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## **Adverse Childhood Experiences, Internalized Homophobia, Alcohol Use, and Suicide Ideation and Attempts Among Sexual Minority MSM of Color**

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# Walden University

College of Health Sciences and Public Policy

This is to certify that the doctoral study by

Odion A. Clunis

has been found to be complete and satisfactory in all respects,  
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2023

Abstract

Adverse Childhood Experiences, Internalized Homophobia, Alcohol Use, and Suicide  
Ideation and Attempts Among Sexual Minority MSM of Color

by

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MPH, Indiana University Bloomington, 2013

BS, University of Illinois Champaign-Urbana, 2011

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Public Health

Walden University

August 2023

## Abstract

Sexual minority men of color who engage in sexual activity with men (MSM) are twice as likely to experience a psychological episode contributing to suicide ideation or attempts when compared to White MSM. These MSM are underserved in health systems, underrepresented in research, and limited in their access to health care services and interventions. The purpose of this quantitative study was to examine relationships between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation and attempts while controlling for age, income, education, and employment among sexual minority men of color (Asian, Black/African American, Hispanic/Latino, Middle Eastern, Native Hawaiian/Pacific islanders, American Indian, and multiracial). Syndemic theory informed the study. Secondary data containing 269 cases from the 2016–2019 Generations data set were analyzed using ordinal logistic regression. Results indicated that adverse childhood experiences and internalized homophobia were the most significant predictors of suicide ideation among sexual minority MSM of color. Adverse childhood experiences were the most significant predictor of suicide attempts. Results may inform existing research and increase knowledge regarding suicide behaviors and risk factors that can impact suicide ideation and attempts among non-White sexual minority populations.

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## Dedication

I dedicate this paper to Black or African American men who may not identify as homosexual or the LGBTQ communities and other sexual minorities of color who may be struggling with suicidal ideation or survived an attempted suicide. Also, to my late Dad and my beautiful Mother. Mostly, to my family, close friends, and God who orders all my steps. Love always!

## Acknowledgments

I would like to acknowledge my mentor, family, and colleagues. Also, my peers from the University of Illinois Urbana-Champaign and Indiana University Bloomington. Also, all the educators who've challenged me to expand my thinking and aim for the stars. I would like to thank the committee for their boundless efforts in ensuring the quality of this research. Finally, I'd like to acknowledge my community and close friends who have been supportive throughout my academic journey.

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## Section 1: Foundation of the Study and Literature Review

This study examined the associations between adverse childhood experiences, internalized homophobia, alcohol use and suicide ideation, and suicide attempts among cisgender sexual minority men of color while controlling for age, income, education, and employment. The Generations 2016–2019 data was used to answer the research questions (see Meyer, 2021). The research questions were developed using the constructs of syndemic theory (Singer et al., 2017). The syndemic theory had been used in previous research to understand co-occurring epidemics in various populations.

Syndemic theory was used in previous studies to provide a conceptual framework to identify the multiple causes and consequences of communicable and noncommunicable diseases in a socioeconomic context. Also, the framework has been applied in recent literature in the context of severe mental illnesses, HIV, and traumatic stress studies (Mendenhall et al., 2022; Seedat, 2021; Singer et al., 2017). The hallmark of a syndemic is the presence of two or more disease states that adversely interact with each other, negatively affecting the mutual course of each disease trajectory and enhancing vulnerability, and are made more deleterious by experienced inequities (Singer et al., 2017). Although the rate of suicide ideation and suicide attempts has been investigated and reported, limited studies addressed factors in subgroups of sexual minority men of color.

Adverse childhood experiences can impact a person's wellbeing over their life course. Reports indicated that there are direct associations with adverse childhood experiences and future violence victimization, perpetration, and lifelong health and

opportunity (Centers for Disease Control and Prevention [CDC], 2022). Adverse childhood experiences are potentially traumatic events that occur from childhood through early adolescence (0–17 years) and include experiences of violence, neglect, and abuse. Bertolino et al. (2020) explained that adverse childhood experience exposure increases risky behaviors such as increased sexual partners and health consequences (e.g., suicide ideation and suicide attempts) in later life. Adverse childhood experiences' pervasiveness and association with suicide outcomes in adulthood had not been studied in sexual minority men of color at the time of the current study.

Internalized homophobia in cisgender sexual minority communities since the expansion of lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ) individual rights has been used in recent studies to understand homophobia and homonegative experiences. Bogart et al. (2022) explained the social constructs of masculinity that involve the negotiation of traditional gender roles and norms, such as physical aggression, sexual prowess, and antifemininity, among African American cultures, and found associations between hypermasculinity and increased homonegative and homophobic experiences leading to substance abuse and suicide attempts. Applying models focusing on associations between these factors and suicide ideation and attempts may improve knowledge in the younger and older populations of sexual minority men of color.

Sexual minority individuals who consume alcohol are at risk of experiencing alcohol-related problems known to be associated with increased suicidality. Watson et al. (2019) discovered that heavier alcohol use and other drug use (e.g., cocaine) increased

participant health care utilization, and a higher number of sexual partners. Although African American men who have sex with men (AAMSM) face multiple psychosocial determinants to suicidality, there are gaps in the engagement of those using government-funded HIV programs aimed at protecting against further infection. For example, in a sample of young Black MSM receiving care in a Ryan White-funded HIV care center that included HIV and mental health services, there were gaps reported with engagement at each stage of a newly described mental health care continuum (Hussen et al., 2021). Interventions that engage individuals at the early stages of engagement with health service providers can aid in combating suicide awareness in sexual minority men who are at risk and engage in treatment.

In 2018, 3,124 African American men and women died by suicide, and 82% were men (CDC, 2023). Currently, only 1% of the U.S. population identifies as AAMSM. However, they account for 25% of new HIV diagnoses and are 3 times more likely to be HIV-infected than non-AAMSM, making this population susceptible to major health disparities related to suicide (CDC, 2023). Furthermore, suicide mortality research is limited, and improving the quality of sexual orientation and sexual identity-focused public health approaches may advance prevention-based methods.

In 2018, suicide was the third leading cause of death among those age 18–24 years and 25–34 years, and fifth among those age 35–44 years (CDC, 2023). Risk factors have an effect on this rising trend in suicide among sexual minority males, but the cascading effects are poorly understood among cisgender sexual minority men of color. Expanding analysis methods to include individual and population levels in a multilevel



analytical approach could lead to discovering more impactful and efficient interventions and preventive measures to improve health in vulnerable populations (Vereecken et al., 2023). The social change effort addressed in this study may increase knowledge by adding value to current minority-focused suicide research. In this section, I provide the background, problem statement, purpose of the study, research questions and hypotheses, theoretical foundation, nature of the study, literature search strategy, theoretical framework, literature review, key variables, definitions, assumptions, scope and delimitations, limitations, significance, conclusion, and a summary.

### **Background**

Exposure to risk that increases suicidal behavior and the various attributes known in current research can occur at any point over the life course. According to the CDC (2020), 1 in 6 adults experienced four or more adverse childhood events, and at least five of the top 10 causes of death were associated with adverse childhood experiences. Several racial/ethnic minority groups are at greater risk for experiencing four or more adverse childhood experiences (CDC, 2020). In the United States, 60% of individuals in the general population have been exposed to at least one adverse childhood experience (i.e., abuse), which has deleterious effects on the physical, psychological, and mental health of children and adults (Lee et al., 2022). Suicidality is thoughts about ending one's life through a suicide attempt and death by suicide (American Psychology Association [APA], 2021). Burke et al. (2021) explained suicidality by defining how complicated multiple interpretations exist and can be interpreted differently across the suicide

spectrum. With these descriptions used more frequently in current scholarship, it is difficult to extricate the direct effects on subgroups of sexual minority populations.

Although gay and bisexual men are behaviorally MSM, understanding cisgender sexual minority men of color and suicidality (suicide ideation and suicide attempts) may add value to their distinctive means of navigating life. Smith et al. (2021) found that the public health community has more factors to consider when attempting to reduce health and social inequities due to gaps in the conceptualizations of health and well-being. Sexual minority identity has been conceptualized in prior literature as multidimensional recognitions and responses toward one's sexual orientation (Wiss et al., 2022). At times sexual minorities are a double minority but can be more resilient if they address their health needs using a population-based approach to navigate disparities. Public health experts can play a valuable role in changing suicide outcomes in this population.

Whether experienced, anticipated, or internalized, homophobia has adverse health effects. Among sexual minority men of color, sexuality-based stressors (exposure to violence and discrimination) have been linked to disparities with increased suicide behavior (i.e., internalized homophobia), increases in new HIV diagnosis, decreased utilization of health care resources, and insufficient preventive services (Kanny et al., 2019; Smith et al., 2021; Xiao & Lu, 2021). Existing research highlighted African Americans and other sexual minorities from the HIV lens, and because this epidemic directly impacts associated suicide behavior, more information may inform further prevention.

Heteronormativity, heterosexism, and homophobia are internal and societal perceptions for identifying, understanding, and responding to antihomosexual or heterosexual-presumptive attitudes and odium toward sexual minorities (Skakoon-Sparling, 2022). Internalized homophobia is higher for emerging age groups of sexual minorities at various socioeconomic statuses (Lee et al., 2019) For example, gay, bisexual, and other MSM identifying adolescents (ages 18–24 years) in Metro Atlanta, GA, there were high reports of individuals distancing themselves from their home environments, discovering extrafamilial support, and isolating themselves from their social networks due to increased exposure to suicide-promoting behavior that affects suicide ideation and attempts (Ferlatte et al., 2022; Hvidkjaer et al., 2021). Suicidal ideation is reported among various emerging age groups (i.e., adolescents, middle age, and older adults), racial minorities (i.e., Asian, Black, Latino), and sexual minorities (i.e., LGBTQ and other MSM), and understanding these associations may inform culturally targeted prevention efforts.

Alcohol use and adverse childhood experiences have been studied. Shangani et al. (2022) found that among sexual minorities between the ages of 36 and 55 years most participants (70%) reported experiences of childhood abuse. Participants who were exposed to childhood violence such as sexual abuse reported more problems with alcohol use and drug use. Wirtz et al. (2022) conducted a review reporting strong evidence of the syndemic relationships between violence and victimization and HIV, depression, substance use, stigma, and condom use among gay and bisexual men, as well as between early violence exposure and substance use. These findings have been identified in sexual

minority populations of color, but adding more information using factors from the current study may add to suicide prevention efforts.

The current research was necessary because it targeted systematic approaches aimed at ameliorating disparities in sexual minority men of color. Also, add to existing knowledge to understand the experiences of sexual minority MSM over the life course addressing the age-associated stages of development in suicide research. Finally, I addressed misconceptions about sexual orientation by targeting the various interpretations of suicide ideation and attempts.

### **Problem Statement**

One of the central risk factors of death by suicide is a previous suicide attempt, and more evidence may improve research and improve suicidality outcomes among sexual minority men of color. Between 2000 and 2018, U.S. suicide rates increased by 35%, contributing to the stagnation and subsequent decrease in U.S. life expectancy (Martínez-Alés et al., 2022). For example, African Americans face minority stressors that provoke their racial minority status and sexual minority status, affecting the growing HIV epidemic. Researchers seeking to understand their individual lives to further strive toward health equity in this population will improve their overall health status (Azucar et al., 2022; Kipke et al., 2020). As previously indicated, 1% of the U.S. population recognizes themselves as AAMSM. However, they account for 25% of new HIV diagnoses and are 3 times more likely to experience major health disparities related to suicide (Arnold et al., 2021; Dana et al., 2023). Approaches that influence both HIV negative and positive minorities of color should be considered to eliminate the gaps in treatment and awareness

(Kanny et al., 2019). There was a gap in the literature regarding sexual minorities of color that the current study addressed. The effects of adverse mental health outcomes, when untreated, can be detrimental to health and well-being. This study was relevant because it provided additional evidence on those effects by focusing on sexuality-based factors and suicidality in sexual minorities of color (see Meyer et al., 2021; Zavala & Waters, 2021). Results of this study may inform targeted responses to disparities to improve suicide outcomes and the development of preventive-based measures in subgroups of racial and sexual minorities.

### **Purpose of Study**

The purpose of this quantitative study was to examine the relationships between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation and suicide attempts among cisgender sexual minority men of color. The independent variables (IVs) were adverse childhood experiences, internalized homophobia, and alcohol use, and the dependent variables (DVs) were suicide ideation and suicide attempt (suicidality). The control variables were age, income, education, and employment.

### **Research Questions and Hypotheses**

RQ1: Is there a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation among sexual minority men of color when controlling for age, income, education, and employment?

$H_01$ : There are no relationships between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation among sexual minority men of color when controlling for age, income, education, and employment.

$H_a1$ : There is a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation among sexual minority men of color when controlling for age, income, education, and employment.

RQ2: Is there a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide attempts among sexual minority men of color when controlling for age, income, education, and employment?

$H_02$ : There are no relationships between adverse childhood experiences, internalized homophobia, alcohol use, and suicide attempts among sexual minority men of color when controlling for age, income, education, and employment.

$H_a2$ : There is a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide attempts among sexual minority men of color when controlling for age, income, education, and employment.

### **Theoretical Foundation for the Study**

Syndemic theory informed this study. Singer developed the theory in 1994 to understand substance abuse, violence investigating instances in which multiple health problems interact with each other and the influences within sociocultural, economic, and physical environments that promote and enhance the negative effects of disease interaction (Mendenhall et al., 2022; Singer et al., 2017). There are three conditions of a syndemic: (a) Two or more diseases clusters co-occur in a specific population, (b) this

observed clustering is facilitated by contextual or social factors such as poverty and other structural inequities, and (c) the clustering of diseases drives adverse disease interactions and enhances disease burden on the affected population (Singer et al., 2017). Limited yet rapidly developing literature on non-communicable disease syndemic can highlight the transdisciplinary interests (i.e., public health, clinical research, medical sciences) to understand multilayered health challenges that can coexist (Hossain et al., 2023). The current study was designed to understand the existence of co-occurrent interactions of DVs and IVs.

Research has focused on investigating how individual-level covariates can explain individual-level outcomes (Tsai, 2018). In the recent research, the syndemic approach has been linked to the omission of population-level studies and contextual effects, which makes it more complicated to apply this model to the population level. In the current study, I examined the co-occurring and syndemic characteristics of adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation and attempts in cisgender sexual minority men of color. Sexual minorities at risk for suicide ideation and attempts may also suffer from societal stressors due to their racial minority and sexual minority status, which may put them at further risk for internalized homophobia and discrimination. The study controlled for age, income, education, and employment. The syndemic framework was adopted to explain interactions between the IVs (adverse childhood experiences, internalized homophobia, and alcohol use) and the DVs (suicide ideation and attempts).

Global research on syndemic indicated the deteriorating effects of concurrent health problems in populations living under chronic social stressors (Hossain et al., 2023). Syndemic theory is a holistic framework used to describe interactions between diseases and between diseases and the social environment contributing to their emergence, clustering, and spread (Singer et al., 2017). Therefore, syndemic theory was the best fit for the current study. Wirtz et al. (2022) explained that inequities exist for sexual minorities of color, and researchers have identified that social categories such as race, ethnicity, and sexual orientation may intersect to affect individual experiences via systems of power and oppression including but not limited to racism, homophobia, and biphobia. The application of syndemic theory in the current study may highlight the sociopolitical and economic circumstances in which mutually worsening comorbidities exist.

### **Nature of the Study**

This quantitative study included a cross-sectional design with secondary data collected by the Inter-university Consortium for Political and Social Research (ICPSR). The secondary (2016–2019) Generations data were included (see Meyer, 2020). The data were used to examine the relationships between adverse childhood experiences, internalized homophobia, alcohol use (IVs) and suicide ideation and suicide attempt (DVs). This study covariates included age, education, employment, and income.

### **Literature Search Strategy**

Electronic databases such as PubMed, LGBTQ Source, Medline, SAGE, PsycINFO, PsycARTICLES, EBSCO, Science Direct, Google Scholar, and SCOPUS



were searched to identify peer-reviewed articles published between 2018 and 2023. These keywords were used: *Sexual Minority, men who have sex with men MSM, adverse childhood experiences, internalized homophobia, alcohol use, alcohol disorder, suicide ideation, suicide attempt, suicidality, sexual minority men, Young men who have sex with men (YMSM), Syndemics Theory, and Syndemic Framework*. CDC's National Institute of Mental Health, American Psychological Association (APA), and the National Institute of Health websites were also searched for related articles and materials. The Boolean operators AND and OR were applied to optimize search results. Abstracts were used to determine an article's relevance to the research questions.

### **Theoretical Framework**

Syndemic theory informed this study. The theory was originated by Singer in 1994 to understand substance abuse, violence, and AIDS by investigating instances in which multiple health problems interact with each other and the influences within sociocultural, economic, and physical environments that promote and enhance the negative effects of disease interaction (Mendenhall et al., 2022; Singer et al., 2017). There are three conditions of a syndemic: (a) Two or more diseases clusters co-occur in a specific population, (b) contextual or social factors, and (c) the clustering of diseases drives adverse disease interaction and enhances disease burden on the affected population (Singer et al., 2017). Limited yet rapidly developing literature on noncommunicable disease syndemic can highlight the transdisciplinary interests (i.e., public health, clinical research, medical sciences) to understand multilayered health challenges that can coexist (Hossain et al., 2023). Research has focused on investigating how individual-level

covariates can explain individual-level outcomes (Tsai, 2018). In the recent research, the syndemic approach has been linked to the omission of population-level studies and contextual effects, which makes it more complicated to apply this model to the population level.

Sexual minority men of color are impacted by co-occurring epidemics unique to their lived experiences with continued threats of being plagued by the HIV crisis, sexual minority status, and racial/ethnic minority status expose them to elements of suicide-related behavior such as suicide ideation and attempts. These men can also identify as heterosexual, so the lack of an available sexual behavior measure does not accurately capture heterosexually identified MSM making this population obsolete in most cases (Turpin et al., 2019). These suicidal behaviors are exacerbated by the bio-social and preventable factors of adverse childhood experiences, internalized homophobia, alcohol disorder, and abuse. The syndemic framework can describe these relations.

Syndemics have been described in recent literature as two or more co-occurring epidemics in the same population (Singer et al., 2017). The conditions considered in previous literature related to sexual minority men of color and other MSM were substance abuse, childhood abuse, and depression (Zhang et al., 2019). Ouakfik et al. (2022) reported that none of the existing reviews on syndemics focused on MSM and also failed to control for race and ethnicity. However, other researchers highlighted syndemic effects in heterosexual men, adolescents, and other racial/ethnic groups of MSMs, but very few addressed sexual minority men (Quinn et al., 2023). The current study focused on sexual minority men of color.

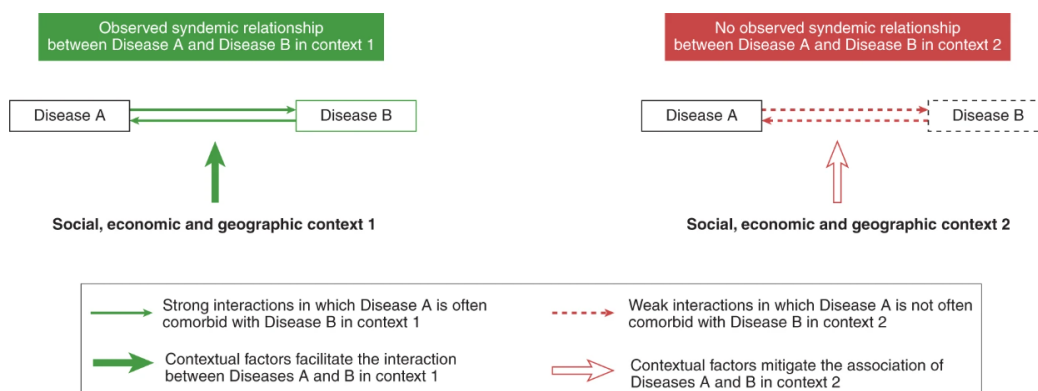
Other researchers used models that informed health-promoting activities such as working out or physical activity in sexual minorities living with HIV. For example, Jemmott et al. (2021) found that participants who actively engaged in the physical activity interventions reported better health outcomes and increased physical activity and wellness. The intersecting and reinforcing nature of multiple forms of violence, experiencing negative HIV outcomes, and mental health conditions impact sexual minority individuals of color and have been conceptualized in previous scholarship as a violence syndemic.

Syndemic frameworks address observed and unobserved relationships between the predictors and dependent variables. As shown in Figure 1, one of the first conditions of a syndemic framework is that two or more diseases cluster (co-occur) in a specific population (Singer et al., 2017). Suicide ideation and suicide attempts have been used as co-occurring conditions to explain suicidality. Threats of being plagued by the HIV crisis, maintaining a sexual minority status, and their racial/ethnic minority status position minorities for the syndemic effects of suicide behaviors, and efforts are needed on all levels to address LGBTQ+ subgroups and populations. Existing suicide outcome-related research highlighted disparities in sexual minority men and youths. However, the effect of sexual orientation was limited, which presented a knowledge gap in the research, especially regarding sexual minority men of color. Studies on young MSM or AAMSM reported experiences of homophobia, race-based discrimination, food insecurity, and conflict with family (Kipke et al., 2020). However, the results did not isolate the targeted effects on sexual minority men of color. Ream (2022) conducted an analysis to explain

why LGBTQ+ youths at risk for suicidality should be assessed for anxiety, trauma, and perceived physical threat from the public policies, and found that the proportions who were LGBTQ increased from 2014 to 2019. Turpin et al. (2019) studied a sample of 1,786 Black MSM and Black heterosexual men and found that were both disparately affected by high HIV incidence compared to heterosexual men of other races, and 16% were unaware of their HIV status. Sexual minority men of color are faced with various social factors that can cause adverse effects.

## Figure 1

### *Syndemic Relationships*



*Note.* Retrieved from Mendenhall et al. (2022). *Sydemics and Clinical Science*.

The bio-social factors previously researched as risk factors in suicide behaviors tested the strength of the relationships and effects on adverse childhood experiences, internalized homophobia, and alcohol use. Thompson et al. (2019) examined longitudinal associations between eight different adverse childhood experiences (physical, sexual, emotional abuse, neglect, parental death, incarceration, alcoholism, and family suicidality) with suicidal ideation and suicide attempts in adulthood while controlling for

depression, problem alcohol use, drug use, delinquency, impulsivity, gender, race, age, and urbanicity. Results were representative of a large sample, indicating that not only were there significant associations between suicide risk with adverse childhood experiences, but an accumulation of adverse childhood experiences was associated with increased odds of both suicide ideation and attempts. Biscond et al. (2023) further examined adverse childhood experiences. They identified that the effects of childhood adversities are exaggerated by childhood physical abuse and are associated with an increased risk of suicidal ideation and plan persistence in adolescence and adulthood. However, limited literature examined the effects on older adults.

Turpin et al. (2019) and Chuang et al. (2021) reported syndemic approaches focusing on syndemics of HIV in sexual minority men of color and internalized homophobia. Internalized homophobia is an internal source of stigma activated by externally generated victimization experiences (e.g., homonegativity). Haney et al. (2021) reported that sexual minority individuals experience greater rates of substance use with internalized homophobia as one critical factor underlying this disparity. To understand these associations, the current study included variables to explain relationships.

Kipke et al. (2020) researched alcohol use and suicide ideation and suicide attempts, along with several other behavioral factors. Kipke et al. highlighted that among 448 young MSM of color ages 16–24 years, most reported experiences of racism (87%) and homophobia (76%), and 17% reported suicidal ideation or planned a suicide attempt. The structural and social determinants of health drive behavioral and mental health outcomes and produce long-term health disparities (Azucar et al., 2022; English et al.,

2022). Other age groups of sexual minority men were underrepresented in the recent literature.

### **Literature Review Related to Key Variables and/or Concepts**

The IVs in this study were adverse childhood events, internalized homophobia, and alcohol use. The DVs were suicide ideation and suicide attempt among sexual minority men of color. The covariates were age, income, education, and employment. This literature review focused on peer-reviewed articles that were aligned with the research questions to examine suicide ideation and suicide attempts among sexual minority men of color.

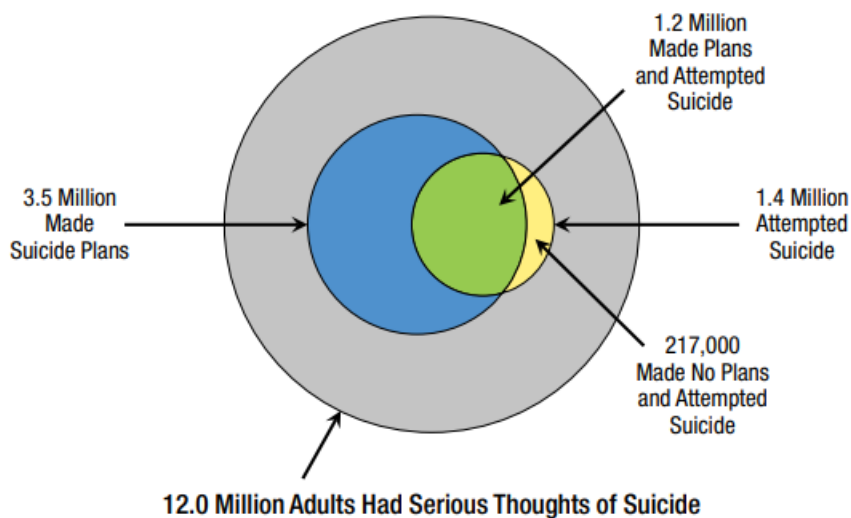
### **Suicide Ideation and Suicide Attempts**

Research has highlighted high-risk behaviors that resulted in increases in new HIV cases leading to adverse mental health outcomes and thoughts of suicide or attempted suicide. In 2019, approximately 12 million American adults thought about suicide, made suicide plans, and attempted suicide (Substance Abuse and Mental Health Services Administration [SAMHSA], 2020). Key substance use and mental health indicators in Figure 2 illustrate that the number of U.S. adults who had serious thoughts of suicide in the past year increased from 8.3 million in 2008 to 12.0 million people in 2019 (SAMHSA, 2020). Since the year 2000, the global age-standardized suicide rate decreased overall, and the only increase in age-standardized suicide rates was in the United States (SAMHSA, 2020). As shown in Figure 3, 1.4 million adults attempted suicide in the past year (SAMHSA, 2020). Research has indicated that rates of suicidality (suicide ideation and suicide attempts) are highest during adolescence and young

adulthood and decline through age 85 years, and more targeted studies can improve interventions throughout the life course (CDC, 2020). The risk behaviors highlighted in recent literature were examined in the current study.

## Figure 2

*Suicide Across the United States*

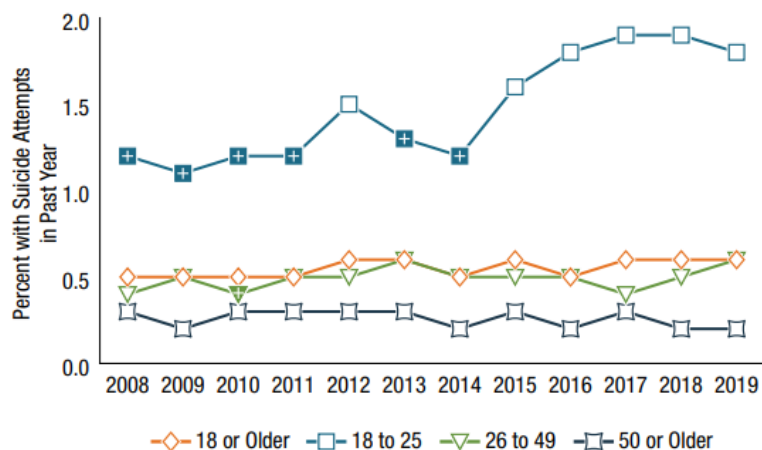


*Note.* SAMSA (2020). (Pg.48) Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health:

[www.samhsa.gov](http://www.samhsa.gov)

**Figure 3**

*Suicidal Attempts in the Past Year Among Adults Age 18 or Older: 2008–2019*



*Note.* SAMSA (2020). (Pg.49) Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health:

[www.samhsa.gov](http://www.samhsa.gov).

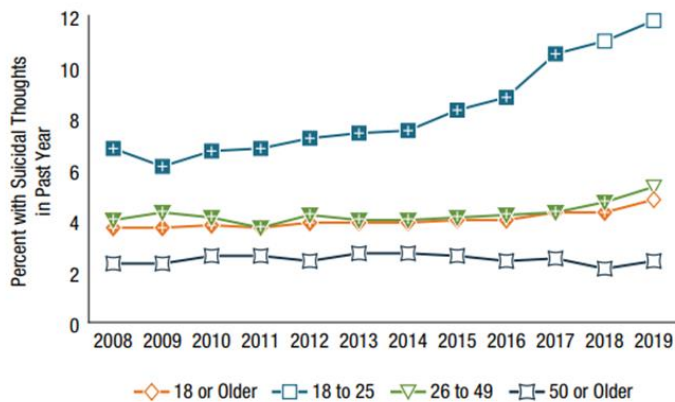
Suicidal thoughts in the past year among adults 18 years old and older from 2008 to 2019 have trended upward. As shown in Figure 4, 19.4 million adults in the U.S. (18 or older) accessed treatment for mental health or feelings of depression (i.e., Major Depressive Episode [MDE]), and 66.3 % reported receiving treatment in the past year, however, leaving 33.7% untreated (SAMSHA, 2020). Furthermore, as access remains steady, mental health services in the past year increased from 27.2 million in 2002 to 40.2 million in 2019 among U.S. adults (see Figure 5). As a mental illness goes untreated there is an increased risk of suicide and this study seeks to highlight more targeted approaches to prevention (Singer et al., 2017). To better understand factors that contribute to the risk



of suicide in adult sexual minority MSM this study will explore those relationships using constructs of the syndemic framework.

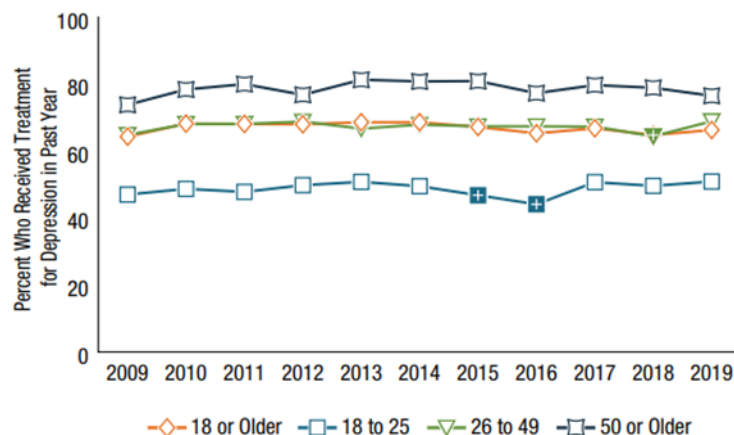
#### Figure 4

*Suicidal Thoughts in the Past Year Among Adults Age 18 or Older: 2008–2019*



*Note.* SAMSA (2020). (Pg.48) Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health:

[www.samhsa.gov](http://www.samhsa.gov)

**Figure 5***Access Treatment for Depression in the Past Year*

Note: SAMSA (2020). (Pg.48) Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health:

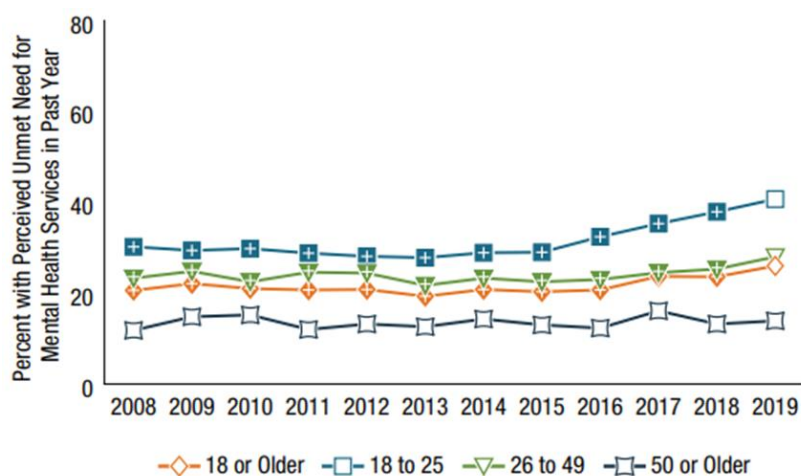
[www.samhsa.gov](http://www.samhsa.gov)

The negative social, psychological, and health effects associated with the internalization of homophobia reported in previous literature include odious mental health or even death by suicide (Braekwell & Jaspal, 2022). Showing relationships that exists with a lack of meaning, purpose, and belonging as a derivative of societal norms, goals, and attachment which are hypothesized as determinants of suicidality, relationships need to be more comprehensively explored to explain the sexual orientation disparity in suicidality (Bränström et al., 2020). Since there is an unmet need in mental health services among adults that are at risk of suicide it will be beneficial for this study to highlight those needs. For example, as shown in Figure 6, among the 51.5 million adults aged 18 years or older in 2019, 13.3 million people felt that even after accessing services there was a perceived unmet need in the past year (SAMSHA, 2020). In addition to

understanding the impact that the adverse childhood experiences, internalization of homophobia, and alcohol use has on sexual minority MSM, this study seeks to understand this phenomenon parallel to suicide ideation and suicide attempts.

### Figure 6

*Unmet Need for Mental Health Services in the Past Year Among Adults Age 18 or Older With Any Mental Illness in the Past Year: 2008–2019*



*Note.* SAMSA (2020). (Pg.48) Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health:

[www.samhsa.gov](http://www.samhsa.gov)

### Suicide Ideation and Adverse Childhood Experiences

Suicide prevention efforts involve a comprehensive approach that exposes systems, organizations, and communities that focus efforts throughout life. Current literature references downstream and upstream approaches to adverse childhood experiences (i.e., neglect, sexual abuse, violence), which focus on treatment in individuals or groups and primary prevention efforts that capture the onset of risky

behaviors before a tragic event occurs. Adverse childhood experiences do not represent the full scope of adversity children may be exposed to, but they are a reliable proxy for what happens in a child's home. The science connecting adverse childhood experiences to lifelong mental and physical health disorders, health risk behaviors, and, consequentially, suicide risk are robust.

Hughes et al. (2022) identified that African American Men in emerging adult populations acknowledged that the developmental challenges of adverse childhood experiences exacerbated evident challenges with substance use and suicidal behavior. For example, early exposure to violence, stress, and forms of abuse carries a negative risk into emerging adulthood. Chenneville et al. (2022) studied a population of Youth living with HIV (YLWH) who present behavioral health risks, including co-occurring mental health and substance use issues, which harm medication adherence in sexual minority MSM ages 17 years old to 24 years old who identified as homosexual, bisexual, or questioning, and who acquired HIV behaviorally. Despite the high prevalence of violence within minority families and the associated economic costs, a limited number of studies focus on minority MSMs. These findings emphasize the importance of incorporating a trauma-informed approach to suicide prevention where efforts can be adopted that have been successful in other areas focused on sexual minority health outcomes.

### **Suicide Attempts and Adverse Childhood Experiences**

Few studies focused on suicide attempts and adverse childhood experiences among sexual minorities. Polanco-Roman et al. (2021) studied racial and ethnic minority youths from disadvantaged backgrounds who present with four or more adverse

childhood experiences suggesting that for prevention efforts, there should also be a consideration for suicide ideation and suicide attempt risk screening. The results suggest efforts to prevent cumulative adverse childhood experiences in early adolescence potentially decreases the risk later in life for suicide ideation and suicide attempts. However, more information can be added related to sexual minority MSM.

### **Suicide Ideation and Internalized Homophobia**

Experiences of homophobia (i.e., perceiving negative social representations and expressing discomfort with a negative coming out experience) threaten the effective incorporation of being gay within the overall identity structure (Breakwell & Jaspal, 2022). Thus, there is the risk that exposure to homophobia will adversely influence self-conceptualization and evaluation concerning one's sexuality, precipitating internalized homonegativity (see Breakwell & Jaspal, 2022). Internalized homophobia is a form of self-directed stigma that impacts sexual minority MSM at various stages of life. Sexual minority MSM youth (ages 25 years and under) have a two to three times higher risk for suicidal behavior than their peers, and public data are unable to provide a clear understanding of the psychosocial factors contributing to the unfavorable mental health indicators (De Lange et al., 2022; Meyer et al., 2021). For example, results from Postuvan (2019) showed that young sexual minority MSMs develop suicide ideation impacted by negative social environments (i.e., culturally inadequate medical visits) and inadequate community support, which lead the internalization by the individual based on their interactions. Internalized homophobia refers to people who are homophobic while also experiencing same-sex attraction themselves.

Tran et al. (2023) found that while studying loneliness, internalized homophobia was a salient psychosocial risk factor associated with distress exposure. Practitioners working with sexual minority men should encourage them to develop strategies to foster meaningful connections for social support to mitigate social issues. Sometimes, people may have negative attitudes and beliefs about those who experience same-sex attraction and then turn the negative beliefs in on themselves rather than come to terms with their desires. This may mean that they feel discomfort and disapproval with their same-sex attractions, never accept them, or never identify as lesbian, gay, or bisexual, which makes this population unique to public health research. Various types of homonegativity, such as victimization, rejection from significant others, and exposure to negative social representations of homosexuality, have been shown to increase the risk of depression, psychological distress, suicidal ideation, and self-harm in sexual minorities (Breakwell & Jaspal, 2022). Internalized homophobia is not fully understood in sexual minority MSM and the by address associations more can be done around prevention.

### **Suicide Attempt and Internalized Homophobia**

Suicide attempts and internalized homophobia has been researched in current literature with limited information on sexual minorities of color. Suicide risk may increase due to mental disorders exaggerated by being a member of many vulnerable groups (Haney, 2021). Internalized homophobia has been reported to be associated with psychological distress. When MSMs face societal stigma, MSMs may internalize this stigma and negative social representations of their sexual orientation, leading to a negative self-construal (see Breakwell & Jaspal, 2022). Suppose one believes social

representations of gay men are negative. In that case, one will experience more negative effects in recalling a negative coming-out experience as the negative cognitions will reinforce the negative effect (Breakwell, 2022). It has been found that recalling even a singular, isolated negative coming-out experience can threaten one's sense of identity (Jaspal et al., 2021). However, some groups of sexual minority MSM may never experience a coming out, limiting this information.

Suicide Attempts among sexual minority MSM are positioned in current research through interventions concentrating on HIV and PrEP, alcohol use, violence, and STI prevention (Kipke et al., 2020; Azucar et al., 2022). Previous scholarship refers to the importance of community connections and how they could protect against suicidality. With the number of disparities in sexual minority MSM, it is important to understand how to provide culturally appropriate treatment interventions to communities and maintain healthy identities, which have seen years of structural disadvantages (Smith et al., 2021). These disadvantages come with risks associated with decreased PrEP use, which can protect against HIV infection and suicidality (Ream, 2022). Therefore, additional information is needed to understand these structural influences and race-based policies and practices that impact sexual minority MSM.

### **Suicide Ideation and the Use of Alcohol**

Fish et al. (2019) and Oginni et al. (2018) were two authors that sought to identify associated factors in adult MSM across the U.S. and Nigeria, respectively. Fish et al. (2019) assessed differences in age rates by suicidal behavior among heterosexuals and sexual minorities (ages 18 years to 60 years) with anti-LGB discrimination and suicidal

behavior. Results indicate a critical period for suicide behavior risk for sexual minorities during young adulthood, with the highest rates of risk at age 18 years old followed by a steady decline until the early 40s (Fish et al., 2019); however, these results were limited to Lesbian, Gay, and Bisexual (LGB) participants. Oginni et al. (2018) researched internalized homophobia and perceived stigma. They found that they were predictors of depression in gay students and accounted for 14% of alcohol and other substance use and 31% of suicidal ideation (see Oginni et al., 2018). Both studies highlight that non-heterosexual individuals in developing countries can benefit from further research investigating the associations with suicide attempts.

Writz et al. (2022) examined experiences of violence victimization through behavioral, interpersonal, and biological means in a sample of black gay and bisexual same gender loving men but failed to consider those who may not identify with a specific sexual identity or have a sexual orientation identification preference. Results from the study reveal associations between negatively associated with self-efficacy of communicating with peers about men's health issues. Chan et al. (2021) studied syndemic of violence and alcohol use in sexual minority women and more studies are needed to understand the impact on populations of sexual minority MSM. The study reported that socially constructed attitudes and beliefs of appropriate behavior and roles was associated with harmful alcohol use and harmful sexual behaviors (see Chan et al., 2021). To better understand these effects in sexual minority MSM my study seeks to highlight the relationship of alcohol syndemic.



### **Suicide Attempts and Alcohol Use in Sexual Minorities**

Sexual orientation differences in childhood sexual abuse and suicide attempts have been studied in current literature. McCabe et al. (2022) highlighted relationships between childhood sexual abuse, sexual orientation discrimination, and suicide attempts citing the effects on alcohol, tobacco, and drug use. The study suggests that more emphasis is placed on factors such as childhood abuse because they produced greater odds of alcohol disorders in sexual minority and heterosexual men alike (McCabe et al., 2022). Similarly, Connor and Bagge (2019) researched associations of suicidal behavior, including suicide and suicide attempt, with alcohol use disorder (AUD) and acute use of alcohol among individual who dies by suicide. However, this study did not examine differences in sexual orientation. Alcohol has been reported to have a major role in cognitive constriction; a narrowing of attention to one's present emotional state and circumstances is another likely mechanism (Connor & Bagge, 2019). Results showed that approximately a quarter to a third of individuals who drank acutely before a suicide attempt reported doing so to facilitate the act of suicide by seeking to build courage, numb fears, or anesthetize the pain of dying. More information about this phenomenon in sexual minority MSM can improve prevention efforts.

Alcohol availability disproportionately impact sexual minority MSM and approaches for reducing disparities can advance health equity. Subbaraman et al. (2020) examined how state-level beverage-specific taxes and availability restrictions in the United States are associated with consumption and alcohol-related problems across race and ethnic groups. Results indicate that men and women of all racial groups are impacted,

and white men are the least impacted by government-controlled spirits sales or a neighborhood with lower bar density (Subbaraman et al., 2020). These effects are an important factor to consider when recommending future interventions. Washington et al. (2021) examined factors associated with alcohol use and condomless anal sex among sexual minority MSM reporting increased risky sexual behavior when using alcohol and being seven times more likely to report condomless anal sex. Interventions can be aimed at improving communication efforts to moderate alcohol and reducing suicide promoting behaviors.

### **Suicide Ideation and Consequences on Age**

The data on lifetime prevalence and age at the onset of suicide ideation and attempts among sexual minority MSM of color in the United States is inadequate. Researchers identified that with limiting information, the creation and evaluation of interventions to reduce suicide among populations of Black Americans, not regarding sexual orientation, must be improved (Jackson et al., 2022; Kipke et al., 2022). Wolford-Clevenger and Cropsey (2020) studied distal risk factors, such as alcohol use, in the presence of proximal risk factors, such as depressive symptoms by suicidal ideation. The authors identified that among black men, regardless of their sexual orientation, the risk is increased for suicide ideation and attempts when they enter the carceral system, which can begin at very early ages for black men. Results revealed that early onset of alcohol use and moderate to severe depressive symptoms might increase the risk of suicidal ideation and should be carefully assessed and monitored by health professionals (Wolford-Clevenger & Cropsey, 2020). The current study seeks to determine if the are

differences in ages groups by three cohorts of sexual minority MSM, which can further explain the age gaps in suicide behavior.

### **Suicide Attempt and Differences in Age**

With consistently elevated rates of suicide attempts and risk-increasing behaviors, lesbian, gay, and bisexual sexual minorities, regardless of their age, may expressly benefit from enhanced prevention, identification, and treatment of suicide risk (Wolford-Clevenger et al., 2020). Wilton et al. (2018) studied childhood abuse history, psychological distress, outness, and sexuality discrimination finding these factors significantly related to suicide attempts among young MSM and transwomen. As previously mentioned, sexual minority MSM does not usually identify as LGBTQ; therefore, understanding age differences can promote more targeted interventions that are culturally appropriate.

### **Suicide Ideation, Suicide Attempts, and Income**

Few studies focused on income levels and suicide ideation in sexual minority MSM. However, without controlling for sexual orientation, Johnson et al. (2018) examined compassion-based meditation in low-income African American men and women ( $n = 59$ ) who had recently attempted suicide. The study revealed that compassion meditation might provide an alternative positive behavior that can replace an individual's automatic self-critical thoughts with a habit that can strengthen self-critical responses (see Johnson et al., 2018). Rosentel et al. (2020) similarly found that LGBTQ Black/African American, Hispanic/Latino, and poor to low-income Chicago residents disproportionately suffered by not having access to care and prevention services in their

communities, which increased service deserts. If findings develop as predicted, they will supplement the current understanding of effective interventions for suicidal sexual minority MSM at various income levels.

Literature on suicide attempts and income in sexual minority MSM can benefit from the current study. The existing research currently focuses on females and low-income adult non-LGBT suicide attempters. Zhang et al. (2019) studied self-compassion as a resilience factor with implications for positive mental health outcomes among ( $n=147$ ) urban, low-income sexual minority MSM with a recent suicide attempt without controlling for sexual orientation. Results from this cross-sectional study revealed that self-criticism was positively associated with depressive symptoms and negatively associated with self-compassion, and self-compassion was negatively associated with depressive symptoms (see Zhang et al., 2019). Suggestions for further research include improving the understanding of ways that self-compassion-focused interventions by applying mechanisms that are consistent with a positive psychology framework (Watson-Singleton et al., 2019; Zhang et al., 2019). The current study will seek to better understand the relationships between suicide attempts and income of sexual minority MSM.

### **Suicide Ideation and Levels of Education**

Being a racial and sexual minority has implications at various education levels. Smith et al. (2021) examined exposure to gun violence fatality, and 23.8% of respondents positively endorsed having known someone who died due to gun violence. This percentage varied across demographic groups, highlighting that violence and exposure to

fatality from gun violence can disproportionately impact Black or Latinx individuals, younger, and of lower income and educational attainment (see Smith et al., 2021). Culturally responsive trauma-informed care was proposed to improve suicide outcomes; understanding these results can be beneficial to suicide research in sexual minority MSM as well. Downing et al. (2020) studied education attainment as a covariant and found no significant racial/ethnic differences in educational attainment by exposure to violence and suicide ideation. Similarly, Pereira (2020) studied a sample of sexual minority men in Portugal, where 68% of the sample ( $n=202$ ) achieved a higher level of education. Results suggest that lifelong exposure to experiences of stigmatization may have a particularly negative impact on older sexual minorities of color. The results of the study support the need to examine other relationships that education have on suicide outcomes among at-risk sexual minorities like sexual minority MSM throughout the life course.

### **Suicide Attempt and Lack of Education**

Lower levels of educational attainment, income, and unemployment are associated with greater suicide attempts in both developed and developing countries (Zelaya et al., 2021). Madrigal et al. (2021) were one of the few studies highlighting education levels and suicide-related behavior in sexual minority men, but none of their data related to sexual minority MSM. Most current literature explains differences in suicide attempts and education levels in transgender LGBTQ individuals. Homosexual experience in people with mental disorders is associated with increased suicide attempts, but no significant relationships were found with education (see Madrigal et al., 2021).

Understanding the relationships between suicide attempts and educational attainment can add to the current literature.

### **Suicide Ideation and Experiences With Employment**

Suicidal thoughts are linked to experiencing stressful transitional life events. Milton et al. (2020) examined differences between sociodemographic predictors and how coping responses after experiencing a stressful transitional life event predict suicide ideation and other suicide-related behaviors. The study had an international scope, focusing on males and females, and did not control for sexual differences. The significant sociodemographic-adjusted risk factors for the men in the study included unemployment, suddenly losing a job, or becoming a first-time parent (see Milton et al., 2020). These factors increased suicide ideation risk and suicide behavior in men regardless of race, ethnicity, and sexual orientation. Kipke et al. (2020) additionally highlight in their study that the onset of stress and stressful life events (i.e., racism and discrimination) are a key underlying mechanism that increases Black and Latino YMSM risk for tobacco, alcohol, and mental health issues provoking suicide ideation or attempts of suicide. This assertion is supported by a growing literature suggesting that discrimination, racial bias, and stigma in domains such as employment status are linked with suicide ideation in sexual minorities (Kipke et al., 2020). The current study seeks to examine those differences further.

### **Suicide Attempt and Employment Status**

English et al. (2022) and Layland et al. (2022) studied associations between formal employment status, anti-LGBTQ policies, and structural racism in sexual minority

MSM and other minority men. English et al. (2022) applied within-group and between-group comparisons identifying evidence that policies impact young sexual minority MSM but did not find evidence for policy effects among White MSM. Also, the identified interlocking systems of oppression and opportunities for future research on suicidal ideation where the researcher is encouraged to examine anti-LGBTQ policies and structural racism in sexual minority MSM to advance health equity (see English et al., 2022). On the other hand, socioeconomic burdens such as financial strain, unemployment, and stigma erode the health of Black and Latino sexual minority men (Layland et al., 2022). According to Layland et al. (2022), 65% of their sample population reported unemployment. Furthermore, the odds of unemployment harmed overall health by increasing sleep and gastrointestinal disorders and mental health outcomes like suicide ideation, which had the highest results.

### **Adverse Childhood Experiences and Alcohol Use Disorders**

Heavy drinking and other drug use are risk factors for suicidal behavior. Among a sample of African American college-age men, findings indicated that stressful life events negatively influence their mental health; when unaddressed, this distress can become emotionally impairing, negatively impacting an individual's psychological well-being and mental health (see Williams et al., 2022). Earlier studies that informed substance use during young adulthood found significant relationships that can negatively affect adult suicide behavior in black men exposed to childhood adversity. The sexual orientation and gender differences around this idea are not reported in the current research.

Wiss et al. (2022) are one of the few researchers who sought to understand the relationship that adverse childhood experiences and alcohol use disorders have on men who have sex with men, reporting that there is a positive association between household dysfunction and drug use, but the perception of social support moderated these results. Mulia et al. (2019) sought to understand the influence of educational attainment on heavy alcohol use in sexual minority MSM, citing that childhood socio-economic disposition is associated with subsequent, adverse socio-economic and school experiences leading to lower educational attainment and, ultimately, more substantial drinking.

### **Internalized Homophobia and the Use of Alcohol**

A high prevalence of a history of alcohol use and binge drinking has been found to exist among populations of minority MSM. Xu et al. (2019) found that minority populations like Chinese MSM reported a high prevalence of alcohol use and associations with internalized homophobia but did not test these relationships among sexual minority MSM. Risk factors across racial and ethnic groups of sexual minority men exist. The study revealed examined that history of alcohol use and frequency of binge drinking in the previous six months and assessed their relationship with internalized homophobia, stigma, and greater drug use issues finding that 62.1% of respondents had a history of alcohol use; 30.7% were current infrequent binge drinkers; and 13.6% were current frequent binge drinkers (see Xu et al., 2019). Alcohol use is explained by various factors in current research but understanding other relationship in sexual minority MSM can increase knowledge.



Similarly, Watson et al. (2019) reported on MSM youth finding associations between known minority stressors and alcohol use. Results show that victimization and stigma increase alcohol use in young MSM. Understanding the sexual minority MSM communities and the cluster of factors that influence their suicide related outcomes may assist in bridging the knowledge gap around suicide outcomes, and help orient further research on this unique subgroup of sexual minorities. At the hand of multiple epidemics and social factors that prevents resilience in this community is a huge public health concern. Use of this study can inform other barriers that ultimately effect suicidality in sexual minority MSM of color.

### **Definitions**

*AAMSM*: African American men who have sex with men (CDC, 2022).

*Adverse Childhood Experiences*: Traumatic events that occur in childhood (0-17 years) such as experiencing violence, abuse, or neglect; witnessing violence in the home; and having a family member attempt or die by suicide (CDC, 2022).

*Cisgender*: Individuals whose current gender identity is the same as the sex they were assigned at birth (CDC, 2022).

*LGBTQ*: Lesbian, gay, or bisexual, transgender, and questioning persons who are diverse, come from all walks of life, and include all races and ethnicities, ages, socioeconomic statuses, and parts of the country (CDC, 2022).

*MSM*: Men who have sex with men. This term is often used clinically to refer to sexual behavior alone regardless of sexual orientation; for example, a person might identify as heterosexual but still be classified as MSM (CDC, 2022).

*Sexual Minority:* Individuals who identify as gay, lesbian, or bisexual, or who are attracted to or have sexual contact with people of the same gender (CDC, 2022).

*Suicidal ideation:* Thinking about, considering, or planning suicide (APA, 2023).

*Suicidality:* The risk of suicide, usually indicated by suicidal ideation or intent, especially as evident in the presence of a well-elaborated suicidal plan (APA, 2023).

*Suicide attempt:* A deliberate but unsuccessful attempt to take one's own life (APA, 2023).

*Syndemic:* Multiple, co-occurring, and synergistic conditions (Singer et al., 2017)

### **Assumptions**

This study was based on three assumptions. First, the survey instruments used to collect data from the 2016–2019 Inter-university Consortium for Political and Social Research (ICPSR) data provided accurate measures of the variables. Second, respondents were born cisgender males and a minority of color who has sex with men and had suicide ideation or one or more suicide attempts in the past 12 months. Third, participants did not identify as transgender.

### **Scope and Delimitations**

The current study was limited to non-white sexual minority MSM living in the United States who were cisgender males and did not include transgender males. The scope was also limited in nature and used descriptive and inferential statistics that yielded conclusions that were only generalizable to sexual minority MSM adults in the United States.

### **Limitations**

One of the limitations to this study was applying findings to the greater population using secondary data to represent the population of interest. Another limitation was understanding the various uses of suicidality to define cultural dynamics based on the survey responses which may not apply to the sociocultural aspects of all racial-ethnic sexual minority MSM. To prevent any bias, this study did not include transgender males whose lived experiences differed from that of their non-transgender peers.

### **Significance of the Study**

Research on suicidality among sexual minority MSM has shown the factors that contribute to suicide risk among this population need further exploration. Understanding the associations with suicidality among sexual minority MSM can improve mental health programs and services, community support, and policies to ameliorate suicide-related risk (CDC, 2021). This study can contribute to social change through awareness of suicidality and other risk factors of suicide among sexual minority MSM. It can also help bridge gaps in mental health and suicide prevention to address the equity and disparities in vulnerable sexual minorities of color (Wilton et al., 2018). Previous research was limited to MSM with HIV, white MSM, and emerging age groups MSM which makes this study significant. Furthermore, as suicide rates continue to increase among MSM, research focusing on sexual minority MSM is needed to inform interventions and to increase awareness of the SI risk in their community. Findings from this study will provide a contemporary theoretical framework for understanding the factors that negatively impact

rates of suicide in this population and may be used by healthcare professionals, mental health advocates, and other stakeholders to promote positive social change.

### **Summary**

In section 1 of this study, I presented the foundations of the study on suicidality among cisgender sexual minority MSM, based on gaps in knowledge and practice. This was followed by the problem statement, the purpose of the study, research questions and hypotheses, theoretical foundations, nature of the study, literature search strategy, and literature review. The literature review provided information on studies that have been explicitly related to suicide ideation, which helped understand how researchers or scholars in the discipline have previously approached the problem while highlighting the strengths and weaknesses in their approaches. The literature review revealed that this topic has been researched in several fields, but no study has specifically observed these factors using the 2016-2019 Inter-university Consortium for Political and Social Research (ICPSR) dataset among cisgender adult sexual minority MSM of color.

The foundations of the study on suicide ideation and suicide attempts among sexual minority MSM, based on gaps in knowledge and practice, are presented in Section 1 of this study. This is followed by the problem statement, the purpose of the study, research questions and hypotheses, theoretical foundations, nature of the study, literature search strategy, and literature review. The literature review includes studies specific to suicidality, which shows how researchers or scholars in the discipline have previously addressed the problem and highlights the strengths and weaknesses in their approaches. It

revealed that this topic has been researched in several fields, but no study has observed the 2016–2019 ICPSR data among adult sexual minority MSM.

## Section 2: Research Design and Data Collection

The purpose of this quantitative study was to examine the relationships between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation and suicide attempts among cisgender sexual minority men of color. The IVs were adverse childhood experiences, internalized homophobia, and alcohol use, and the DVs were suicide ideation and suicide attempt (suicidality). The control variables were age, income, education, and employment. Section 2 includes the research design and rationale, methodology (including population, sampling procedures, and operationalization of variables), the data analysis plan, threats to validity, and ethical procedures.

### **Research Design and Rationale**

This study was a cross-sectional examination of the association between the IVs (adverse childhood experiences, internalized homophobia, and alcohol use) and the DVs (suicide ideation and suicide attempts). The control variables were age, income, education, and employment. A cross-sectional approach was appropriate to capture a possible association in contributing factors. The target population was sexual minority cisgender men of color.

To answer the research questions, I collected 2016-2019 secondary data from ICPSR contractor Gallup Inc., which is referred to as the Generations data throughout the current study. The Generations participants were recruited using the Gallup Daily Tracking Survey, and participants were screened and enrolled in the study between March 28, 2016 and March 30, 2017. Also, Black and Latino respondents were screened

and enrolled between April 1, 2017 and March 30, 2018 to ensure representative samples of sexual minorities. Generations employed a longitudinal design, but I used a cross-sectional design. Farlatte (2018) explained that researchers using the cross-sectional approach can examine numerous characteristics simultaneously among variables. The cross-sectional nature of the current study made it cost-effective and less complicated to conduct because multiple measurements could be taken simultaneously. The use of the cross-sectional design to document the prevalence of suicide ideation in this study was consistent with research strategies to provide information about suicide prevention in the study population. Use of secondary data reduced the amount of time needed to create survey instruments and collect data.

## **Methodology**

### **Population**

The Generations data set was used to assess whether younger sexual minorities differed from older cohorts of sexual minorities in how they viewed their sexual minority identity and experienced stress related to prejudice and everyday discrimination and how that impacted their well-being and overall mental health (Meyer et al., 2020). For the current study, I focused on all three generations of sexual minority men of color (Asian, Black/African American, Hispanic/Latino, Middle Eastern, Native Hawaiian/Pacific islanders, American Indian, and multiracial). In total, 366,644 participants were screened for inclusion in the data (see Meyer et al., 2020). Respondents were eligible U.S. adults who identified as lesbian, gay, bisexual, queer, or same-gender loving and not transgender. Also, participants were ages 18–25 years, 34–41 years, and 52–59 years.

The final Generations baseline sample size was 706, which included participants across three generations of cisgender sexual minority men of color.

### **Sampling Procedures**

Gallup used a dual-frame sampling procedure, which included random-digit dialing to reach both landline and cellphone users, as well as an additional random selection method for choosing respondents with landlines (Meyer, 2020). Gallup stratified that list to ensure that the unweighted samples were proportionate by U.S. Census region and time zone. Gallup weighted the data daily to compensate for disproportionalities in nonresponse and selection probabilities. The self-administered survey was completed online via link sent by email or on paper via mailed questionnaire to all eligible Generations respondents. This data are publicly available, and all variables were used to conduct the current study.

Generations was an appropriate data set because of its national representation and because it was funded by a grant from the National Institute of Child Health and Human Development and supplemental grants from the National Institutes of Health, Office of Behavioral and Social Sciences Research, and the Office of Research on Women's Health. Several items from the Generations study were part of validated scales designed to measure constructs relevant to identity, stress, and health. All of the scales in the Generations survey were calculated from individual variables. The reliability of each scale was assessed with Cronbach's alpha for the entire sample and then by sex at birth, cohort, and race/ethnicity, respectively. For the current study, a subsample of the original



Generations data ( $N = 269$ ) was used. The minimum sample size of 152 for this research was calculated from an a priori power analysis utilizing G\*POWER.

### **G Power Analysis**

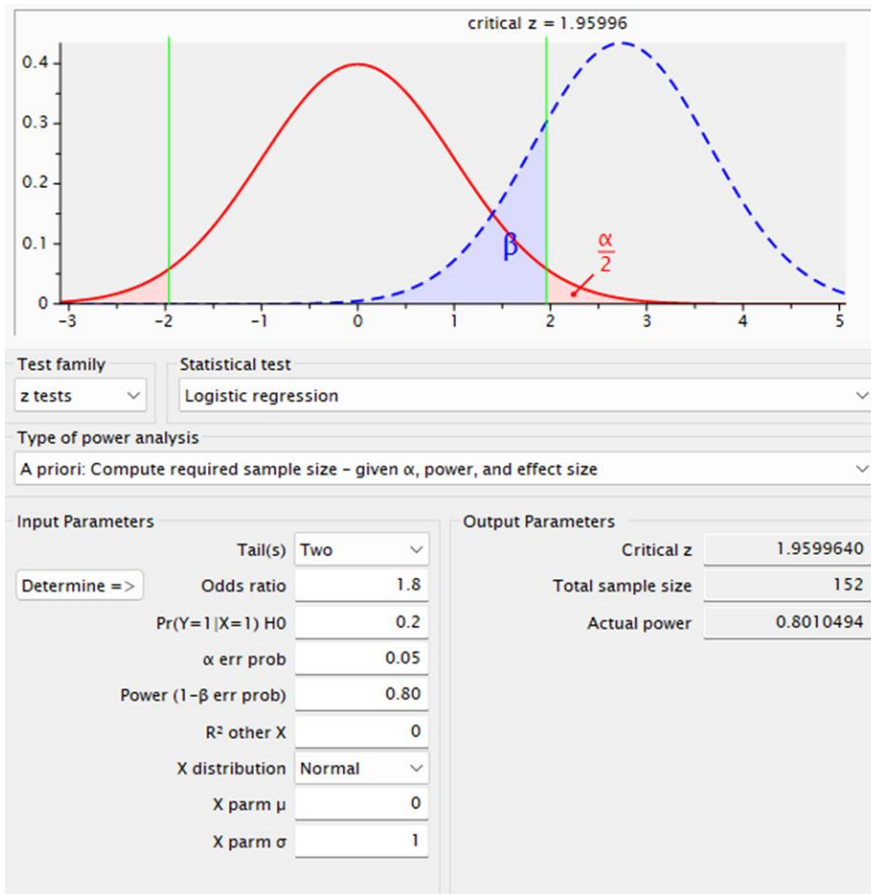
I completed a power analysis using the G\*Power application to determine the sample size, effect size, alpha level, and power level appropriate for the DVs of suicide ideation and suicide attempt (see Figure 7). Performing sample size determination by power analysis requires effect size, desired Type I error rate ( $\alpha$ ) that is often set at  $p < .05$ , and the power, which is based on the desired Type II error rate, which is conventionally set at 95% (Chen et al., 2010). To determine the sample size for the ordinal logistic regression analysis of the data set for this research, I used the G\*Power application (see Chen et al., 2010). I conducted separate power analyses for each research question. For RQ1, I selected  $z$  test as the test family and logistic regression as the statistical test. As shown in Figure 7, power was set to .80, the desired Type I error rate ( $\alpha$ ) was set to .05, odds ratio was set to 1.8, and the two-tailed hypothesis direction was selected based on the nondirectional hypothesis for this research. The minimum sample size of 152 was calculated from an a priori power analysis utilizing G\*POWER (see Figure 7).

For RQ2, I selected  $z$  test as test family and logistic regression as the statistical test. Figure 8 shows the power analysis for critical  $z$  logistic regression. Power was set to .80, the desired Type I error rate ( $\alpha$ ) was set to .05, the odds ratio was set to 1.8, and the two-tailed hypothesis direction was selected based on the nondirectional hypothesis for this research. Figure 9 shows the sample size calculation for RQ2 in G\*Power. The

minimum sample size of 107 for this question was calculated from an a priori power analysis utilizing G\*POWER (see Figure 9).

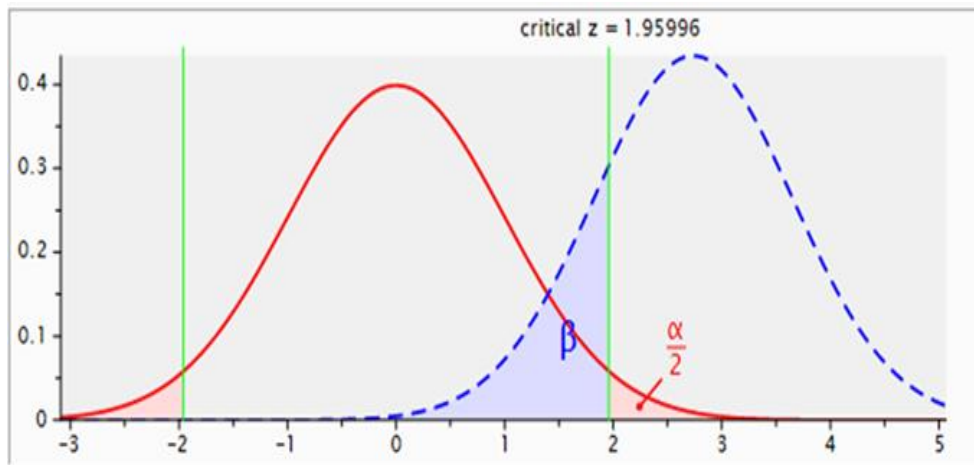
### Figure 7

#### *Sample Size Calculation for RQ1 Predictor in G\*Power 3.1*

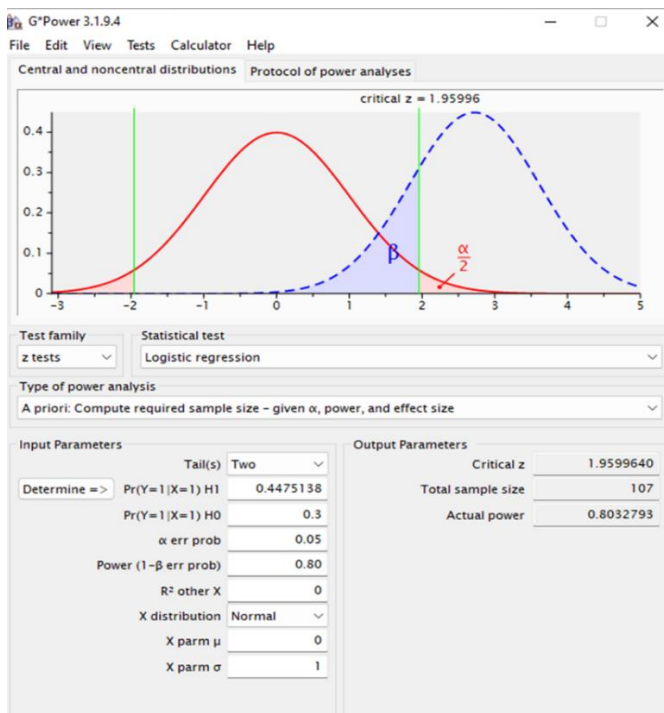


**Figure 8**

*Power Analysis Critical Z: Logistic Regression*

**Figure 9**

*Sample Size Calculation for RQ2 Predictor in G\*Power 3.1*



## Operationalization

As shown in Appendix, the IVs were adverse childhood experiences, internalized homophobia, and alcohol use. The DVs were suicide ideation and suicide attempts. The covariates included age, income, education, and employment.

Adverse childhood experiences were assessed in the data set. Adverse childhood experiences were defined by asking respondents to “look back before you were 18 years of age; how often did your parents or adults in your home ever slap, hit, kick, punch, or beat each other up?” Available response options were 3-point Likert scales (*never to more than once*). All items were dichotomized to create a summary adverse childhood experiences score (1 = *sometimes*, 2 = *more than once*, 0 = *never*).

Internalized homophobia was assessed by the degree to which respondents accepted stigma as a part of their value systems (see Meyer et al., 2020). Scale items included “I have tried to stop being attracted to people of the same sex as me.” Available response options were 3-point Likert scales (*never to more than once*). Adverse childhood experiences were calculated from responses (1 = *sometimes*, 2 = *more than once*, 0 = *never*).

Alcohol use was assessed in the data set and defined using the Alcohol Use Disorder Identification Test, a 3-item scale designed to identify people with dangerous drinking behavior or who have active alcohol use disorders (see Meyer et al., 2020). The scale items were “How often do you have a drink containing alcohol?” (*never* [0 points], *monthly or less* [1 point], *2–4 times a month* [2 points], *2–3 times a week* [3 points], *4 or more times a week* [4 points]), “how many standard drinks containing alcohol do you

have on a typical day?” (*none* [0 points], *1 or 2* [0 points], *3 or 4* [1 point], *5 or 6* [2 points], *7 to 9* [3 points], *10 or more* [4 points]). The scale was then created as the sum of all variables in the scale. Any respondents failing to answer any single item in the scale were recorded as “missing” on the resulting scale score.

Suicide ideation was one of the DVs. Responses to the question defined it as, “Did you ever have any intention to act on thoughts of wishing you were dead or trying to kill yourself?” Response options were *never* = 0, *yes, once* = 1, or *yes, more than once* = 2.

### **Data Analysis Plan**

Data were analyzed using IBM Statistical Package for the Social Sciences (SPSS) software Version 28 with an alpha level of 0.05 for statistical significance. Quantitative analysis aided in assessing research findings from a secondary data set to identify key outcomes. Once the data were uploaded into SPSS, I determined their completeness and accuracy. Any missing or invalid data were addressed by using the SPSS function for listwise deletion, which ensured the missing cases were dropped rather than being deleting completely from the data. Inferential statistics informed the outcomes of statistical tests to evaluate the hypotheses and related to the outcomes obtained from the sample. A priori analysis was the optimal power analysis for sample size and calculation because it controls Type I and Type II errors for the null and alternative hypothesis (Kang, 2021). I made inferences about the population from the sample size. To investigate the independent associations of adverse childhood experiences, internalized

homophobia, and alcohol use with suicidal ideation, and suicide attempt, I conducted separate binary logistic regressions including covariates.

***Research Question 1 and Hypothesis***

RQ1: Is there a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation among sexual minority men of color when controlling for age, income, education, and employment?

$H_01$ : There are no relationships between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation among sexual minority men of color when controlling for age, income, education, and employment.

$H_{a1}$ : There is a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation among sexual minority men of color when controlling for age, income, education, and employment.

***Research Question 2 and Hypothesis***

RQ2: Is there a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide attempts among sexual minority men of color when controlling for age, income, education, and employment?

$H_02$ : There are no relationships between adverse childhood experiences, internalized homophobia, alcohol use, and suicide attempts among sexual minority men of color when controlling for age, income, education, and employment.

$H_{a2}$ : There is a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide attempts among sexual minority men of color when controlling for age, income, education, and employment.

For the current study, two ordinal logistic regressions models were used to examine the relationships between adverse childhood experiences, internalized homophobia, and alcohol use and suicide ideation among sexual minority men of color, as well as the relationship between adverse childhood experiences, internalized homophobia, and alcohol use and suicide attempts among sexual minority men of color. In addition, odds ratios were calculated to estimate the measure of association between adverse childhood experiences, internalized homophobia, and alcohol use, and the measure of association between suicide ideation and suicide attempts while controlling for age income education and employment.

Four assumptions were considered and met when conducting the ordinal logistic regression. The first two assumptions relate to the study design and the measurements, and the second two assumptions relate to the characteristics of the data collected and how the data fits the model. The first assumption is that one dependent variable is measured at the ordinal level. The second assumption is that one or more independent variables that are continuous, ordinal, or categorical, including the dichotomous variables. The independent variables and covariates included in this study were ordinal and nominal. Ordinal logistic regression was used to predict if the ordinal dependent variable given one or more independent variables. More specifically, it will help (a) determine which of your independent variables (if any) have a statistically significant effect on your dependent variable; and (b) determine how well your ordinal logistic regression model predicts the dependent variables (Laerd Statistics, 2023). I did not need to test for multicollinearity because no continuous independent variables existed.

### **Threats to Validity**

The Generations dataset employed weighted analyses such as stratified sampling to consider unequal selection probabilities and nonresponse adjustments to ensure an accurate sample population representation and reduce errors (see Meyer, 2021). Also, a dual-frame sampling procedure was conducted, including random digit dialing (RDD) and a random selection method for choosing respondents with landlines (Meyer, 2020). Sample weight was applied and was generalizable to the U.S. population of sexual minorities such as lesbian, gay men, and bisexual adults ages 18 years to 60 years old. No stratification or cluster weights were identified. To increase the sample size, all respondents that fit the study perimeters will be included, making the results more generalizable. ICPSR data undergoes a confidentiality review and are altered when necessary to limit the risk of disclosure.

### **Ethical Procedures**

Permission to conduct the current study will be obtained from the Walden University Institutional Review Board. Access to data is not restricted for this study as analysis will be conducted on data that is available to the public. ICPSR routinely creates ready-to-go data files with setups in major statistical software formats and standard codebooks that accompany the data at no cost. The database is updated quarterly and is accessed by qualitative and quantitative researchers worldwide. IRB approval is granted under approval number 06-05-23-1043383. Additionally, the folder containing the data will be password protected and secured for the duration of the study. There are not identifiable ethical implications to report that would cause a conflict of interest.



## **Summary**

This section explains the research design and rationale, research methodology, the survey instrument, primary data collection, statistical analysis plan, threats to external and internal validity, and ethical concerns. The purpose of the study, research questions, and hypotheses were restated. The sampling frame used by ICPSR and analysis tools to select the study population were described, emphasizing defining the study population, operationalizing the dependent and independent variables, and data management procedures. The next section will conduct an objective review of the results and findings of the data collected for the current study.

### Section 3: Presentation of the Results and Findings

The purpose of this quantitative study was to determine whether there was a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation and suicide attempts among sexual minority men of color. The IVs were adverse childhood experiences, internalized homophobia, and alcohol use, and the DVs were suicide ideation and suicide attempt (suicidality). The control variables were age, income, education, and employment. Two research questions were answered using ordinal logistic regression.

In Section 3, the outcomes of the study are outlined. I describe the procedures for accessing the secondary data set, baseline descriptive statistics and frequencies, discrepancies from the original plan, and the results of the analysis. The section concludes with a summary of the findings.

#### **Accessing the Data for Secondary Analysis**

The secondary Generations data were included to examine three generations by understanding the life and health of sexual minority individuals between 2016 and 2019 in the United States (see Meyer, 2020). Responses from females were not included in the final analysis, and responses from White males were not included. Results were based on 269 sexual minority men of color included in the final data. Respondents who were included in the final sample were Asian, Black/African American, Hispanic/Latino, Middle Eastern, Native Hawaiian/Pacific Islander, American Indian, and multiple race individuals. Only responses from cisgender males were included. These data were representative of the population targeted for the study and the variables necessary to test

the hypotheses. Per the G\*Power application analysis, the final sample size was large enough to conduct the study.

There were a few discrepancies with the final data. The final study sample included racial and sexual minority men of color as described by the Generations data set. To ensure the study was generalizable to my population of interest, White males and females were not included in the study. The number of sexual minority men of color who responded to the survey was 269. I conducted ordinal logistic regression to determine which IVs (if any) has a statistically significant effect on the DV. For the continuous IVs, I interpreted how a single unit increased or decreased in that variable associated with the odds of the DVs having a higher or lower value. Mean, standard deviation for continuous variables, and proportion were calculated for categorical variables. Ordinal logistic regression with odds ratio at 95% confidence interval was used to measure the magnitude of association and prediction for IVs.

## **Results**

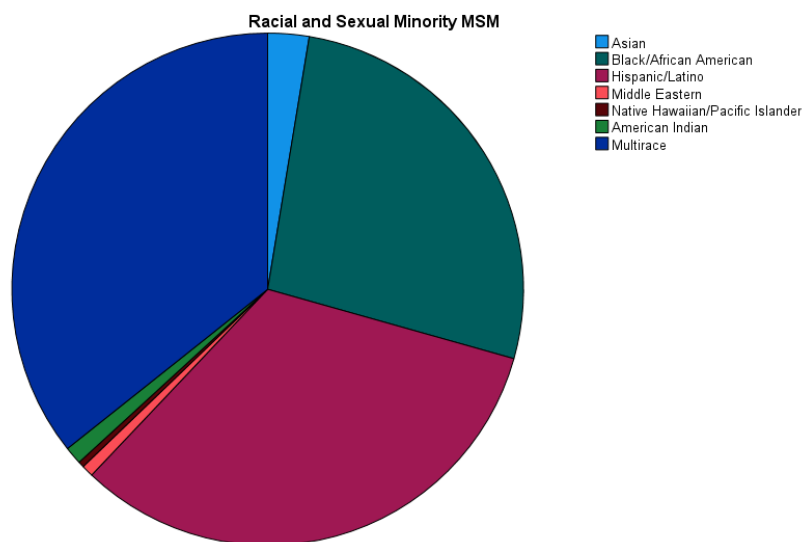
### **Descriptive Statistics IV**

As shown Figure 10, the final sample was 269 sexual minority men of color in the Generations data set: Asian (2.6%), Black/African American (26.8%), Hispanic/Latino (32.7%), Middle Eastern (0.7%), Native Hawaiian/Pacific Islander (0.4%), American Indian (1.1%), and respondents with multiple races (35.7%). In the Figure 11, the frequency of distribution for the predictor variable adverse childhood experiences variable is represented: 51.3% responded *never*, 10.4% responded *once*, and 32% responded *more than once*. In Figure 12, the frequency of distribution for the predictor

variable internalized homophobia is shown: 45.4% strongly disagreed that they had tried to stop being attracted to someone who is the same sex, 11.9% somewhat disagreed, 4.8% neither agreed nor disagreed, 21.6% somewhat agreed, and 13.8% strongly agreed. In Figure 13, the frequency of distribution for the predictor variable alcohol use is shown. Among the sample, 12.6% responded *never*, 30.1% responded *monthly or less*, 27.9% responded *2–4 times a month*, 16.7% responded *2–3 times a week*, and 9.7% responded *4 or more times a week*.

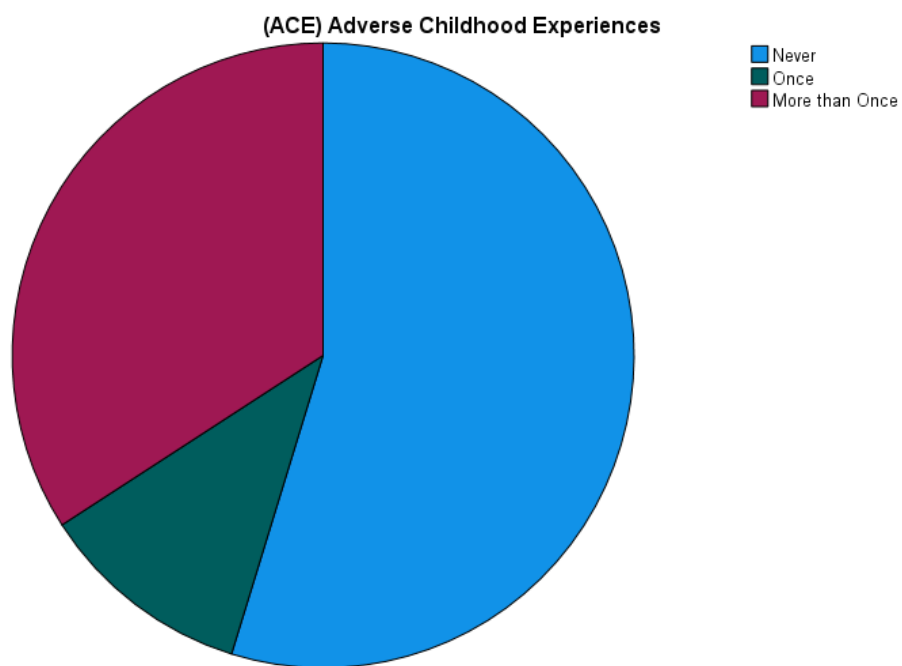
### Figure 10

*Frequency of Distribution by Racial and Sexual Minority MSM*



**Figure 11**

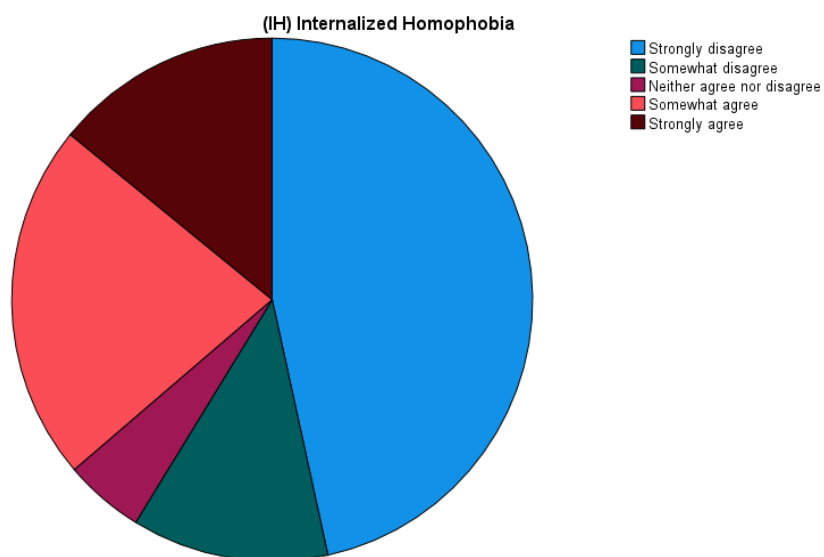
*Frequency of Distribution for Adverse Childhood Experiences*



*Note.* The question was as follows: Before the age 18 did parents or adults in the home ever slap, hit, kick, punch, or beat you?

**Figure 12**

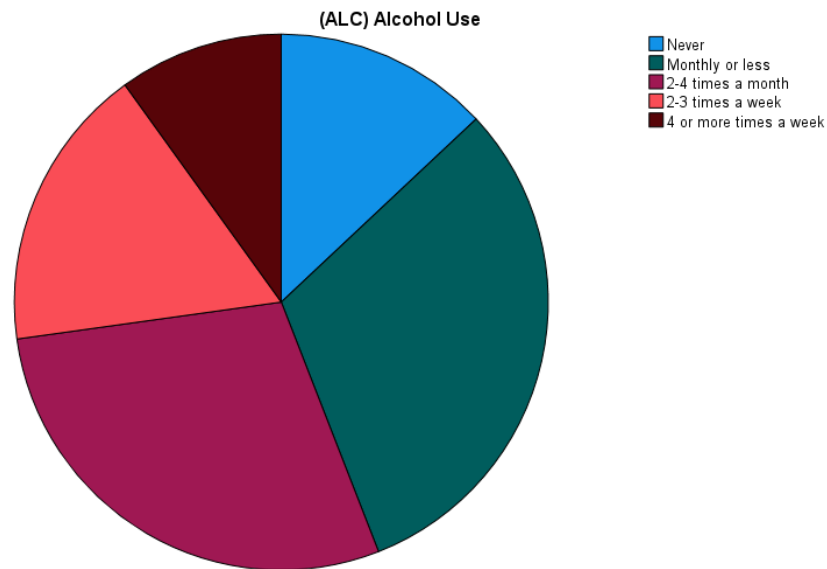
*Frequency of Distribution for Internalized Homophobia*



*Note.* The prompt was as follows: I have tried to stop being attracted to the same sex as me.

**Figure 13**

*Frequency of Distribution for Alcohol Use*



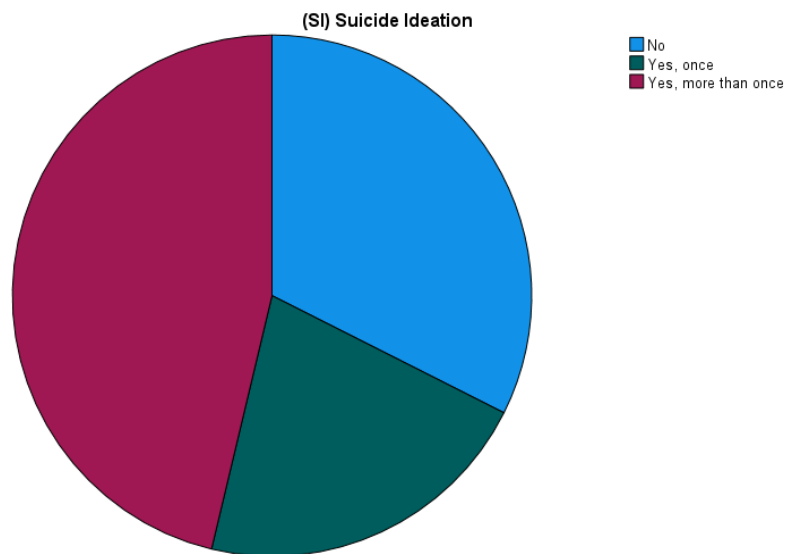
*Note.* The question was as follows: How often do you have a drink containing alcohol?

### **Descriptive Statistics DV**

Figures 14 and 15 show the frequency of distribution for the ordinal outcome variables suicide ideation and suicide attempt. For suicide ideation, 29.7% responded *no*, 21.6% responded *yes, once*, and 45.7% responded *yes, more than once*. For suicide attempt, 72.9% responded *no*, 20.2% responded *yes, once*, 4.8% responded *yes, more than once*, and 1.4% of the responses were missing.

**Figure 14**

*Frequency of Distribution for Suicide Ideation*

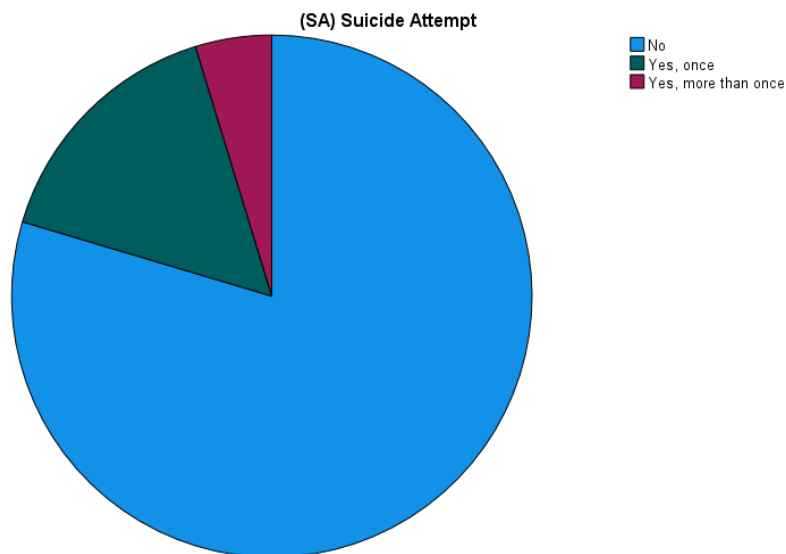


*Note.* The question was as follows: Did you ever in your life have thoughts of killing yourself?



**Figure 15**

*Frequency of Distribution for Suicide Attempts*



*Note.* The question was as follows: Did you ever make a suicide attempt (i.e., purposefully hurt yourself with at least some intention to die)?

### **Assumptions**

The four assumptions that were considered when conducting the ordinal logistic regression were met when conducting the final analysis. The first assumption was that one dependent variable is measured at the ordinal level (Laerd Statistics, 2015). For both research questions in the current study, the DVs were ordinal. Responses were scored on a Likert scale. The second assumption was that one or more IVs are continuous, ordinal, or categorical, including the dichotomous variables (Laerd Statistics, 2015). The IVs adverse childhood experiences, internalized homophobia, and alcohol use were ordinal. Missing responses were left uncoded to prevent any bias in the results.

### **Research Question 1**

An ordinal regression analysis was conducted to investigate whether there was a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation among sexual minority men of color when controlling for age, income, education, and employment. SPSS Version 28 was used for this analysis.

RQ1: Is there a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation among sexual minority men of color when controlling for age, income, education, and employment?

$H_0$ 1: There are no relationships between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation among sexual minority men of color when controlling for age, income, education, and employment.

$H_a$ 1: There is a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation among sexual minority men of color when controlling for age, income, education, and employment.

The Case Processing Summary in Table 1 provides the proportion of cases falling at each level of the suicide ideation. The Model Fitting in Table 2 contains the -2 Log Likelihood for an Intercept only (or null) model and the Full Model (containing the full set of predictors). Also, the likelihood ratio chi-square test whether there is a significant improvement in fit of the Final model relative to the Intercept only model (Laerd Statistics, 2023). In this case, we see a significant improvement in fit of the final model over the null model [ $\chi^2(11) = 24.304, p = 0.12$ ]. The Goodness of Fit in Table 3 contains the Deviance and Pearson chi-square tests. These tests are useful for determining whether

a model shows good fit to the data (Laerd Statistics, 2023). In this analysis, both the Pearson chi-square test [ $\chi^2(437)= 451.923, p=.301$ ] and the deviance test [ $\chi^2(437)= 454.330, p=.274$ ] were both non-significant. These results suggest good model fit. The Table 4 shows the pseudo-R-square values that are treated as rough analogues to the R-square value in this model. In general, there is no strong guidance in the literature on how these should be used or interpreted (Laerd Statistics, 2023). In this study there has been a 4.1% improvement in the predication of outcome based on the predictors in the comparison to the null model.

In the parameters estimates (Table 5), the regression coefficients and significance tests for each of the independent variables in the model are depicted. Adverse childhood experiences was a significant positive predictor of suicide ideation. For every one unit increase on adverse childhood experiences, there is a predicted increase of .380 in the log odds of being in a higher suicide ideation category. This indicates that an individual scoring higher on adverse childhood experiences were more likely to indicate greater suicide ideation. Internalized homophobia was a significant positive predictor of suicide ideation. For every one unit increase on internalized homophobia, there was a predicted increase of .156 in the log odds of being in a higher suicide ideation category. This indicates that an individual scoring higher on internalized homophobia were more likely to indicate greater suicide ideation. Alcohol use was not a significant negative predictor of suicide ideation. Age, income, employment, and education were covariates in the model. Age was a significant negative predictor of suicide ideation. For every one unit decrease on age, there was a predicted decrease of -.020 in the log odds of being in a

higher suicide ideation category. This indicates that an individual scoring higher on age were less likely to indicate greater suicide ideation. Income, employment, and education were not significant predictors in the model. When the result of the Test of Parallel lines (i.e., assumption of Proportional odds) indicate non-significance, the assumption is satisfied (Table 6). In the results from our analysis, the assumption is satisfied  $p=.428$ . the effect of the predictor is the same across all levels of the dependent variable.

**Table 1**

*Case Processing Summary by Suicide Ideation*

Category		<i>n</i>	Marginal percentage
(SI) Suicide ideation	No	69	30.7%
	Yes, once	54	24.0%
	Yes, more than once	102	45.3%
Employment	Employed full time (employer)	122	54.2%
	Employed full time (self)	13	5.8%
	Employed part time, do not want full time	18	8.0%
	Unemployed	13	5.8%
	Employed part time, want full time	28	12.4%
	Not in work force	31	13.8%
	Valid	225	100.0%
Missing	44		
Total	269		

**Table 2***Model Fitting Information SI*

Model	-2 Log Likelihood	Chi-square	Df	Sig.
Intercept Only	478.634			
Final	454.330	24.304	11	.012

Note. Link function: Logit.

**Table 3***Goodness-of-Fit SI*

	Chi-square	df	Sig.
Pearson	451.923	437	.301
Deviance	454.330	437	.274

Note. Link function: Logit.

**Table 4***Pseudo R-Square SI*

Measure	R-Square value
Cox and Snell	.084
Nagelkerke	.095
McFadden	.041

Note. Link function: Logit.

**Table 5***Parameter Estimates SI*

		Esti mate	Std. Error	Wald	df	Sig.	95% confidence interval	
							Lower bound	Upper bound
Threshold	[SUICIDEIDEATIO N = 1]	-.855	.736	1.350	1	.245	-2.296	.587
	[SUICIDEIDEATIO N = 2]	.240	.733	.107	1	.743	-1.197	1.677
Location	EDUCATION	.111	.104	1.129	1	.288	-.094	.315
	INCOME	-.098	.066	2.188	1	.139	-.228	.032
	INTERNALIZEDHO MOPHOBIA	.156	.088	3.182	1	.074	-.015	.328
	ADVERSECHILDH OOD EXPERIENCES	.380	.145	6.874	1	.009	.096	.665
	ALCOHOLUSE	-.104	.120	.750	1	.387	-.339	.131
	AGE	-.020	.011	3.350	1	.067	-.042	.001
	[EMPLOYMENT=1]	.028	.411	.005	1	.946	-.779	.834
	[EMPLOYMENT=2]	-.033	.673	.002	1	.961	-1.353	1.287
	[EMPLOYMENT=3]	.349	.603	.334	1	.563	-.833	1.531
	[EMPLOYMENT=4]	-.155	.649	.057	1	.811	-1.427	1.117
	[EMPLOYMENT=5]	-.606	.509	1.416	1	.234	-1.603	.392
	[EMPLOYMENT=6]	0 <sup>a</sup>	.	.	0	.	.	.

*Note.* Link function: Logit.

a. This parameter is set to zero because it is redundant.

**Table 6***SI Test of Parallel Lines<sup>a</sup>*

Model	-2 log likelihood	Chi-square	df	Sig.
Null hypothesis	454.330			
General	443.142 <sup>b</sup>	11.188 <sup>c</sup>	11	.428

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. Link function: Logit.

b. The log-likelihood value cannot be further increased after maximum number of step-halving.

c. The Chi-Square statistic is computed based on the log-likelihood value of the last iteration of the general model. Validity of the test is uncertain.

### **Research Question 2**

An ordinal logistic regression analysis was conducted to investigate if there is a relationship between adverse childhood experiences, internalized homophobia, alcohol use and suicide attempts among sexual minority MSM of color when controlling for age, income, education, and employment. SPSS Version 28 was used for this analysis.

RQ2: Is there a relationship between adverse childhood experiences, internalized homophobia, alcohol use and suicide attempts among sexual minority MSM of color when controlling for age, income, education, and employment?

$H_0$ 2: There are no relationships between adverse childhood experiences, internalized homophobia, alcohol use and suicide attempts among sexual minority MSM of color when controlling for age, income, education, and employment.

*H<sub>a2</sub>*: There is a relationship between adverse childhood experiences, internalized homophobia, alcohol use and suicide attempts among sexual minority MSM of color when controlling for age, income, education, and employment.

The case processing summary is in Table 7. The model fit is 799.416 for the intercept-only model compared to the model with the intercept and all independent variables, which has a -2 log likelihood of 760.070 (see Table 8). The smaller the -2 log likelihood value, the better the fit. The greater the difference between the two models, the better the independent variables are at explaining the dependent variable (Laerd Statistics, 2023). The difference between the two -2 log likelihood values is presented in the “Chi-Square” column (i.e.,  $760.070 - 799.416 = 39.346$ ), which is chi-square distributed with 11 degrees of freedom and is statistically significant,  $p < .001$ . The independent variables add statistically significantly to the model. The final model statistically significantly predicted the dependent variable over and above the intercept-only model,  $\chi^2(11) = 26.840, p = .005$ .



**Table 7***Case Processing Summary SA*

Category		<i>n</i>	Marginal percentage
(SA) suicide attempt	No	169	74.8%
	Yes, once	46	20.4%
	Yes, more than once	11	4.9%
Employment	Employed full time (employer)	123	54.4%
	Employed full time (self)	13	5.8%
	Employed part time, do not want full time	18	8.0%
	Unemployed	13	5.8%
	Employed part time, want full time	28	12.4%
	Not in work force	31	13.7%
Valid		226	100.0%
Missing		43	
Total		269	

In this analysis, Table 9 shows the goodness of fit for the suicide attempt model. The Pearson chi-square test [ $\chi^2(439)= 522.298, p=.004$ ] was significant. The deviance test [ $\chi^2(439)= 284.347, p=1.0$ ] is not significant. Table 10 shows the pseudo-R-square values that are treated as rough analogues to the R-square value in this model. These results suggest good model fit. In this study, there has been an 8.6% improvement in the predication of outcome based on the predictors in the comparison to the null model (Table 11).

In the parameters estimates illustrated in Table 11, the regression coefficients and significance tests for each of the independent variables in the suicide attempt model are

depicted. Adverse childhood experiences was a significant positive predictor of suicide attempt. For every one unit increase on adverse childhood experiences, there is a predicted increase of .419 in the log odds of a higher suicide attempt category. This indicates that an individual scoring higher on adverse childhood experiences were more likely to indicate greater likelihood of a suicide attempt. Internalized homophobia was not a significant predictor of suicide attempt. Alcohol use was not a significant predictor of suicide attempt. Age, income, education, and employment were covariates in the model. Age, income, education, and employment were not significant predictors in the model. Table 12 shows the test of parallel lines in the model were not significant. When the result of the test of Parallel lines (i.e., assumption of Proportional odds) indicate non-significance, the assumption is satisfied (Laerd Statistics, 2023). In the results from the analysis, the assumption is satisfied  $p=.978$ .

**Table 8**

*Model Fitting SA*

Model	-2 log likelihood	Chi-square	<i>df</i>	Sig.
Intercept Only	311.187			
Final	284.347	26.840	11	.005

*Note.* Link function: Logit.

**Table 9***Goodness-of-Fit SA*

	Chi-square	<i>df</i>	Sig.
Pearson	522.298	439	.004
Deviance	284.347	439	1.000

Link function: Logit.

**Table 10***Pseudo R-Square SA*

Measure	R-Square value
Cox and Snell	.112
Nagelkerke	.150
McFadden	.086

*Note.* Link function: Logit.

**Table 11***Parameter Estimates Suicide Attempts*

		Estimate	Std. Error	Wald	df	Sig.	95% confidence interval	
							Lower bound	Upper bound
Thresho ld	[SUICIDEATTEMPT = 1]	1.410	.914	2.382	1	.123	-.381	3.201
	[SUICIDEATTEMPT = 2]	3.428	.956	12.852	1	<.001	1.554	5.303
Locatio n	EDUCATION	-.129	.133	.945	1	.331	-.390	.131
	INCOME	-.206	.088	5.528	1	.019	-.378	-.034
	INTERNALIZEDHOM OPHOBIA	.112	.108	1.086	1	.297	-.099	.323
	ADVERSECHIILDHO ODEXPERIENCES	.419	.177	5.592	1	.018	.072	.767
	ALCOHOLUSE	-.125	.152	.676	1	.411	-.423	.173
	AGE	.015	.014	1.132	1	.287	-.013	.043
	[EMPLOYMENT=1]	1.121	.540	4.314	1	.038	.063	2.179
	[EMPLOYMENT=2]	-.417	.944	.195	1	.658	-2.268	1.433
	[EMPLOYMENT=3]	-.852	.857	.986	1	.321	-2.532	.829
	[EMPLOYMENT=4]	.785	.750	1.097	1	.295	-.684	2.254
	[EMPLOYMENT=5]	-1.011	.768	1.731	1	.188	-2.517	.495
[EMPLOYMENT=6]	0 <sup>a</sup>	.	.	0	.	.	.	

Link function: Logit.

a. This parameter is set to zero because it is redundant.

**Table 12***Test of Parallel Lines*

Model	-2 log likelihood	Chi-square	df	Sig.
Null Hypothesis	284.347			
General	280.645 <sup>b</sup>	3.702 <sup>c</sup>	11	.978

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. Link function: Logit.

b. The log-likelihood value cannot be further increased after maximum number of step-halving.

c. The Chi-Square statistic is computed based on the log-likelihood value of the last iteration of the general model.

Validity of the test is uncertain.

### Summary

In this section, I presented the results of the Generations Data from 2016-2019 to evaluate the relationship between adverse childhood experiences, internalized homophobia, and alcohol use and suicidality (suicide attempt and suicide ideation) among cisgender sexual minority MSM of color. Out of the total sample of 706 only 269 cases were sexual minority men of color. I tested for assumptions and model fit using chi-square and conducted multiple ordinal logistic regressions to determine the relationships between the independent variables, dependent variables, and covariates.

The results of the analysis in relation to RQ1, indicate that I was able to reject the null hypothesis for predictor variables adverse childhood experiences and internalized homophobia due to findings of statistical significance. Also, I was able to reject the null

hypothesis for predictor variable age due to findings of statistical significance. I failed to reject the hypothesis for predictor variable alcohol use and covariate education, income, and employment due to showing no statistical significance. The results of the analysis in relation to RQ2, indicate that I was able to reject the null hypothesis for predictor variables adverse childhood experiences due to findings of statistical significance. I failed to reject the hypothesis for predictor variable internalized homophobia and alcohol use and covariates age, income, education, and employment due to showing no statistical significance. More detailed analysis and interpretation of findings is discussed in the next section.

Section 4 serves as an overview of the study, which include detailed interpretation of findings, limitations of the study, recommendations, and implication for professional practice and social change. The results of these findings will be interpreted and discussed further in Section 4. I will explain how the findings align with the Syndemics theory. Comparisons will also be made with what has been found previously in the peer-reviewed literature, and the limitations and recommendations for further research will be described. Finally, I will reflect on findings for their potential impact on professional practice and positive social change.

#### Section 4: Application to Professional Practice and Implications for Social Change

This study was a secondary analysis of data collected by the ICPSR. The purpose of this quantitative study was to determine whether there was a relationship between adverse childhood experiences, internalized homophobia, alcohol use, and suicide ideation and suicide attempts among sexual minority men of color such as Asian, Black/African American, Hispanic/Latino, Middle Eastern, Native Hawaiian/Pacific islanders, American Indian, and multiracial individuals. The IVs were adverse childhood experiences, internalized homophobia, and alcohol use, and the DVs were suicide ideation and suicide attempts. The control variables were age, income, education, and employment. Two research questions were addressed using ordinal logistic regression.

Out of the total sample of 706 cases, 269 cases were sexual minority men of color who were included in the final study. I tested for assumptions and model fit using chi-square and conducted multiple ordinal logistic regressions to determine the relationships between the IVs, DVs, and covariates. The results indicated that adverse childhood experiences and internalized homophobia were the most significant predictors of suicide ideation among sexual minority men of color. The results also indicated that adverse childhood experiences was the most significant predictor of suicide attempts among sexual minority men of color.

#### **Interpretation of Findings**

Ordinal logistic regression was used to answer the research questions. Syndemic theory informed this study. The theory was originated by Singer in 1994 to understand substance abuse, violence, and AIDS by investigating instances in which multiple health

problems interact with each other and the influences within sociocultural, economic, and physical environments that promote and enhance the negative effects of disease interaction (Mendenhall et al., 2022; Singer et al., 2017). There are three conditions of a syndemic: (a) Two or more diseases cluster (co-occur) in a specific population, (b) this observed clustering is facilitated by contextual or social factors such as poverty and other structural inequities, and (c) the clustering of diseases drives adverse disease interaction and enhances disease burden on the affected population (Singer et al., 2017). Limited yet rapidly developing literature on noncommunicable disease syndemic can highlight the transdisciplinary interests (i.e., public health, clinical research, medical sciences) to understand multilayered health challenges that can coexist (Hossain et al., 2023). The current study was designed to understand the existence of co-occurring interactions of DVs and IVs.

### **Research Question 1**

Statistical significance was seen for adverse childhood experiences and internalized homophobia and suicide ideation in the current study. Statistical significance was not seen for alcohol use and suicide ideation. Among the covariates in the study, negative statistical significance was seen for age. There was no statistical significance for income, education, and employment. This indicates that an individual scoring higher on adverse childhood experiences is more likely to indicate greater suicide ideation. This also indicates that an individual scoring higher on internalized homophobia is more likely to indicate greater suicide ideation. Findings confirm what was stated by Bettis et al. (2020) and Tordoff et al. (2022) that there is an association between early childhood



violence and suicidal thoughts. Current findings also confirm that there is risk that exposure to homophobia will adversely influence self-conceptualization and evaluation concerning one's sexuality, precipitating internalized homophobia and suicide ideation (see Breakwell & Jaspal, 2022). Suicide ideation was significantly predicted by adverse childhood experiences and internalized homophobia in sexual minority men of color.

### **Research Question 2**

Statistical significance was seen for adverse childhood experiences and suicide attempts in the current study. Statistical significance was not seen for internalized homophobia and alcohol use and suicide attempts. Among the covariates, income was a significant negative predictor of suicide attempts, and there was no statistical significance for age, education, and employment. This indicates that an individual scoring higher on adverse childhood experiences is more likely to indicate greater suicide attempts. This also indicates that as an individual's income decreases, they are more inclined to suicide attempts. Current findings confirm previous studies by Zhang et al. (2019) and Rosentel et al. (2020) who found that LGBTQ Black/African American, Hispanic/Latino, and poor to low-income individuals across various ages above 18 years disproportionately suffered and had increased suicidality.

Current findings also aligned with the finding from Thompson et al. (2019) who used a longitudinal methodology to determine associations between eight different adverse childhood experiences (physical, sexual, emotional abuse, neglect, parental death, incarceration, alcoholism, and family suicidality) with suicidal ideation and suicide attempts in adulthood while controlling for depression, problem alcohol use, drug use,

delinquency, impulsivity, gender, race, age, and urbanicity. Results from the current study indicated that adverse childhood experiences was associated with increased odds of suicide attempt. Additionally, Turpin et al. (2020) and Chuang et al. (2021) reported syndemic approaches focusing on syndemics of HIV in sexual minority men of color and internalized homophobia. Current findings indicate that internalized homophobia and personal sensitivity are closely linked.

Global research on syndemic informs the deteriorating effects of concurrent health problems in populations living under chronic social stressors (Hossain et al., 2023). Syndemic theory is a holistic framework describing interactions between diseases and between diseases and the social environment contributing to their emergence, clustering, and spread (Singer et al., 2017). Therefore, syndemic theory was the best fit for the current study.

### **Limitations**

There were several limitations in the current study. One limitation was applying findings to the greater population using secondary data to represent the population of interest. Another limitation was understanding the various uses of suicidality to define cultural dynamics based on the survey responses, which may not apply to the sociocultural aspects of all sexual minorities of color. To mitigate limitations, this study did not include transgender males whose experiences may have differed from those of their cisgender peers. To avoid any bias in the results, the sample was limited to the baseline sample wave (2016–2017) with the oversampling (2018–2019) to include sexual minority men of color in the final analysis.

## **Recommendations**

I recommend that future research be more inclusive of sexual minority men of color and other racial and sexual minority individuals who do not identify as members of the LGBTQ community. It is hard to generalize about cisgender sexual minority men of color (Zheng & Zheng, 2019). Sexual minorities of color made up 269 of the sample, and the largest population of color that was represented was Hispanic/Latino. Therefore, future research could include sexual minorities of color to bring awareness to syndemics in their unique experiences and inequities at the core of health disparities in suicide (see Ong et al., 2021; Quinn et al., 2021). Understanding differences in suicide ideation and predictors of suicide in the population of interest could promote future research that is more targeted at specific racial and sexual minorities. Although the current study considered socioeconomic factors such as age, income, education, and employment, further research could consider the effects of marital status as a predictor of suicidality.

## **Implications for Professional Practice**

One recommendation for public health practitioners is to develop and improve affirming policies that have an impact at the individual, community, and organizational levels to inform co-occurring disparities and inequities in suicidality affecting sexual minority men of color. Among sexual minorities of color, sexuality-based stressors (exposure to violence) are linked to disparities with increased suicide behavior (i.e., internalized homophobia), decreased utilization of prevention related resources, and insufficient preventive services (CDC, 2022; Lin et al., 2022; Smith et al., 2021). The current study explains relationships between adverse childhood experiences and

internalized homophobia as predictors of suicidality, and public health practitioners should promote further understanding of racial and sexual orientation disparity in suicidality (Bränström et al., 2020). Erney & Weber (2018) confirmed that health systems and economic systems are ill-equipped to support the multifaceted identity of sexual minorities of color. Public health practitioners can improve the quality of services and resources provided to inform targeted suicide prevention efforts in sexual minority men of color.

Efforts can be focused on internalized homophobia by improving social environments (i.e., culturally adequate services for individuals and families) and culturally adequate community support, which can bring awareness and resilience to internalizing attraction to the same sex based on their interactions (Poštuvan et al., 2019). Wirtz et al. (2022) further confirmed that inequities exist for sexual minorities of color, and systems of oppression include homophobia. The opportunity for public health practitioners exists where the application of syndemic theory is used to highlight the sociopolitical and economic circumstances in which mutually worsening comorbidities exist around homophobia.

### **Social Change**

Positive social change can be effected in sexual minority communities by public health officials, policymakers, and advocates accessing and using current knowledge on sexual minority men of color's suicidality. The present study may inform ways that adverse childhood experiences and internalized homophobia impact suicide ideation, and adverse childhood experiences impact suicide attempts in sexual minority men of color.

Because there is an unmet need for suicide prevention services among sexual minority men of color, it will be beneficial for future public health professionals to address the inequities that accompany the unmet needs of sexual minority men of color (Rosentel et al., 2020).

Another implication may be to increase the quality of resources that support organization-level suicide prevention to include mechanisms that address the traumas experienced by sexual minority men of color. This can also be promoted in communities disproportionately impacted by syndemics, which can improve the outcomes of suicide prevention and promote awareness at the individual and community level. Organizations can employ healing circles, which have been previously used in addressing individual-level challenges in response to stressful situations at the community and policy levels (Pastor et al., 2018). This could promote positive social change in suicide outcomes in marginalized populations of sexual minority men and inform how to ameliorate disparities contributing to suicidality in sexual minorities.

### **Conclusion**

The results indicated that adverse childhood experiences and internalized homophobia were the most significant predictors of suicide ideation among sexual minority men of color. This analysis also indicated that adverse childhood experiences was the most significant predictor of suicide attempts among sexual minority men of color. Based on these results, future research could be done to identify why or how this happens so that better interventions can be developed and implemented for suicide prevention.

This is made evident by the current study on syndemics and suicidality among sexual minority men color, which has shown that the factors that contribute to suicide risk among this population need further exploration. Public health officials may inform and educate those impacted by suicidality and all of the associated outcomes. Efforts must be made to eliminate suicidality among marginalized individuals or members of racial and sexual minority groups.

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## Appendix: Scale of Measurement Level and Operational Definition of Variables

Name of Variable	Level of Measurement	Survey Questions	Levels
Suicide Ideation	Ordinal	Defined by individual response to thinking about how they might kill yourself or plan to themselves in the past year.	1 – No 2 – Yes, once 3- Yes, more than once
Suicide Attempt	Ordinal	Defined by ever making a suicide attempt with the intent to purposefully hurt themselves with at least some intention to die.	1 – No 2 – Yes, once 3- Yes, more than once
Adverse Childhood Experiences	Ordinal	Defined by exposure to violence prior to adulthood where parents or adults in the home ever slap, hit, kick, punch, or beat you.	1 – Never 2 – Once 3 – More than once
Internalized Homophobia	Ordinal	Defined by an attempt to stop being attracted to people who are the same sex.	1 – Strongly Disagree 2 – Somewhat Disagree 3 – Neither agree nor disagree 4- Somewhat agree 5- Strongly Agree
Alcohol Use	Ordinal	Defined by the Alcohol Use Disorder Identification Test (AUDITC), and frequency the respondent consumed a drink containing alcohol.	0 – None (zero points) 1 – 1 or 2 (1 point) 2- 3 or 4 3 – 5 or 6 4- 4 or more times a week (4 points)

Age	Ordinal	Defined by 3 age cohorts under investigation in Generations: ages 18 – 25 years, 34 – 41 years, or 52 – 59 years; Black; completed 6th grade at least, and if they spoke English.	1- 18- 60
Income	Ordinal	Defined by total annual household income before taxes.	1- under \$720, 2- \$720 to \$5,999, 3- \$6,000 to \$11,999, 4- \$12,000 to \$23,999, 5- \$24,000 to \$35,999, 6- \$36,000 to \$47,999, 7- \$48,000 to \$59,999, 8- \$60,000 to \$89,999, 9- \$90,000 to \$119,999, 10- \$120,000 to \$179,999, 11- \$180,000 to \$239,999, 12- \$240,000 and over
Education	Ordinal	Defined by the highest level of school completed.	1 -less than high school diploma, 2- high school degree or diploma, 3- technical or vocational school, 4- some college, 5- college graduate, 6- post graduate work or degree
Employment	Ordinal	Defined by response options that best describe current employment status.	1- FT, 2- SELF, 3- PT, do not want FT, 4- Unemployed, 5- PT, want full time, 6- No in Workforce