender Diverse; OR =Odds-ratios reported for main effects. *N* = 1314 due to missing data when running primary analyses.

Table 9.

Binary Logistic Model of Differences in Suicidal Ideation across SGD Subgroups with Gay Participants as Comparison Group

	OR	95% CI	*p*
Age	.95	(.94 - .96)	<.001
Income	1.05	(1.01 – 1.10)	.02
Education	1.01	(.95 – 1.08)	.72
Heterosexual	.55	(.36 - .86)	.02
Bisexual	1.06	(.68 – 1.65)	.79
Gender Diverse	1.30	(.84 – 2.02)	.33
Lesbian	.71	(.42 – 1.18)	.32

Note. SGD = Sexual and Gender Diverse; OR = Odds-ratios reported for main effects. *N* = 1314 due to missing data when running primary analyses.

Table 10.

Binary Logistic Model of Differences in Suicidal Ideation across SGD Subgroups with Lesbian Participants as Comparison Group

	OR	95% CI	*p*
Age	.95	(.94 - .96)	<.001
Income	1.05	(1.01 – 1.10)	.02
Education	1.01	(.95 – 1.08)	.72
Heterosexual	.78	(.49 – 1.25)	.33
Bisexual	1.50	(.96 – 2.33)	.14
Gay	1.41	(.85 – 2.36)	.32
Gender Diverse	1.83	(1.18 – 2.85)	.02

Note. SGD = Sexual and Gender Diverse; OR = Odds-ratios reported for main effects. *N* = 1314 due to missing data when running primary analyses.

Table 11.

Binary Logistic Model of Differences in Suicidal Ideation across SGD Subgroups with Gender Diverse Participants as Comparison Group

	OR	95% CI	*p*
Age	.95	(.94 - .96)	<.001
Income	1.05	(1.01 – 1.10)	.02
Education	1.01	(.95 – 1.08)	.72
Heterosexual	.43	(.29 - .63)	<.001
Bisexual	.82	(.58 – 1.16)	.33
Gay	.77	(.50 – 1.20)	.33
Lesbian	.55	(.35 - .85)	.02

Note. SGD = Sexual and Gender Diverse; OR = Odds-ratios reported for main effects. *N* = 1314 due to missing data when running primary analyses.

Table 12.

Poisson Model of Differences in Chronic Health Conditions across SGD Subgroups with Heterosexual Participants as Comparison Group

	IRR	95% CI	*p*	SMD
Age	1.00	(1.00-1.01)	<.01	<.01
Income	1.02	(1.00 – 1.04)	.1	.02
Education	.99	(.97 - 1.00)	.01	.02
Gender Diverse	1.26	(1.12 – 1.41)	<.001	.33
Bisexual	1.41	(1.26 – 1.57)	<.001	.52
Gay	1.18	(1.05 – 1.32)	.01	.22
Lesbian	1.35	(1.19 – 1.54)	<.001	.45

Note. SGD = Sexual and Gender Diverse; IRR = Incidence Rate Ratios; SMD = standardized mean differences. Standardized mean differences are reported for main effects. *N* = 1316 due to missing data when running primary analyses.

Table 13.

Poisson Model of Differences in Chronic Health Conditions across SGD Subgroups with Bisexual as Comparison Group

	IRR	95% CI	*p*	SMD
Age	1.00	(1.00-1.00)	<.01	<.01
Income	.99	(.97 – 1.00)	.01	.02
Education	1.02	(.97 - 1.04)	.10	.02
Heterosexual	.71	(.64 – .79)	<.001	.44
Gender Diverse	.89	(.80 – 1.00)	.06	.16
Gay	.83	(.74– .94)	.01	.25
Lesbian	.96	(.85 – 1.09)	.53	.06

Note. SGD = Sexual and Gender Diverse; ; IRR = Incidence Rate Ratios; SMD = standardized mean differences. Standardized mean differences are reported for main effects. Benjamini-Hochberg p-corrections are reported. N = 1316 due to missing data when running primary analyses.

Table 14.

Poisson Model of Differences in Chronic Health Conditions across SGD Subgroups with Gay as Comparison Group

	IRR	95% CI	*p*	SMD
Age	1.00	(1.00-1.00)	<.01	<.01
Income	.99	(.97 – 1.00)	.01	.02
Education	1.02	(.97 - 1.04)	.10	.02
Heterosexual	.85	(.76– .96)	.01	.22
Bisexual	1.20	(1.06 – 1.36)	.01	.27
Gender Diverse	1.07	(.94 – 1.22)	.32	.10
Lesbian	1.15	(1.00 – 1.32)	.06	.20

Note. SGD = Sexual and Gender Diverse; ; IRR = Incidence Rate Ratios; SMD = standardized mean differences. Standardized mean differences are reported for main effects. Benjamini-Hochberg p-corrections are reported. N = 1316 due to missing data when running primary analyses.

Table 15.

Poisson Model of Differences in Chronic Health Conditions across SGD Subgroups with Lesbian as Comparison Group

	IRR	95% CI	*p*	SMD
Age	1.00	(1.00-1.00)	<.01	<.01
Income	.99	(.97 – 1.00)	.01	.02
Education	1.02	(.97 - 1.04)	.10	.02
Heterosexual	.74	(.65 - .84)	<.001	.39
Bisexual	1.04	(.92 – 1.18)	.53	.06
Gay	.87	(.76 – 1.00)	.06	.20
Gender Diverse	.93	(.82 – 1.06)	.32	.10

Note. SGD = Sexual and Gender Diverse; SMD = standardized mean differences. Standardized mean differences are reported for main effects. Benjamini-Hochberg p-corrections are reported. *N* = 1316 due to missing data when running primary analyses.

Table 16.

Poisson Model of Differences in Chronic Health Conditions across SGD Subgroups with Gender Diverse as Comparison Group

	IRR	95% CI	*p*	SMD
Age	1.00	(1.00-1.00)	<.01	<.01
Income	.99	(.97 – 1.00)	.01	.02
Education	1.02	(.97 - 1.04)	.10	.02
Heterosexual	.80	(.71 - .89)	<.001	.29
Bisexual	1.12	(1.01 – 1.25)	.06	.17
Gay	.93	(.82 – 1.06)	.32	.09
Lesbian	1.08	(.95 – 1.22)	.32	.10

Note. SGD = Sexual and Gender Diverse; ; IRR = Incidence Rate Ratios; SMD = standardized mean differences. Standardized mean differences are reported for main effects. Benjamini-Hochberg p-corrections are reported. N = 1316 due to missing data when running primary analyses.

Table 17.

Binary Logistic Model of Differences in Suicidal Ideation across Racial and Ethnic SGD Subgroups with White SGD as Comparison Group

	OR	95% CI	*p*
Age	.95	(.94 - .96)	<.001
Income	1.04	(.99 – 1.09)	.15
Education	1.04	(.99 – 1.09)	.26
Multiracial SGD	.83	(.51 – 1.33)	.52
Black SGD	.63	(.41 - .98)	.24
Hispanic SGD	.79	(.50 – 1.23)	.44

Note. SGD = Sexual and Gender Diverse; SMD = standardized mean differences. Odds-ratios (OR) are reported for main effects. Benjamini-Hochberg p-corrections are reported. $N = 925$ due to exclusion of heterosexual respondents and missing data when running analyses.

Table 18.

Binary Logistic Model of Differences in Suicidal Ideation across Racial and Ethnic SGD Subgroups with Hispanic SGD as Comparison Group

	OR	95% CI	*p*
Age	.95	(.94 - .96)	<.001
Income	1.04	(.99 – 1.09)	.15
Education	1.04	(.99 – 1.09)	.26
White SGD	1.58	(1.02 – 2.44)	.24
Multiracial SGD	1.30	(.87 – 1.96)	.44
Black SGD	1.24	(.84 – 1.82)	.44

Note. SGD = Sexual and Gender Diverse; SMD = standardized mean differences. Odds-ratios (OR) are reported for main effects. Benjamini-Hochberg p-corrections are reported. $N = 925$ due to exclusion of heterosexual respondents and missing data when running analyses.

Table 19.

Binary Logistic Model of Differences in Suicidal Ideation across Racial and Ethnic SGD Subgroups with Black SGD as Comparison Group

	OR	95% CI	*p*
Age	.95	(.94 - .96)	<.001
Income	1.04	(.99 – 1.09)	.15
Education	1.04	(.99 – 1.09)	.26
White SGD	1.28	(.81 – 2.01)	.44
Hispanic SGD	.81	(.55 – 1.19)	.44
Multiracial SGD	1.05	(.68 – 1.62)	.82

Note. SGD = Sexual and Gender Diverse; SMD = standardized mean differences. Odds-ratios (OR) are reported for main effects. Benjamini-Hochberg p-corrections are reported. $N = 925$ due to exclusion of heterosexual respondents and missing data when running analyses.

Table 20.

Binary Logistic Model of Differences in Suicidal Ideation across Racial and Ethnic SGD Subgroups with Multiracial SGD as Comparison Group

	OR	95% CI	*p*
Age	.95	(.94 - .96)	<.001
Income	1.04	(.99 – 1.09)	.15
Education	1.04	(.99 – 1.09)	.26
White SGD	1.21	(.76 – 1.95)	.52
Hispanic SGD	.77	(.51 – 1.15)	.44
Black SGD	.95	(.62 – 1.47)	.82

Note. SGD = Sexual and Gender Diverse; SMD = standardized mean differences. Odds-ratios (OR) are reported for main effects. Benjamini-Hochberg p-corrections are reported. $N = 925$ due to exclusion of heterosexual respondents and missing data when running analyses.

Table 21.

Poisson Model of Differences in Chronic Health Conditions Across racial and ethnic SGD Subgroups with White SGD as Comparison Group

	IRR	95% CI	*p*	SMD
Age	1.00	(1.00 – 1.00)	.32	<.01
Income	.98	(.97 – 1.00)	.02	.02
Education	1.02	(1.00 – 1.04)	.21	.03
Multiracial SGD	1.17	(1.02 – 1.34)	.04	.26
Black SGD	.81	(.71 - .93)	.01	.29
Hispanic SGD	.93	(.82 – 1.06)	.26	.11

Note. SGD = Sexual and Gender Diverse; IRR = Incidence Rate Ratios; SMD = standardized mean differences. Standardized mean differences are reported for main effects. Benjamini-Hochberg p-corrections are reported. N = 926 due to exclusion of heterosexual respondents and missing data when running analyses.

Table 22.

Poisson Model of Differences in Chronic Health Conditions Across racial and ethnic SGD Subgroups with Hispanic SGD as Comparison Group

	IRR	95% CI	*p*	SMD
Age	1.00	(1.00 – 1.00)	.32	<.01
Income	.98	(.97 – 1.00)	.02	.02
Education	1.02	(1.00 – 1.04)	.21	.03
White SGD	1.08	(.95 – 1.22)	.26	.11
Multiracial SGD	1.26	(1.11 – 1.42)	.001	.38
Black SGD	.87	(.77 - .99)	.04	.19

Note. SGD = Sexual and Gender Diverse; IRR = Incidence Rate Ratios; SMD = standardized mean differences. Standardized mean differences are reported for main effects. Benjamini-Hochberg p-corrections are reported. N = 926 due to exclusion of heterosexual respondents and missing data when running analyses.

Table 23.

Poisson Model of Differences in Chronic Health Conditions Across racial and ethnic SGD Subgroups with Black SGD as Comparison Group

	IRR	95% CI	*p*	SMD
Age	1.00	(1.00 – 1.00)	.32	<.01
Income	.98	(.97 – 1.00)	.02	.02
Education	1.02	(1.00 – 1.04)	.21	.03
White SGD	1.23	(1.07 – 1.41)	<.01	.29
Hispanic SGD	1.15	(1.01 – 1.30)	.03	.19
Multiracial SGD	1.44	(1.26 – 1.65)	<.001	.61

Note. SGD = Sexual and Gender Diverse; IRR = Incidence Rate Ratios; SMD = standardized mean differences. Standardized mean differences are reported for main effects. Benjamini-Hochberg p-corrections are reported. N = 926 due to exclusion of heterosexual respondents and missing data when running analyses.

Table 24.

Poisson Model of Differences in Chronic Health Conditions Across racial and ethnic SGD Subgroups with Multiracial SGD as Comparison Group

	IRR	95% CI	*p*	SMD
Age	1.00	(1.00 – 1.00)	.32	<.01
Income	.98	(.97 – 1.00)	.02	.02
Education	1.02	(1.00 – 1.04)	.21	.03
White SGD	.86	(.75 - .98)	.02	.26
Hispanic SGD	.80	(.71 - .98)	<.001	.38
Black SGD	.69	(.61 - .79)	<.001	.61

Note. SGD = Sexual and Gender Diverse; IRR = Incidence Rate Ratios; SMD = standardized mean differences. Standardized mean differences are reported for main effects. Benjamini-Hochberg p-corrections are reported. N = 926 due to exclusion of heterosexual respondents and missing data when running analyses.

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