STIGMA AND MENTAL HEALTH: EXPLORING THE ASSOCIATION BETWEEN STRUCTURAL STIGMA, INTERPERSONAL STIGMA, ANXIETY, AND DEPRESSION AMONG LGBTQ+ YOUNG ADULTS

by

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ABSTRACT

KIRSTEN ANITA GADE. Stigma And Mental Health: Exploring The Association Between Structural Stigma, Interpersonal Stigma, Anxiety, And Depression Among Lgbtq+ Young Adults.
(Under the direction of DR. VICTORIA SCOTT & DR. VIRGINIA GIL-RIVAS)

In 2015, marriage equality was established in the United States in the Supreme Court case Obergefell vs. Hodges, representing a monumental achievement for the LGBTQ+ community. However, since this historic ruling, anti-LGBTQ+ legislation has seen an exponential increase with each passing year holding the new record high in number of proposed and enacted policies (American Civil Liberties Union, 2024; Human Rights Campaign, 2023a). Given the uptick in discriminatory legislation, or structural stigma, against the LGBTQ+ community it is important to understand the implications on individual experiences and health. Past studies have investigated this connection, however, a majority have focused on LGBTQ+ adults over the age of 30. This study aims to incorporate a wider diversity in age to the research on structural stigma and the LGBTQ+ community by focusing on young adults who are LGBTQ+. This population has a unique perspective given LGBTQ+ young adults have a high risk of negative mental health in comparison to heterosexual and cisgender young adults.

This study will shed light on the potential pathway of interpersonal stigma connecting structural stigma and individual anxiety and depression symptoms via two research questions: RQ1) Does structural stigma have a indirect relationship with depression via interpersonal stigma in young adults who identify as LGBTQ+?; and RQ2) Does structural stigma have a indirect relationship with anxiety via interpersonal stigma in young adults who identify as LGBTQ+? These research questions were explored through a path analysis on outcomes of anxiety (n=243) and depression (n=237) symptoms among LGBTQ+ individuals aged 20 to 30.

There was a significant association between interpersonal stigma and anxiety and depression such that higher rates of interpersonal stigma were associated with higher anxiety and depression symptoms. Additionally, a small indirect effect was found in the association between structural stigma, interpersonal stigma, and anxiety. This finding provides a framework to continue research into the influence of discriminatory policies and experiences of interpersonal stigma on anxiety symptoms among young LGBTQ+ adults. Future research should include other related factors such as social support, connection to one's community, socioeconomic status, and interpersonal stigma.

Another important finding to highlight is transgender individuals reported the highest rates of interpersonal stigma and symptoms anxiety and depression. This indicates a need for continued advocacy and support for this population. These findings are consistent with the current hostile political climate restricting gender-affirming care and the right to access public accommodations for transgender and non-binary individuals. Additional research should be conducted to identify interventions to support these individuals in the context of policy barriers and the current social and political environment. Other findings from this study inform further research areas such as the differences in experience of BIPOC LGBTQ+ individuals and the intersection of anti-LGBTQ+ discrimination and racial discrimination.

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DEDICATION

I dedicate my thesis work to those who supported me the most, my friends and family. A special feeling of gratitude to my parents, thank you for learning along with me, listening to my presentations, and providing me with the best support I could have asked for. Thank you to my wonderful partner, AJ, who encouraged me every step of the way. Finally thank you to my best friend Ally, who always made sure to remind me that I have a wonderful, fantastic group of friends and family who will always be there for me. Your small acts of kindness kept me grounded and helped me change my perspective when I was in need of extra support. I would have never been able to do all this without you all.

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CHAPTER 1: INTRODUCTION

1.1 Background

Marriage equality for all individuals in the 50 states of America became a reality on June 26th, 2015 through the Supreme Court case Obergefell vs. Hodges (Justia U.S Supreme Court, n.d). This Supreme Court ruling is considered a historic achievement for the LGBTQ+ community in the United States. However, since this ruling, the increase in proposed and enacted anti-LGBTQ+ legislation has become a major concern. In 2015, 150 anti-LGBTQ+ policies were introduced nationally, but this number has grown to over 500 in 2024 (American Civil Liberties Union, 2024; Human Rights Campaign (HRC), 2023a).

The increase in this type of legislation is a cause for concern as they restrict supportive resources and reduce protections for LGBTQ+ individuals from discrimination, harassment, and stigma (HRC, 2023b). One example of this type of policy is the Religious Freedom Restoration Act introduced in 2015 to promote religious freedom as a way to exempt individuals from following LGBTQ+ anti-discrimination policies. This act allows business owners, landlords, and adoption agencies to refuse services to people because they identify as LGBTQ+ (HRC, 2015). Other policies passed within the last seven years focus on promoting the use of conversion therapy, defined as “any attempt to change a person’s sexual orientation, gender identity, or gender expression” (Gay and Lesbian Alliance Against Defamation, n.d, p. 1; HRC, 2015). Some policies seek to specifically ostracize individuals who are transgender by restricting access to public accommodations, participation in sports, and the ability to receive necessary health care (HRC, 2015). Additionally, this trend of discriminatory legislation includes restricting the discussion of sexual orientation and gender identity in classrooms, and creating bans on Drag shows (HRC, 2023a). These policies are perpetuating the idea that children need to be protected

from sexual and gender minorities, preserving existing and historical prejudice and stereotypes against the LGBTQ+ community.

The history of discriminatory legislation and its impacts on the LGBTQ+ community dates back to the 1960s during the emergence of the LGBTQ+ rights movement (Morgan & Rodriguez, 2020). This movement began in response to oppressive laws and policies and eventually led to the decriminalization of sodomy, the official removal of homosexuality as a mental illness in the Diagnostic and Statistical Manual of Mental Disorders, and the enactment of local and state anti-discrimination policies for housing and employment (Morgan & Rodriguez, 2020). These accomplishments paved the path for one of the most historic accomplishments of this movement, the legalization of marriage equality in the United States (Justia U.S Supreme Court, n.d). To those a part of the 1960s LGBTQ+ rights movement, this ruling would perhaps represent the last hurdle in the decades-long battle for equality.

However, the recent trend in anti-LGBTQ+ policies reveals that this battle is far from over. The need to continue this fight for equality became official in August of 2023 when The Human Rights Campaign, an organization devoted to advocating for LGBTQ+ equality and inclusion since the 1980s, released a "state of emergency" for individuals who identify as LGBTQ+ in the United States (HRC, 2023c). This "state of emergency" is in response to the exponential and unprecedented increase in anti-LGBTQ+ legislation between 2015 and 2023 (HRC, 2023c). The rapid spread of this type of legislation is particularly notable in policies targeting public education and the restriction of inclusivity for students who are LGBTQ+ and LGBTQ+ inclusive curricula.

In 2017, new legislation was introduced focusing on prohibiting inclusive sexual education, specifically requiring the inclusion of "discriminatory, stigmatizing, shame-based, or

medically inaccurate" information about sexual orientation in public sexual education curricula (GLSEN, 2018; Sex Education for Social Change, 2020, p. 6). In 2018 Gay, Lesbian, & Straight Education Network (GLSEN), an organization dedicated to creating a better world for LGBTQ+ students for over 30 years, published an article stating that "although many of these laws [policies prohibiting inclusive sexual education] only explicitly apply to sexual health education, their influence may spill over into other areas of instruction, having a chilling effect on LGBTQ+ curricular inclusion more broadly" (p.5). The "spillover" impact is evident with Florida's enactment of the Parental Choice in Education bill. This bill, proposed in March of 2022 and later enacted in March 2023, prohibits the discussion of sexual orientation and gender identity in classrooms from kindergarten to third grade ("CS/CS/ HB 1557", 2022). Revisions to this bill, made in May 2023, extend the restrictions from third grade to eighth grade and prohibit district school boards from putting in place requirements that school personnel refer to students and staff to pronouns other than those that correspond with their biological sex ("CS/CS/HB 1069", 2023).

This bill has resulted in high levels of concern among LGBTQ+ parents in Florida (Goldberg, 2023). Many parents are reluctant to volunteer for their children's school and fear their children will be discouraged or afraid to speak openly about their families in the classroom and beyond (Goldberg, 2023). Since its introduction in 2022, the Parental Choice in Education policy has traveled to Kentucky, Missouri, North Carolina, South Carolina, and Iowa (Peele, 2023; "SB 134", 2023; "Senate Bill DRS35021-TC-20", 2023; "23 RS BR 943", 2023). The rapid diffusion of these policies from one state to the next directly contributes to how anti-LGBTQ+ policies have become so widespread. With the exponential rate of increase from year to year in this type of legislation, it is vital that the impact of these policies on the LGBTQ+ community be studied.

1.2 Stigma Conceptualized

When laws or policies cause a detrimental effect on individuals who are already at a social or economic disadvantage, such as the anti-LGBTQ+ legislation, this is referred to as a type of stigma called structural stigma (Hatzenbuehler & Link, 2014). In general, stigma is a concept involving multiple interrelated components of "labeling, stereotyping, separation, status loss, and discrimination" creating two distinct groups of stigmatized individuals and non-stigmatized individuals (Link & Phelan, 2001, p.377). Those components are conceptualized by Link and Phelan through three requirements (2001). The first requirement for stigma to occur is the recognition of differences between individuals. Second, these differences are labeled as negative leading to distinct categories of "normal" and "different" groups of individuals (Link & Phelan, 2001). Finally, those labeled as different experience a loss of status and discrimination which leads to contrasting and often distinct outcomes between groups (Link & Phelan, 2001). It is important to recognize that those in stigmatized groups are facing these challenges due to socially created labels and processes. These experiences are the result of those who are not stigmatized exercising their power to uphold the negative experiences of stigmatized individuals, in some instances using laws and policies.

1.2.1 Socio-Ecological Model and Stigma.

Stigma creates a hostile and dangerous environment at all levels of social context for those in the stigmatized groups (Link & Phelman, 2001; Stangl et al., 2019). The social context can be best understood by using the socio-ecological model. This conceptual model is composed of four systems: the microsystem, mesosystem, exosystem, and macrosystem (Bronfenbrenner, 1997). Within this model, each system sits within the other, representing how there are interactions within and across each level. The microsystem, mesosystem, and exosystem refer to

specific structures and environments in which an individual exists. The microsystem represents an individual's immediate setting such as a workplace or family. The mesosystem represents how an individual's microsystems interact, such as how one's family and friends interact and influence an individual. The exosystem includes areas such as community, media, and government. The macrosystem refers to the culture or subcultures guiding the way all other systems operate. This includes rules and regulations, both implicit and explicit. The full socio-ecological model is ultimately based upon the principles of interdependence as the things that occur at one level will affect what occurs at another level. This model allows multiple influences, effects, or unintended consequences to be analyzed from one level to the other.

Using the socio-ecological model, it can be seen that stigma is not imposed solely among individuals. The stigma process is upheld through multiple structures and systems that impact individuals. Within the macrosystem and exosystem, stigma exists in negative cultural attitudes, discriminatory legislation, as well as the lack of protective policies (anti-discrimination policies). Stigma at this level perpetuates the experiences of stigmatized individuals within lower levels of social ecology through harassment, assault, and discrimination (Stangl et al., 2019). Using this model it can be recognized that this pathway is not unidirectional. Interpersonal interactions such as harassment and assault exist at the microsystem and mesosystem, ultimately upholding cultural attitudes and the continuation of enacting discriminatory policies present at larger systems of the ecological model (Stangl et al., 2019).

1.2.2 Types of Stigma

Interpersonal Stigma

Different types of stigma exist within the different levels of an individual's ecology. Interpersonal stigma refers to the social interactions between stigmatized and non-stigmatized

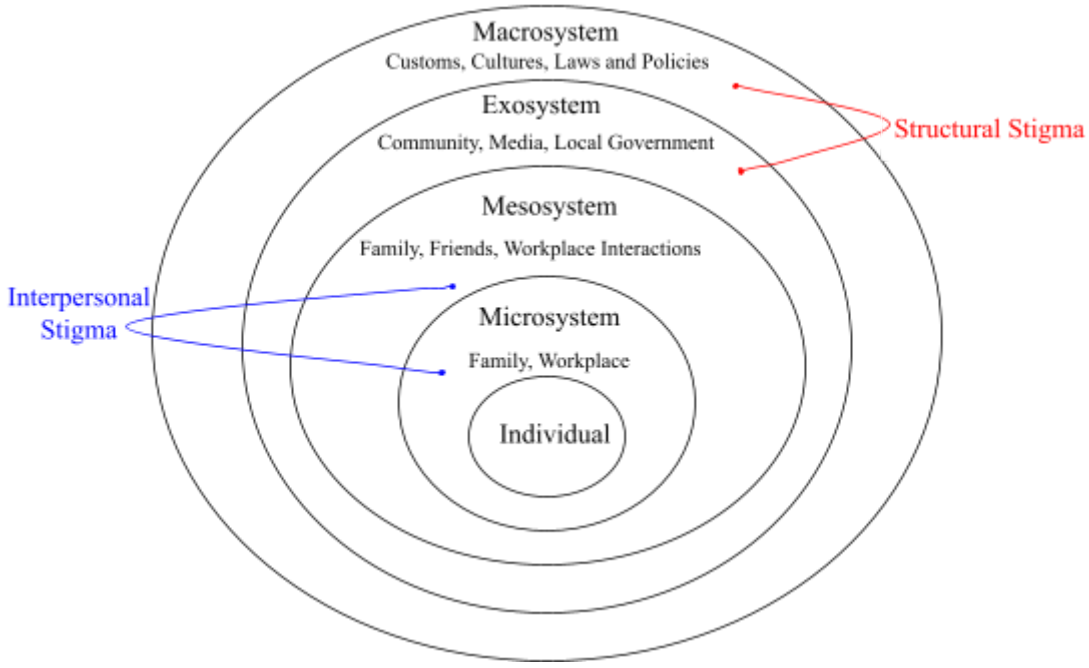
individuals in the microsystem and mesosystem, see Figure 1 (Hatzenbuehler, 2017). Interpersonal stigma includes acts of overt action such as hate crimes. In addition, interpersonal stigma includes microaggressions known as the daily or passing comments or behaviors that intentionally or unintentionally communicate hostile, derogatory, or negative insults or invalidations toward stigmatized individuals (Hatzenbuehler, 2017; Sue et al., 2007).

Structural Stigma

Societal forms of stigma, or structural stigma, influence individuals through laws and policies or through commonly held social attitudes that shape the social and political environment (Hatzenbuehler et al., 2017). In the form of legislation, it can promote the existence of new stigma or perpetuate existing stigma (Burris, 2006). This is upheld in the macrosystem and exosystem of the socio-ecological model as these levels pertain to community, government, and societal influences, see Figure 1. An example of structural stigma, at the macrosystem, is legislation that restricts the discussion of LGBTQ+ identities from sexual education in public schools. In states with these policies, there is a lack of supportive school staff and administrators and a lack of access to LGBTQ+ supportive clubs (GLSEN, 2018). The negative school environment would be considered at the mesosystem as there is an interaction between different microsystems, teachers, and school clubs. This type of climate perpetuates harassment and bullying of LGBTQ+ youth, as in states with these policies LGBTQ+ youth experience a higher rate of interpersonal stigma (GLSEN, 2018). This example demonstrates how influences from the macrosystem (legislation) can have an indirect effect on the mesosystem (e.g., the school climate). The school climate then in turn impacts the health and wellbeing of individual students as the risk of bullying and harassment due to sexual orientation or gender identity increases (GLSEN, 2018).

Figure 1

Socio-Ecological Model and Stigma



Note. Adapted from "Toward an experimental ecology of human development", by U. Bronfenner, 1977, American Psychologist.

1.3 Stigma Impacts on Health

Stigma, both structural and interpersonal, has significant impacts on individuals who are stigmatized, leading to its classification as a social determinant of health (Hatzenbuehler & Link, 2014). Social determinants of health are non-medical health factors or conditions such as age, education, or food insecurity that influence health outcomes (World Health Organization (WHO), 2023). Specifically for LGBTQ+ populations, stigma is considered a social determinant of health because it impacts health outcomes such as fatigue, pain, anxiety, depression, general distress, changes in stress reactions, and increases in rumination in LGBTQ+ individuals (Flentje et al., 2021; Griffin et al., 2018; Hatzenbuehler & Pachankis, 2016; Kelleher, 2009; Pachankis et al., 2021). In contrast, the lack of stigma and a safe and accepting environment is evidenced to

predict good physical health across groups of individuals of different sexual orientations, gender identities, and different racial and ethnic subgroups within the LGBTQ+ community (Flentje et al., 2021). Given the recent increase in anti-LGBTQ+ policies, it is particularly important to acknowledge stigma as a contributor to health inequalities for the LGBTQ+ community.

Environments with unsupportive policies and anti-LGBTQ+ discrimination, or high structural stigma, have been found to have negative associations with physical and mental health among LGBTQ+ adults and youth (Bränström & Pachankis, 2021; Flentje et al., 2021; Hatzenbuehler, 2009; Pachankis et al., 2021). This association is consistent with the minority stress model which suggests that stigma, in its many forms, targeted at LGBTQ+ individuals is creating a negative environment and disproportionate experiences of stress for those targeted individuals (Meyer, 2003). This stress is the link between one's environment and negative mental health experiences (Meyer, 2003). The association between structural stigma and mental health continues to be investigated in the literature in connection to this model. One way to explore the specific association between the environment (stigma) and the outcome (mental health) is to investigate the specific pathway connecting these two variables.

The pathway between structural stigma and mental health that this project focused on was interpersonal stigma. Structural stigma and interpersonal stigma are often present and persistent against stigmatized individuals at the same time in history (Bränström et al., 2023; Petrou & Lemke, 2017; Pharr et al., 2022; Woodford et al., 2018). Their relationship can also be symbiotic, meaning the presence of one perpetuates and facilitates the presence of the other. While these two constructs coexist, there is also evidence to suggest that when one of these forms of stigma is high so is the other (Bränström et al., 2023; Gower et al., 2018; Kull et al., 2016). Data from sexual and gender minority individuals from 28 different countries displayed

this phenomenon as a significant relationship was found between residing in an area with high structural stigma and experiencing victimization (Bränström et al., 2023).

The increased experience of victimization and discrimination and the related mental health effects for the LGBTQ+ community have been reported and documented in multiple studies (Lefevor et al., 2019; Morris & Balsam, 2003). Interpersonal stigma, such as discrimination and victimization, is found to have a significant positive relationship with anxiety, depression, and psychological distress, as well as, a higher likelihood of being diagnosed with a mental disorder (Lefevor et al., 2019; Lei et al., 2021; Morris & Balsam, 2003). In sum, there is a positive correlation between structural and interpersonal stigma as well as a direct effect of interpersonal stigma on negative mental health. Given these associations, interpersonal stigma can be considered the indirect path between structural stigma and negative mental health.

1.3.1 Indirect Effect of Structural Stigma

Interpersonal stigma has been previously identified as a mediator in a study measuring individuals' familiarity with state-level transgender sports bans and suicidal ideation among sexual and gender minority adults (Pharr et al., 2022). These sports bans are a part of the recent trends in anti-LGBTQ+ legislation. It was found that familiarity with discriminatory legislation created a significantly higher likelihood of experiencing interpersonal stigma and suicidal ideation (Pharr et al., 2022). Another policy a part of the new wave of anti-LGBTQ+ legislation is the Parental Choice in Education policy. The impact of this policy, specifically on LGBTQ+ parents, was found to be adverse. Of the sample of LGBTQ+ parents, 113 participants (88%), stated that they were concerned about the new bill, and 1 in 4 reported experiencing harassment since the passing of the policy (Goldberg, 2023). Parents reported increased anxiety and stress revolving around the fear of being harassed (Goldberg, 2023). Additionally, over half of the

sample report considering moving out of Florida due to the enactment and residual effects of these new policies (Goldberg, 2023).While no statistical analyses were conducted to test these associations, this information supports increased concern regarding the new wave of anti-LGBTQ legislation. These two studies are among the first few documentations of the effect of the new wave of anti-LGBTQ+ legislation in the United States. They provide a baseline to continue investigating the relationship between anti-LGBTQ+ legislation, discrimination, and the connection to mental health.

1.4 LGBTQ+ Young Adults

In the past, many studies have focused on the influence of structural stigma on LGBTQ+ adults, with the majority focusing on individuals over the age of 30 (Clark et al., 2022; Flentje et al., 2021; Hatzenbuehler et al., 2009; Kail et al., 2015; Pachankis et al., 2021). To expand the knowledge on the effects of structural stigma on the LGBTQ+ community, research on a wider range of ages is essential. A focus on young adults would allow for a greater representative sample as nearly 1 in 6 young adults in the United States identifies as LGBTQ+ (Flores & Conron, 2023). Further, young adults who identify as LGBTQ+ have a high risk for negative mental health including high rates of depression and anxiety (Miranda-Mendizábal et al., 2017; Perez-Brumer et al., 2017; TTP, 2022). With this in mind, it is important to understand conditions, such as structural stigma, that may negatively impact the health and well-being of young adults who identify as LGBTQ+.

In the context of structural stigma, young adults' experiences may differ from older adults as young adults are experiencing a particularly vulnerable time, transitioning to adulthood, creating a higher sensitivity to discrimination (Lei et al., 2021; WHO, 2021). This transitional period is a sensitive developmental time and is when the majority of mental health disorders

manifest (Lei et al., 2021; WHO, 2021). During emerging adulthood, ages 18 to 25, individuals experience identity exploration and development (Arnett, 2000). This development includes explorations in one's life possibilities including "work, love, and worldviews" (Arnett, 2000, pg 479). However, this process can be negatively impacted by interpersonal stigma, discrimination, and prejudice as it threatens a part of one's identity (Scroggs & Vennum, 2021). Additionally, when young adults experience discrimination there is the possibility of a lack of access to mental health services, leading the effects of discrimination to worsen (Lei et al., 2021). The experiences of identity development and exploration coupled with a sensitivity to discrimination creates a distinct perspective. LGBTQ+ young adults have a particularly unique perspective given the higher risk of negative mental health while in this developmental life phase. To understand the influence of stigma on the entire LGBTQ+ community, it is important to investigate this unique experience.

1.4.1 Anxiety and Depression

In 2022, The Trevor Project (TTP), a nonprofit organization dedicated to ending suicide among LGBTQ+ young people, conducted its annual nationwide survey focusing on mental health (2023). This survey sample consisted of nearly 34,000 young people who identify as LGBTQ+ aged 13-24 years. It was found that 73% of this sample experiences symptoms of anxiety. This percentage continues to grow steadily each year, beginning at 68% in 2020. This is similar for individuals who experience depression as rates increased from 55% in 2020 to 58% in 2022.

It is also important to recognize the discrepancy between the mental health status of sexual and gender minority young adults compared to their heterosexual counterparts. LGBTQ+ young adults generally report a poorer mental health status compared to individuals who are

heterosexual (Miranda-Mendizábal et al., 2017; Perez-Brumer et al., 2017). For example, college students who identify as LGB are more likely to experience higher levels of depression and anxiety compared to their heterosexual peers (Wilson & Liss, 2022). Other related social and emotional concepts such as safety, belongingness, and happiness are also experienced at a lower rate among college students who are LGB compared to students who are heterosexual (Wilson & Liss, 2022).

1.4.2 Interpersonal experiences

Differences in social support and increased experiences with harassment and bullying are some of the reasons for these disparities and the high rate of negative mental health among LGBTQ+ young adults compared to heterosexual young adults (TTP, 2023; Wilson & Liss, 2022). The school environment, both high school and college, is predictive of mental health for young adults who are LGBTQ+ (TTP, 2032; Wilson & Liss, 2022). For high school students, a greater affirming school environment is associated with a lower rate of attempted suicide in LGBTQ+ young adults (TTP, 2023).

Woodford and colleagues (2018) investigated the college environment and its influence on the mental health of LGBTQ+ students. Campuses were evaluated based on their presence of structural stigma in the form of LGBTQ+ resources, non-discriminatory policies including protections for gender and sexual minorities, and offering at least one course in LGBTQ+-related studies. In relation to the socio-ecological model, the resources available on college campuses represent the exosystem and the rules and policies represent the macrosystem. On college campuses with the above characteristics or low structural stigma, there was a lower report of victimization and microaggressions. Discrimination is created by peers, and school staff (microsystem). The presence of discriminatory treatment from both of these groups makes this

experience exist within the mesosystem of an individual. Woodford's study displayed how the interactions between the exosystem and macrosystem influence experiences for individuals within the mesosystem. By analyzing the context from the social and political climate (exosystem and macrosystem), experiences at the individual level (mesosystem) are able to be better explained and understood. Simultaneously, it is important to assess individual similarities and differences as these factors may affect how one's environment influences their experience.

Young adults who identify as LGBTQ+ may also be subject to discriminatory treatment from parental figures or caregivers. Even during the transitions into adulthood, LGBTQ+ young adults' mental health continues to be affected by their parent-child relationship and parental acceptance from their parents (DeChants et al., 2022). Parental and family rejection has been shown to contribute to predicting negative mental health outcomes such as increased depression and suicidal thoughts among young adults who identify as LGBTQ+ (Carastathis et al., 2017; Needham & Austin, 2010). In comparison to older adults, LGBTQ+ young adults continue to be impacted by the treatment of their parents during this time of identity development thus giving further reason to focus on interpersonal stigma and this population specifically. As young adults are disproportionally affected by interpersonal stigma during young adulthood, it is important to identify how this type of stigma is influenced and from what contexts.

1.5 Current Study

This study aims to contribute to three main areas of the literature outlined below.

1) Stigma, in its many forms, has had a sustained negative impact on the LGBTQ+ community throughout history. However, this new wave of anti-LGBTQ+ policies beckons investigation given that the number of anti-LGBTQ+ bills proposed has almost doubled each year since 2015, making 2023 the worst year on record for this discriminatory legislation (HRC,

2023a). Additionally, this legislation trend extends beyond one area of focus. Current bills proposed are targeting public school education, access to proper health care for individuals who are transgender or nonbinary, participation in sports, restrictions on bathroom access, and restrictions on drag shows (HRC, 2015; HRC, 2023a). Not only is this legislation trend affecting multiple settings, but it is also spreading rapidly throughout the United States. Without intervention, anti-LGBTQ+ policies will continue to spread at this accelerated rate increasing hostile and dangerous environments for the LGBTQ+ community. This study will focus specifically on investigating the environment created by this new trend of anti-LGBTQ+ policies and aim to provide evidence of their harmful effect on the LGBTQ+ community.

2) While previous research has focused on LGBTQ+ adults over the age of 30, this research will specifically focus on young adults to incorporate a wider diversity in age in this area of research. Additionally, as there is an increased prevalence of poor mental health in LGBTQ young adults it is important to understand the impact of structural stigma on this subgroup. Young adults are within a particularly vulnerable developmental period in which identity construction takes place. It is during this time that interpersonal stigma has a stronger impact on mental health compared to older adults, providing further evidence for the need to focus on the effects of stigma and this population.

3) While the association between structural stigma, interpersonal stigma, and negative mental health has been studied in the past, there remains a need to research their relationship. The pathway from structural stigma to negative mental health must be understood as this pathway informs the interventions developed to alleviate this problem. This research study aims to investigate the indirect effect that interpersonal stigma has on the association between structural stigma and negative mental health.

This study aims to explore the following research question:

RQ1: Does structural stigma have an indirect relationship with depression via interpersonal stigma in young adults who identify as LGBTQ+?

Hypothesis 1.1: Structural stigma will have a direct effect on individual levels of depression. Such that, higher levels of structural stigma will be associated with higher levels of depression.

Hypothesis 1.2: Structural stigma will have an indirect effect on individual levels of depression through interpersonal stigma. Such that, structural stigma will be associated with higher levels of interpersonal stigma, contributing to higher levels of depression.

RQ2: Does structural stigma have a indirect relationship with anxiety via interpersonal stigma in young adults who identify as LGBTQ+?

Hypothesis 1.1: Structural stigma will have a direct effect on individual levels of anxiety. Such that, higher levels of structural stigma will be associated with higher levels of anxiety.

Hypothesis 1.2: Structural stigma will have an indirect effect on individual levels of anxiety through interpersonal stigma. Such that, structural stigma will be associated with higher levels of interpersonal stigma, contributing to higher levels of anxiety.

CHAPTER 2: METHODS

2.1 Sample

Through the social science data archive ICPSR (Inter-university Consortium for Political and Social Research) data from the National Couples Health and Time Study (NCHAT) (Kamp Dush et al., 2023) was utilized for this project. This dataset is a population-representative sample of couples in the United States (U.S.). The survey data was collected from September 2020 to April 2021. The NCHAT study partnered with the Gallop Panel and the Gallup Recontact Sample to recruit participants. The recruitment process consisted of survey invitations sent via mail, electronically, and via telephone to individuals who are part of the Gallop Panel, a probability-based panel of U.S adults, and the Gallop Recontact Sample. A subset of 255 participants from this dataset were selected for this study. Individuals who meet this study's eligibility criteria are those who identify as LGBTQ+ and are between the ages of 20 and 30. See Table 1 for demographic characteristics. Listwise deletion of the outliers resulted in 237 participants for the analysis of research question one and a sample of 243 participants for the analysis of research question two.

Structural stigma, the main explanatory variable of interest in this study, was defined as a state's level of inclusivity for LGBTQ+ individuals based on municipal laws, policies, and services. Scores of structural stigma were derived from the Movement Advancement Project (MAP) Policy Tally (2020) to test the hypothesized relationships between structural stigma and symptoms of anxiety and depression. MAP creates an individualized score, ranging from -7 to 38.5, for each state based on the enactment of inclusive or protective LGBTQ+ policies from seven categories. States receive positive points for inclusive and protective policies and negative points for discriminatory or harmful policies.

2. 2 Measures

Age. Participants provided the year and month of birth (i.e. "*What is the year and month you were born?*").

Gender Identity. Participants self-reported gender identity via a multiple choice question (i.e., "*Which of the following best describes your gender?*") with the available answer choices as "man", "woman", "trans man", "trans woman", or "do not identify as any of the above". If participants selected "*Do not identify as any of the above*" for the first question they were directed to a second question "*Do any of the following terms describe your gender?*". The second question allowed participants to select all answer choices that applied, with some examples of "*agender*" and "*genderqueer*", or write in their answer under "*other*". To categorize gender, there were three groups used in the analysis including men, women, and transgender. The subgroup transgender includes all individuals who identify as transgender, non-binary, two-spirit, agender, gender fluid, gender neutral, genderqueer, multiple identities, or don't know. This subgroup was created for consistency among group size for analysis purposes. This subgroup is referred to as "transgender" as this term can be used as an umbrella term for individuals whose gender identity or expression does not conform to their sex assigned at birth (American Psychological Association, 2023).

Sexual Orientation. Participants self-reported their sexual orientation and were asked "*Which of the following do you consider yourself to be?* (select all that apply)". Some of the possible answer choices included "Heterosexual or "straight", " Gay or lesbian", and "Bisexual" as well as the option to write in one's answer. To categorize sexual orientation, three groups were used including gay or lesbian, bisexual, and queer. The following identities are reported in the subgroup "queer" as this term is used to represent multiple sexual orientations that are not

included under the heterosexual category (HRC, 2023d). Few individuals identified as demisexual, same-gender loving, queer, omnisexual, asexual, don't know, or questioning. Additionally, 9% of individuals identified as pansexual and 21% of individuals identified with more than one identity within the queer subgroup.

Race. Participants self-reported their race through the question "*What is your race? (you may select more than one)*". Due to a lack of variability in different racial identities and ethnicities there were two groups utilized to analyze differences by race and ethnicity. For race and ethnicity, any identity other than White was grouped together for the analysis. This group included individuals who identified as Black or African American, American Indian or Alaska Native, Asian Indian, Chinese, Filipino/a/x, Japanese, Korean, Vietnamese, Native Hawaiian, Hispanic, Guamanian or Chamorro, Samoan, something else, or identified as multiple identities.

Relationship quality. Relationship quality was measured using the Dyadic Coping Inventory (Bodenmann et al., 2018, Kamp Dush et al., 2023). This scale is used to assess stress measurement in couplings. This is a 37-item scale using a Likert scale from *1 very rarely* to *5 very often*. An example of an item from this scale includes "*How often do you experience each of the following situations with your spouse/partner? My spouse/partner shows empathy and understanding*" (Bodenmann et al., 2018). The National Couples Health and Time survey used four items from this original scale. The full scale shows evidence of high international consistency (alpha=.71-.92) (Nepomuceno et al., 2022). Evidence also shows support for this scale used in a population with LGBTQ+ individuals (Fortunato et al., 2023). The adapted version of the scale in this study had a .87 Cronbach's alpha.

Current location. Participants provided their state for their current place of residence. Location was utilized to identify different scores of structural stigma, measured by state policy score.

Structural stigma. Structural stigma was assessed through the data collected by the Movement Advancement Project (MAP) LGBTQ+ Policy Talley (2020). The MAP LGBTQ+ Policy Talley examines the inclusivity of a particular state for LGBTQ+ individuals based on seven categories of policies. All 50 states are captured in this index. Total scores for states range from -7 to 38.5 with higher scores indicating greater inclusivity and more legal protections for LGBTQ+ individuals or lower structural stigma. Each state is analyzed in seven categories including relationship and parental recognition, nondiscrimination, religious exemption, LGBTQ+ youth, health care, criminal justice, and identity documents. Points are awarded based on the state's compliance for policies enacted within each category. Points are removed if a state has a discriminatory or harmful policy.

Participants were matched with a score for structural stigma based on the state they reported residing in. Each state was matched with its corresponding score from the MAP LGBTQ+ Policy Talley. For this project, lower scores were interpreted as greater structural stigma and higher scores were interpreted as lower structural stigma. The MAP LGBTQ+ Policy Talley analyzes laws and policies in regard to discrimination, employment, the inclusion of LGBTQ+ individuals in state-provided services and programs, and proper reporting of hate crimes (2020).

Interpersonal stigma. Individual levels of discrimination were assessed using the Everyday Discrimination Scale (EDS) (Kamp Dush et al., 2023; Meyer et al., 2016; Williams et al., 1997). The scale has a total of 9 items and utilizes a 5-point Likert scale ranging from *1 never*

to *5 very often* which is adapted from the original 1997 version of the scale that uses a 6-point Likert scale. The scale utilizes the prompt "*In your day-to-day life over the past month, how often did any of the following things happen to you?*" Some examples of items include "*People acted as if they were afraid of you"* and "*You were treated with less respect than other people".* The total individual score is calculated by the sum of all items with the lowest score as 9 and the highest possible score as 45, with higher scores indicating higher levels of discrimination. Evidence supports the validity and reliability of the EDS as well as the use of the scale with young adults who identify as LGBTQ+ (Cronbach's alpha=.88) (Gamarel et al., 2019). Within the sample for this study, the Everyday Discrimination Scale had a Cronbachs's alpha of .85, providing further support for the use of this scale.

Depression. Individual levels of depressive symptoms were assessed via the Center for Epidemiological Studies Short Depression Scale (CES-D 10) (Andresen et al., 1994; Kamp Dush et al., 2023). This scale includes 10 items and utilizes the prompt "*Below is a list of the ways you might have felt or behaved. How often have you felt this way in the past 7 days?".* The scale is on a 4-point Likert scale from *1 rarely or none of the time (less than 1 day)* to *4 most or all of the time (5-7 days).* Some item examples include *"I felt lonely"* and *"I felt hopeful about the future"*. Two of the items are reversed scored. The total individual score is calculated by the sum of all items with the lowest score of 10 and the highest score of 40. Higher scores indicate higher levels of depression. Scores over 20 are generally used to indicate clinical levels of depression (Powers et al., 2002). Evidence to support the validity and reliability of the CES-D 10 has previously been reported in a Confirmatory Factor Analysis with loadings ranging from .44 to .87 for all items and with a Cronbach's alpha of .89 (Andresen et al., 1994; Björgvinsson et al., 2013). Evidence also supports the use of this scale among young adults who identify as

LGBTQ+ with a reported Cronbach's alpha of .87 (Kneale & Bécares, 2021). n this sample, the CES-D 10 had a Cronbach's alpha of .86.

Anxiety. Individual levels of anxiety symptoms were assessed via the Generalized Anxiety Disorder Scale (GAD-7) (Kamp Dush et al., 2023; Spitzer et al., 2006). This scale has a total of 7 items scored on a 4-point Likert scale from *0 not at all* to *3 nearly every day*. An item example includes "*In the past 7 days, how often have you been bothered by feeling nervous, anxious, or on edge?".* Individual scores are summed with a possibility of total scores ranging from 0, the lowest possible score, to 21, the highest possible score. Higher scores indicate higher levels of anxiety. Scores that are greater than 10 are considered to be within the clinical range of anxiety (Spitzer et al., 2006). Evidence to support the validity and reliability of the GAD-7 is reported in a Confirmatory Factor Analysis reporting a Cronbach's alpha of .86 (Löwe et al., 2008). Evidence also supports the use of this scale among young adults who identify as LGBTQ+ with a Cronbach's alpha of .90 (Woodford et al., 2018). Within this sample, the use of the GAD-7 had a Cronbach's alpha of .89.

2.3 Data Analysis

The sample size required for multiple linear regression path analysis was estimated using multiple sources. First, an a-priori power analysis was conducted using G*Power 3.1.9 (Faul et al., 2009). This analysis indicated that a sample of 103 would be required for linear multiple regression with an R^2 deviation from zero with a small effect size and 6 total predictors. These predictors include the independent variable (structural stigma), the indirect effect variable (interpersonal stigma), and the two confounding variables (gender and sexual orientation). The confounding variables were categorical and therefore dummy coded which resulted in four total variables. Sim and colleagues (2022) and Fritz and MacKinnon (2007) have estimated the

required sample size for a path analysis by conducting a Monte Carlo simulation with a small effect size of between 462 and 600. Both of these estimations are based on the statistical power of .80. The sample size used for this study is 255, which satisfies the first estimation but not the latter. However, the analyses were bootstrapped 5000 times reducing the risk of Type 1 error (Precher et al., 2007).

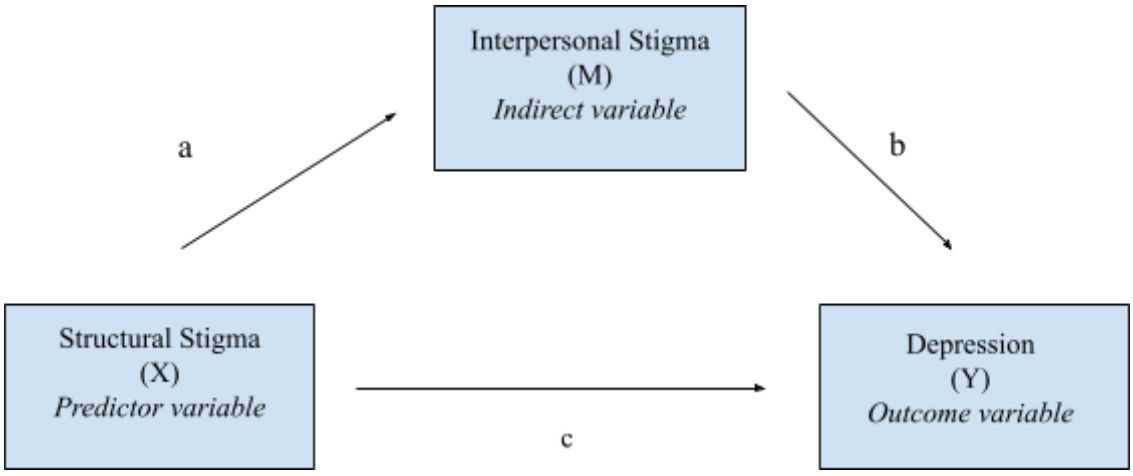
SPSS version 28 was used for all analyses with the Hayes Process Macro package. Descriptive analyses were conducted to understand the distribution by race, sexuality, and gender identity. Pearson's bivariate correlations were used to assess additivity. This step acts to ensure that all predictor variables are not overly correlated and will act as the preliminary correlation analysis to investigate the relationship between variables. The expected correlations were (1) a negative correlation between structural stigma and interpersonal stigma, (2) a negative correlation between structural stigma and anxiety and depression symptoms, and (3) a positive correlation between interpersonal stigma and anxiety and depression. It is important to note that higher scores represent *less* structural stigma as the variable used to measure structural stigma is from the M.A.P. Policy Talley in which more points indicate a greater number of protective/supportive LGBTQ+ policies. No missing data were found. A copy of the dataset with the sample of 255 was created as two different models, one for each outcome variable, were analyzed. The following procedures were completed on both datasets and their respective models.

Outliers were identified using Mahalanobis distance and removed using listwise deletion. Assumption testing included assessing normality, linearity, and homoscedasticity of the residuals (Hayes, 2018). The assumptions were met for both regression models. A path analysis for each model was conducted in PROCESS macro to investigate the possible indirect effect of

interpersonal stigma on structural stigma and anxiety and depressive symptoms, see Figures 2 and 3 (Model 4; Hayes, 2018). Gender and sexual orientation were included as covariates as the descriptive statistics and ANOVA test revealed there were significant subgroup differences by anxiety symptoms, depressive symptoms, and interpersonal stigma scores. Each path was assessed via regression coefficients(b), p values, and t statistics for practical and statistical significance.

Figure 2

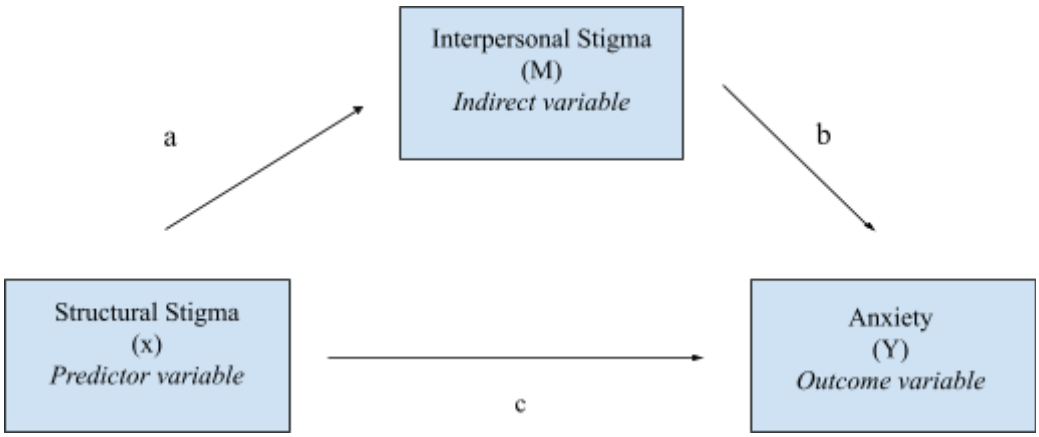
A Statistical Diagram Representing Research Question 1



Note: Gender identity and sexuality were included as covariates.

Figure 3

A Statistical Diagram Representing Research Question 2



Note: Gender identity and sexuality were included as covariates.

CHAPTER 3: RESULTS

3.1 Participant Characteristics

The majority of participants identify as women (50%) and as white (80%). The average age of participants was 27 years old. Participants who identify as queer (39%) were the largest subgroup in the distribution by sexual orientation followed by individuals who identify as bisexual (32%) and gay or lesbian (29%). The majority of participants (45-46%) reside in areas of low structural stigma or within the "high" category of the MAP Policy Talley indicating high policy support for LGBTQ+ residence. Sample characteristics of the full sample and the sample for each model (with outliers removed) are presented in Table 1.

Table 1

Sample Characteristics

	Model 1 n=237	Model 2 n=243	Full Sample n=255
	n (%)	n (%)	n (%)
Gender			
Men	83 (35%)	85 (35%)	88(35%)
Women	125 (53%)	126 (52%)	128(50%)
Transgender	29 (12%)	32 (13%)	39(15%)
Sexual Orientation			
Gay/ Lesbian	70 (29%)	71 (29%)	74(29%)
Bisexual	75 (32%)	78 (32%)	82(32%)
Queer	92 (39%)	94 (39%)	99(39%)
Race			
White	189 (80%)	194 (80%)	204(80%)
Other	48 (20%)	49 (20%)	51(20%)

MAP Talley			
High (75-100%)	111 (46%)	111 (46%)	115 (45%)
Medium (50-75%)[a]	-	-	-
Fair (25-50%)	37 (15%)	37 (15%)	39 (15%)
Low (0-25%)	53 (22%)	56 (23%)	58 (23%)
Negative (<0)	27 (11%)	30 (12%)	34 (13%)

Note. Outliers were removed for the data analysis in model 1 and model 2. Participants were on average 27 years old. MAP categorizes policy scores using 5 groups in which each group includes a percentage distribution of the total scores. For example, states categorized as "high" have a policy score between 75% -100% of the total score.

[a]Those residing in a state with a medium MAP talley did not meet the minimum number of respondents required by ICPSR for data reporting.

3.2 Descriptive Analysis

Descriptive statistics for the study variables are presented in Table 2. The preliminary correlations supported the hypothesized associations, thus the path analyses were performed. The results of the correlations are also presented in Table 2.

Table 2

Descriptive Statistics and Correlations among Study Variables for Model 1 and Model 2

Variable	n	Mean	SD	1	2	3
Model 1	237					
1. Structural Stigma		18.42	14.29	-		
2. Interpersonal Stigma		13.07	4.02	-.08	-	
3. Depression		21.50	6.45	-.02	.31**	-
Model 2	243					

1.Structural Stigma	18.50	14.30	-		
2.Interpersonal Stigma	13.07	4.02	-.15*	-	
3.Anxiety	14.66	5.35	-.04	.36**	-

Note. Interpersonal stigma scores range from 9 to 45. Anxiety scores range from 0 to 21. Depression scores range from 10 to 40. Structural Stigma scores range from -7 to 38.5.

**p*-value <.05 ***p*-value <.01

3.3 Cross-section Analysis Results

3.3.1 Research Question 1: The Association Between Structural Stigma, Interpersonal Stigma, and Depression Symptoms

It was hypothesized that structural stigma would have a direct effect on depressive symptoms and an indirect effect via interpersonal stigma. Such that, higher levels of structural stigma would be associated with higher levels of depressive symptoms, and higher levels of interpersonal stigma contributing to higher levels of symptomatology. This relationship was assessed by using PROCESS Macro and Model 4 by Hayes (Hayes, 2018). Sexual orientation and gender were used as covariates in the analysis as ANOVA results indicate depressive symptoms and interpersonal stigma scores were significantly different for the different subgroups. Transgender individuals reported the highest levels of interpersonal stigma (*M*=14.97, *SD*=4.31) and depressive symptoms (*M*=26.31, *SD*=5.86) compared to cisgender men and women. Participants who identified as queer reported the highest levels of interpersonal stigma (*M*=13.15, *SD*=3.90) and depressive symptoms (*M*=23.10, *SD*=6.35) compared to individuals who identify as lesbian/gay and bisexual.

Relationship quality was not used as a covariate as there was no significant correlation found between this variable and any other variable of interest. The average score of relationship

quality was 16.98 (*SD*=2.92) out of a total possible score of 20. Race/ethnicity was also not used as a covariate as there was no significant difference found between the two different subgroups by depressive symptoms and interpersonal stigma. Participants who are white had a higher average score for depressive symptoms (*M*=21.53, *SD*=6.46) compared to those who did not identify as white (*M*=20.33, *SD*=6.01). Those who did not identify as white scored higher in experiences of interpersonal stigma (*M*=13.06, *SD*=4.21) compared to white participants (*M*=12.63, *SD*=3.53).

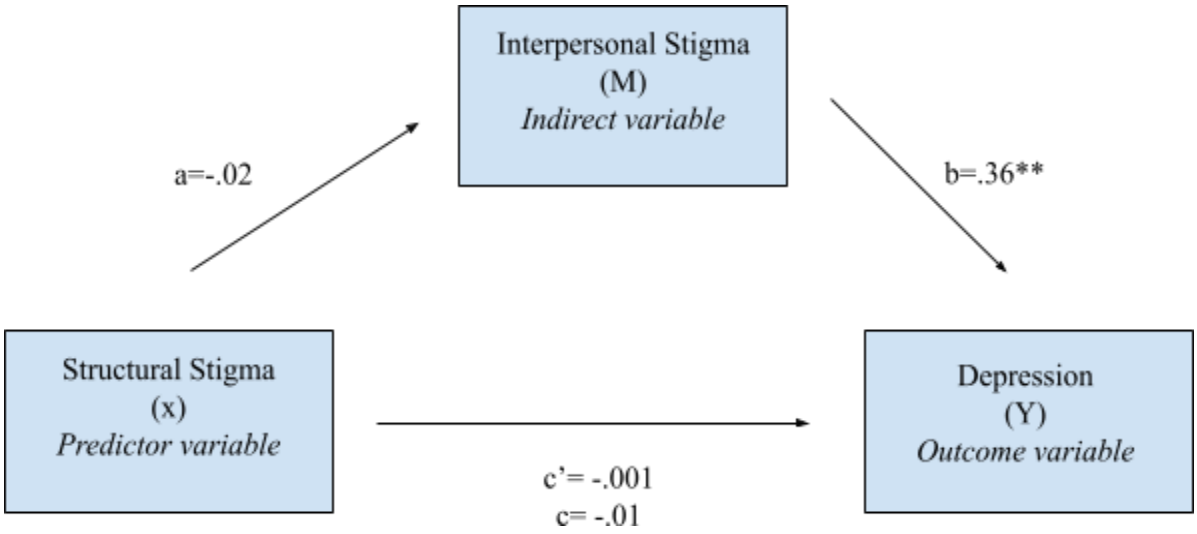
The results of the path analysis indicate that there was no direct or indirect relationship between structural stigma and depressive symptoms, see Figure 4. Structural stigma was not significantly associated with interpersonal stigma, however, interpersonal stigma was significantly associated with depressive symptoms, see Table 3. This relationship indicates that in states with an equal MAP Talley score (structural stigma) a one unit increase in interpersonal stigma is associated with a .36 unit increase in depressive symptoms. However, structural stigma was not significantly associated with depressive symptoms nor was there an indirect effect from structural stigma to depressive symptoms (via interpersonal stigma), see Table 3. This indicates that structural stigma is not associated with symptoms of depression in young adults who identify as LGBTQ+ either directly or indirectly via interpersonal stigma in this sample.

There was a significant difference between cisgender men, women, and transgender individuals within each path of the analysis. The subgroup of transgender individuals was found to have a significantly stronger effect by path a, b, and the total effect see Table 4. Additionally, the effect of path a was significantly stronger for lesbian and gay participants, see Table 4.

Figure 4

The Statistical Diagram Representing the Direct and Indirect Effect of Structural Stigma on

Depressive Symptoms



Note: N=237. Sexual Orientation and Gender Identity were included as covariates. The direct and indirect effects of structural stigma on depression via interpersonal stigma, R^2=.15.

**p<.001

Table 3

Direct and Indirect Effect of Structural Stigma on Depressive Symptoms

Relationship	Path	Effect (b)	Standard Error	t	p	Confidence Interval
Structural stigma → Interpersonal stigma	a	-0.02	0.02	-1.44	0.15	[.15, -.06]
Interpersonal stigma → Depressive Symptoms	b	0.36	0.12	3.39	0.001	[.001, .15]
Indirect effect: Structural stigma → Interpersonal stigma → Depressive Symptoms	ab	-0.01	0.01	-	-	[-.02, .004]
Direct effect: Structural stigma→ Depressive Symptoms	c'	-0.001	0.03	-0.05	0.96	[-.06, .05]
Total effect: Structural stigma→ Interpersonal Stigma→ Depressive Symptoms	c	-0.001	0.03	-0.36	0.72	[-.07, .05]

Note. N=237

Table 4

Direct and Indirect Effect of Gender and Sexual Orientation on Depressive Symptoms

Variable	n	Path a effect (b)	Path b effect (b)	Total Effect (b)
Gender				
Men	83	-2.23*	-3.36*	-4.17**
Women	125	-4.54**	-6.03**	-7.97**
Sexual Orientation				
Lesbian/Gay	70	1.66*	-0.29	0.32
Bisexual	75	0.66	0.70	0.46

Note. *N*=237. Gender and Sexuality were dummy coded for the analysis and include three subgroups. The reference group for Gender is "transgender" and the reference group for sexual orientation is "queer".

*p<.05 **p<.001

3.3.2 Research Question 2: The Association between Structural and Interpersonal Stigma and Anxiety Symptoms

It was hypothesized that structural stigma would have a direct and indirect effect on anxiety symptoms via interpersonal stigma. Sexual orientation and gender were used as covariates in the analysis as ANOVA results indicate that anxiety symptoms were significantly different for the different subgroups. Transgender individuals reported the highest levels of interpersonal stigma (*M*=15.53, *SD*=4.90) and anxiety symptoms (*M*=19.28, *SD*=5.30) compared to cisgender men and women. Participants who identified as queer reported the highest levels of interpersonal stigma (*M*=13.41 *SD*=4.25) and anxiety symptoms (*M*=15.89, *SD*=5.47) compared to individuals who identify as lesbian or gay and bisexual.

Relationship quality was not used as a covariate as there was no significant correlation found between this variable and any other variable of interest. The average score of relationship

quality was 16.95 (*SD*=2.99) out of a total possible score of 20. Race/ethnicity was also not used as a covariate as there was no significant difference found between the two different subgroups by anxiety symptoms and interpersonal stigma. Participants who identified as white had a higher average score for anxiety symptoms (*M*=14.92, *SD*=5.34) compared to those who did not identify as white (*M*=13.61, *SD*=5.27). Those who did not identify as white scored higher in experiences of interpersonal stigma (*M*=13.57, *SD*=4.18) compared to white participants (*M*=12.94, *SD*=3.98).

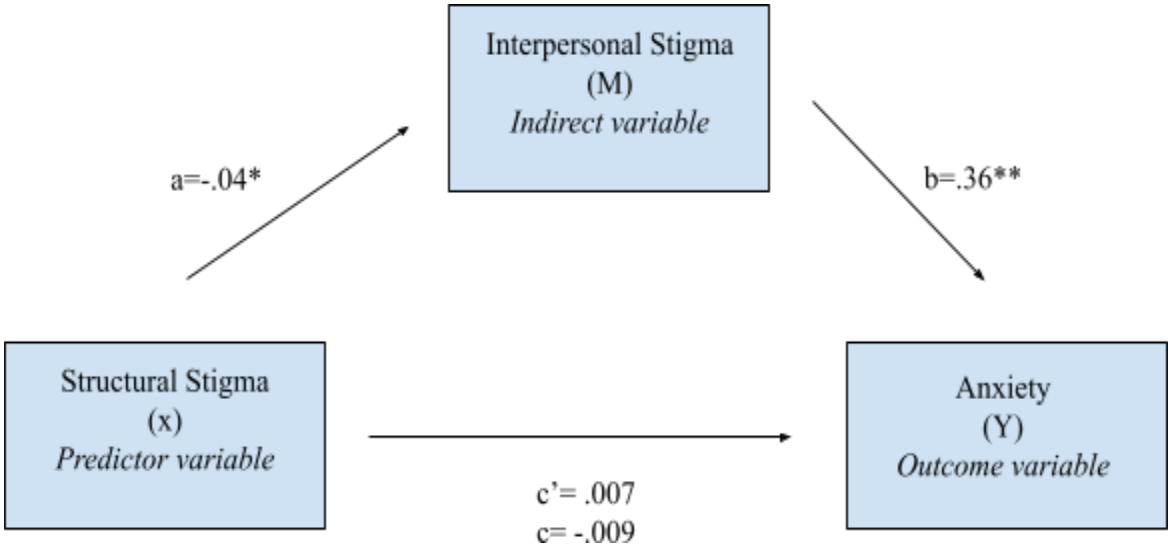
The results of the path analysis indicate that there was an indirect relationship between structural stigma and anxiety symptoms via interpersonal stigma, see Figure 5. Specifically, structural stigma was significantly associated with interpersonal stigma, see Table 5. This would indicate that for every one point higher of MAP scores (structural stigma) there would be a .04 decrease in interpersonal stigma. Interpersonal stigma was significantly associated with anxiety symptoms, see Table 5. This indicates that in states with equal MAP scores (structural stigma) a one unit increase in interpersonal stigma is associated with a .36 unit increase in anxiety symptoms. Structural stigma was not directly associated with anxiety symptoms, however, there was significant indirect effect of structural stigma via interpersonal stigma, see Table 5. This indicates that structural stigma is not directly associated with anxiety symptoms but there is a small indirect effect via interpersonal stigma for young adults who identify as LGBTQ+ in this sample. Overall, structural stigma was associated with 16% of the variance in this model, see Figure 5.

There were significant gender differences in the strength of associations between structural and interpersonal stigma. . Specifically, individuals who identified as transgender had

the strongest effect for path a, b, and the total effect, see Table 6. Additionally, the effect of path a was significantly stronger for lesbian and gay participants.

Figure 5

The Statistical Diagram Represents the Results of the Direct and Indirect Effect of Structural Stigma on Anxiety Symptoms



Note: *N*=243. Sexual Orientation and Gender Identity were included as covariates. The direct and indirect effects of structural stigma on anxiety via interpersonal stigma, R^2=.16.

*p<.05, **p<.001.

Table 5

Direct and Indirect Effect of Structural Stigma on Anxiety Symptoms

Relationship	Path	Effect (b)	Standard Error	t	p	Confidence Interval
Structural stigma → Interpersonal stigma	a	-0.04	0.02	-2.39	0.02	[0.02, -0.07]
Interpersonal stigma → Anxiety Symptoms	b	0.36	0.08	4.44	0.00	[0.00,0.20]

Indirect effect: Structural stigma → Interpersonal stigma → Anxiety Symptoms	ab	-0.02	0.01	-	-	[-0.03,-0.02]
Direct effect: Structural stigma→ Anxiety Symptoms	c’	-0.01	0.02	-0.29	0.77	[-0.04, 0.05]
Total effect: Structural stigma→ Interpersonal Stigma→ Anxiety Symptoms	c	-0.01	0.02	-0.39	0.70	[-0.05, 0.04]

Note. N=243.

Table 6

Direct and Indirect Effect of Gender and Sexual Orientation on Anxiety Symptoms

Variable	n	Path a effect (b)	Path b effect (b)	Total Effect (b)
Gender				
Men		-4.77**	-5.30**	-7.03**
Women		-2.60**	-3.61**	-4.55**
Sexual Orientation				
Lesbian/Gay		1.69*	-0.21	0.41
Bisexual		0.70	0.16	0.40

Note. *N*=237. Gender and Sexuality were dummy coded for the analysis and include three subgroups. The reference group for Gender is “transgender” and the reference group for sexual orientation is “queer”.

*p<.05 **p<.001

CHAPTER 4: DISCUSSION

4.1 Discussion of Findings

While tremendous achievements have been made toward LGBTQ+ equality in the United States over the last decade, recent and developing state legislation can threaten this progress. Since 2015, each year brings a new record high in the number of anti-LGBTQ+ bills signed into law (HRC, 2023c). With no end in sight, it is imperative that the environment created by these policies be understood as well as their impact on the lives of LGBTQ+ Americans. The aim of this study was to examine if structural stigma, in the form of discriminatory policies, was associated with symptoms of anxiety and depression among LGBTQ+ young adults via interpersonal stigma. This pathway has been previously established in the literature (Pharr et al., 2022) but information is lacking on the association among young adults, a population with a high risk for negative mental health outcomes (Miranda-Mendizábal et al., 2017; Perez-Brumer et al., 2017; TTP, 2022).

Participants in this study reported symptoms within the range of clinical anxiety and depression (Powers et al., 2002; Spitzer et al., 2006), consistent with the existing literature on LGBTQ+ young adults (Miranda-Mendizábal et al., 2017; Perez-Brumer et al., 2017; TTP, 2022). The high risk for negative mental health that LGBTQ+ individuals face in comparison to their heterosexual counterparts is generally understood in the literature to be related to the difference in social conditions and stigma associated with LGBTQ+ identities rather than inherent individual characteristics (Kelleher, 2009). The rationale for this disparity can be explained using the minority stress model, which suggests that stigma, discrimination, and harassment targeted at LGBTQ+ individuals create a negative environment leading to increases in mental health problems (Meyer, 2003). Specific to this population, both distal and proximal

stressors are linked to feelings of lacking safety, belonging, and social support, and engagement in unhealthy coping mechanisms (Budge et al., 2013; Wilson & Liss, 2022).

4.1.1 The Role of Gender Identity

Not all individuals who identify within the LGBTQ+ community experience environmental or interpersonal stressors the same. Particularly individuals who identify as transgender or whose gender identity or expression does not conform to their sex assigned at birth (American Psychological Association, 2023) experience higher rates of depression, suicidality, and anxiety compared to cisgender men and women (Budge et al., 2013; Lefevor et al., 2019; TTP, 2023). Consistent with the literature, individuals in the transgender subgroup reported the highest rates of depression, anxiety, and interpersonal stigma in this study. Within the minority stress model, transgender and genderqueer individuals are likely to experience distal and proximal stressors related to cisnormativity (Lefevor et al., 2019). Gender-specific discrimination, harassment, and assault (physical and sexual) are commonly experienced stressors for transgender and genderqueer individuals (Lefevor et al., 2019; TTP, 2023).

Concerning the focus of this study, discriminatory policies are another type of distal stressor that may contribute to the increase in negative mental health and experiences in interpersonal stigma. With the increase in anti-LGBTQ+ policies starting in 2015, policies restricting gender-affirming care, an effective and recommended treatment for gender dysphoria, have increased in circulation throughout the United States (HRC, n.d). Most recently, 23 states have banned gender-affirming care for minors (Davis, 2024) and some states are considering bans for individuals up to 26 years old (HRC, n.d). The subsequent implications of these policies affect the availability of insurance coverage for gender-affirming care.

Currently, 12 states explicitly ban the coverage for gender-affirming care through Medicaid and this number is only expected to increase going forward (MAP, 2024a). Advocacy groups such as, The Advocates For Trans Equality's Trans Health Project, are working to change these types of policies and promote the coverage of gender-affirming care by all insurance companies (Advocates for Trans Equality, 2024). This type of work is vital for creating an inclusive and safe environment for all LGBTQ+ individuals.

Other barriers to receiving gender-affirming care for transgender and genderqueer individuals include distal stressors such as a lack of service availability and discrimination within the healthcare system (Puckett et al., 2017). Additionally, the recent political focus on limiting gender-affirming care has created an increase in proximal stressors in the form of greater concern and a lack of sense of safety for transgender individuals (HRC, 2023e; TTP, 2023). Future research should continue to investigate the relationship between stigma and mental health of transgender and genderqueer individuals focusing specifically on the interaction of these distal and proximal stressors. Investment into this type of research also promotes the identification of specific interventions for healthcare systems and professionals to better serve clients who are transgender and non-binary within a context of policy barriers and a hostile sociopolitical environment.

Healthcare workers also have a unique position in this fight for care equity. Continued advocacy by providers, healthcare communities, and medical institutions are essential when battling these restrictions and bans on gender-affirming care. Medical professionals all over the country are speaking out in support of gender-affirming care and some are even joining their clients in the courtroom (Branstetter, 2023; Logan, 2024). Direct advocacy from doctors is so

important as it helps clarify the truth regarding best practices (gender-affirming care) for all patients who identify as transgender and non-binary.

In addition to advocacy, some suggestions to combat current stigma within the healthcare system are to update the current cisnormative perspectives in medical school curriculum and including and/or increasing the teachings of gender-affirming care (Puckett et al., 2017). These modifications would also promote the well-being of transgender identifying individuals as this would improve the patient experience. The current curriculum does not provide sufficient teachings for healthcare providers to understand the experience of their transgender identifying patients (Johnson & Rogers, 2019). This lack of understanding within traditional healthcare discourages transgender individuals from seekings and persisting in mental health counseling (Johnson & Rogers, 2019). These environments are not gender affirming, a vital component in creating safe spaces for transgender individuals (Glynn et al., 2016). Creating gender-affirming spaces would include ensuring medical providers ask all patients their preferred name and pronouns (Puckett et al., 2017). Integrating these questions into the everyday routine of healthcare facilities can help to promote a safer and more inviting environment for all patients, regardless of gender identity or expression.

However, some current policies restricting gender-affirming care put doctors at risk of criminal punishment for providing these services or making these types of changes (MAP, 2024a). Ultimately, advocacy against these restrictions by medical professionals who can do so without this risk of punishment is so important. Without political intervention, these policies will continue to limit the ability of doctors to act in accordance with best practice for their patients and further risk the mental health and well-being of transgender identifying patients. Without being able to rely on traditional resources, many individuals are reliant on community

organizations dedicated to providing safe and gender-affirming spaces (Johnson & Rogers, 2019). These types of organizations promote important aspects for coping with gender-related stress including social support and engagement among transgender and genderqueer individuals (Gorman et al., 2020; Johnson & Rogers, 2019). Seeking social support is recommended for this population as it can help normalize the transgender experience and create necessary social support networks among individuals (Johnson & Rogers, 2019).

4.1.2 The Role of Race and Ethnicity

Within this sample, there was a majority of individuals who identified as white in comparison to any other racial group or ethnicity. Participants who identified as white reported slightly higher rates of depression and anxiety but slightly lower rates of interpersonal stigma compared to any other race or ethnicity. Only a small portion of the sample identified as either Black or African American, Hispanic, Native Hawiaan, Asian Indian, or something else thus it is difficult to generalize these findings. Regardless, it is difficult to compare these findings to existing literature as there is a lack of research on LGBTQ+ individuals who identify as BIPOC (Black, Indigenous, and other people of color) indicating a higher need to continue research in this area.

In reference to the minority stress model, individuals who identified with one or more minoritized identities are at an increased risk of exposure to environmental stressors, leading to additional distress and negative mental health (Salerno et al., 2023). This increased risk is thought to be associated with the emotional labor of managing multiple types of stigma, such as structural racism and homophobia (Schmitz et al., 2020). However, research has supported both higher and lower rates of depression and anxiety among BIPOC LGBTQ+ individuals compared to their white counterparts, representing a common discrepancy in the literature known as the

Black White mental health paradox (although known by this name this paradox is found to be consistent across other racial groups and ethnicities when compared to non-Hispanic white individuals) (Barnes & Bates, 2017; Salerno et al., 2023, TTP, 2023; Wilson et al., 2023). While it is found that BIPOC LGBTQ+ individuals fare worse in general well-being and distress in comparison to white LGBTQ+ individuals, rates of mental health diagnoses do not always follow this trend (Wilson et al., 2021). On the surface, these findings may seem to be inconsistent with the minority stress model and this is often noted in the literature. While there is currently no one explanation commonly accepted to explain this paradox, there are some that help to explain the findings in this context and study. Specifically, social determinants of health may influence the relationship between mental health and race/ethnicity.

For example, LGBTQ+ individuals who are Black often experience higher rates of economic instability which may affect one's access to health care and the ability to be diagnosed with a mental health disorder (Barnes & Bates, 2017; Wilson et al., 2021). Different cultural beliefs may also disrupt the consistency of reported mental health for LGBTQ+ individuals of color. Specifically LGBTQ+ people who identify as Latino/a report challenges associated with expectations of "individual autonomy" when disclosing mental health challenges to family members (Schmitz et al., 2020). These expectations are not intentionally harmful as they most likely stem from past experiences of the Latino/a community when individualism represented resilience in the face of racial prejudices in the United States (Schmitz et al., 2020). However, these expectations are also coupled with family disapproval or resistance to seeking professional help, which may serve as a barrier to seeking services and being diagnosed with a mental disorder for Latino/a individuals (Schmitz et al., 2020; Villatoro et al., 2014).

Economic challenges and cultural differences both serve as barriers to accessing mental health care. Other differences between Black and white individuals are in the expression of mental health symptoms, such as depression (Barnes & Bates, 2017; Ettman et al, 2022; Walton & Payne, 2016). These differences are not reflected in all measures and diagnostic material, thus potentially accounting for differences in rates of symptoms between racial groups (Barnes & Bates, 2017; Ettman et al, 2022; Walton & Payne, 2016). One of the measures utilized in this study, the GAD-7, has been found to exhibit racial bias in scores of anxiety among Black and white individuals (Parkerson et al., 2015). The measure of depressive symptoms utilized in this study, CES-D 10, has limited information reported on its ability to accurately capture differences via racial and ethnic groups (Miller et al., 2008).

Other factors suggested to be related to the differences in mental health symptoms reported between racial and ethnic groups are in perceived need for care. When compared to white individuals at the same level of symptom severity, Black, Hispanic, and Asian Americans are less likely to perceive a need for mental health care (Oh et al., 2024). The lack of intention to seek mental health care is also associated with a lack of mental health literacy, indicating those with less intention to seek care do not have the same resources to accurately identify mental health symptoms compared to those who do (Chakawa & Shapiro, 2022). Additionally, BIPOC individuals are less likely to report impairment from higher levels of depression and anxiety in comparison to white individuals (Oh et al., 2024). Again, it is important to note that the differences in mental health evaluation may be tied to health literacy. Health literacy is connected to problem recognition, or the ability to identify a psychological condition, and is low among young adults but particularly low among BIPOC young adults (Chakawa & Shapiro, 2022; Crisanti et al., 2016).

These differences in interpretation of one's mental health paired with barriers to seeking treatment may explain some of the differences noted in this study as measures of anxiety and depression were entirely self-report. Overall, the findings in this study regarding rates of anxiety and depression should not be interpreted to suggest white individuals experience more symptoms of anxiety and depression compared to other racial groups. Additional research should investigate the connection between barriers to mental health treatment and patterns of understating mental health symptoms among different racial and ethnic groups to further explain this common paradox.

Consistent with the findings of this study, LGBTQ+ who identify as BIPOC generally report higher rates of interpersonal stigma such as discrimination and harassment as this population is more likely to experience multiple forms of discrimination, based on both sexual identity and racial identity (Casey et al., 2019; Medina & Mahowald, 2023; Salerno et al., 2023). When investigating how young adults who identify as LGBTQ+ are impacted by structural and interpersonal stigma, it is important to consider how intersectionality may influence this relationship. Currently, the literature on comparing experiences of stigma by LGBTQ+ individuals of color versus white LGBTQ+ individuals is limited. However, from the available data, there are few racial and ethnic differences reported comparing the effects of structural stigma with LGBTQ+ individuals (Everett et al., 2016; Flentje et al., 2021).

Specifically, supportive and accepting environments and policies are shown to have a similar positive impact on health and lower rates of perceived discrimination for both white and LGBTQ+ individuals who identify BIPOC (Everett et al., 2016; Flentje et al., 2021). Racial and ethnic differences comparing areas of higher structural stigma are often not examined or reported in existing research (Bränström et al., 2023; Bränström & Pachankis, 2021; Pachankis &

Bränström, 2018; Ünsal et al., 2022). Unfortunately, this trend was continued in this study as there was not an equal representation of racial or ethnic groups in this sample and there were no significant differences found between race or ethnicity and scores of depression, anxiety, and interpersonal stigma. Race and ethnicity were therefore not included as a covariate in either statistical model.

4.2 Structural Stigma and Interpersonal Stigma

Consistent with expectations, higher rates of interpersonal stigma were associated with higher rates of symptoms of anxiety and depression symptoms. This relationship can be explained using the minority stress model in which discrimination is categorized as a distal stressor as it is an external experience (Meyer, 2003). As a distal stressor, discrimination creates a hostile and negative environment leading to excess stress for individuals (Meyer, 2003). Discrimination and harassment, within the literature, are found to have a significant positive relationship with anxiety, depression, as well as other psychological distress symptoms and disorders among LGBTQ+ individuals (Lefevor et al., 2019; Lei et al., 2021; Morris & Balsam, 2003).

Additionally, structural stigma was associated with interpersonal stigma in both models such that higher MAP Talley (lower structural stigma) scores were associated with lower scores of interpersonal stigma. However, only in the model including anxiety was the relationship significant. This may be in part due to the lack of variability within this sample as a majority of participants reside in areas of low structural stigma. Without an equal representation of levels of structural stigma, it is difficult to determine its association with interpersonal stigma in this model. In addition to the lack of variability in the sample, it is important to consider all other factors that may contribute to these findings.

Past literature has established evidence to support the positive correlation between structural stigma and interpersonal stigma in the LGBTQ+ community (Bränström et al., 2023; Hatzenbueler et al., 2024; Pharr et al., 2022; Woodford et al., 2018). Generally, structural and interpersonal stigma are thought to work hand-in-hand to preserve existing stereotypes and prejudice against the LGBTQ+ community (Stangl et al., 2019). However, the relationship between these two types of stigmas may not be entirely straightforward. While the hypothesized trend was observed between structural stigma and interpersonal stigma in this study, the lack of a statistical significance association in one model and lack of strength in the other provides room for further interpretations. One important consideration is in the measure of structural stigma as it included the presence of discriminatory legislation and protective policies. These two types of legislation produce conflicting results when coupled with interpersonal stigma in the literature.

Studies investigating discriminatory laws and policies (representing higher structural stigma) find higher reports of discrimination and harassment in these contexts compared to environments without those policies (Bränström et al., 2023; Gower et al., 2018; Kull et al., 2016). However, some studies investigating environments with protective policies (representing lower structural stigma) find the opposite effect. For example, Clark and colleagues (2022) found that in states with a greater number of protective policies for the LGBTQ+ community individuals (lower structural stigma) reported higher rates of interpersonal stigma, indicating a negative correlation. One reason stated for this correlation is the possible backlash individuals in minoritized groups face after receiving protection from the state (Clark et al., 2022). This phenomenon has been previously observed among individuals who identify as transgender during the implementation of anti-workplace discrimination policies; at the time of enactment, these policies are associated with higher odds of unemployment among staff who identify as

transgender (Leppel, 2016). These results may indicate that the presences of protective policies, on their own, are not an accurate measure of low structural stigma. As discriminatory and protective legislation were combined into the variable of structural stigma, their independent effects were unable to be disentangled in this study.

Future research efforts should continue to investigate these two distinct types of policies to understand the differences in their effect. Additional areas to explore would be the length of time these policies take to influence their associated social environment. It has been suggested that state-level protective policies may require a prolonged period of time to transform social attitudes and the everyday experiences of those being protected (Clark et al., 2022; Kreitzer et al., 2014; Swank et al., 2013). Longitudinal studies would be best suited for this type of research as patterns of acceptance and rejection within communities could be tracked over time, providing valuable information for the development of interventions in creating safe environments for LGBTQ+ individuals. These research efforts support the necessary continued advocacy for LGBTQ+ individuals who continue to face stigma, even in areas with protective policies.

Transforming state environments to be supportive and safe is beyond the control of any one individual considering the size and complexity of this task. However, individual action can be taken to improve one's local community. Increased civic engagement and support of protective policies for LGBTQ+ individuals within one's school district and county can promote the existence of safe spaces, even within less supportive states.

4.2.1 Direct and Indirect Effect of Structural Stigma

Contrary to hypothesis 1, structural stigma was not directly or indirectly associated with depressive symptoms. Structural stigma was however associated with higher levels of anxiety via interpersonal stigma, supporting hypothesis 2.2. However, the indirect effect was small. It is

important to note that the sample in this study was not equally distributed in terms of residence in areas of low and high structural stigma. The majority of individuals lived in areas of low structural stigma, possibly contributing to the lack of direct and strong effect found. In addition, the average score among participants for interpersonal stigma was relatively low, indicating that this sample of participants does not experience a high amount of discrimination or harassment.

Additionally, the sample in this study was composed entirely of individuals in a romantic relationship. The association between relationship status and mental health is inconsistent in the literature for LGBTQ+ young adults (Baams et al., 2014; Bauermeister et al., 2010; Whitton et al., 2018). Thus, it is unlikely that relationship status alone interferes in the association between structural stigma and mental health. However, the quality of one's relationship may act as a protective factor given its association with positive mental health among LGBTQ+ individuals who are experiencing discrimination (Frost et al., 2016; Robles et al., 2022; Starks et al., 2023; Sarno et al., 2022). There was no correlation identified between relationship quality and symptoms of anxiety or depression in this sample. However, with no comparison group it is difficult to determine if relationship quality ultimately acted as a protective factor against the effects of structural stigma and thus contributing to the lack of strong connection found.

These unexpected results can also be attributed to multiple different factors found to affect LGBTQ+ individuals who are experiencing high levels of stigma. For example, social support and connection to one's community can serve as protective factors against symptoms of anxiety and depression, especially in high structural stigma areas (Griffin et al., 2018; Ünsal et al., 2022). Receiving social support and feeling connected to others in the LGBTQ+ community is specifically correlated with increased identity disclosure, which is also associated with a decrease in anxiety and depression (Griffin et al., 2018; Ünsal et al., 2022). Younger adults may

have a slight advantage in receiving social support in comparison to older adults through the use of social media. Social media is often utilized by LGBTQ+ young adults to create safe social environments that are not otherwise available to them (Berger et al., 2022; Gordon et al., 2023). These spaces serve as communities for LGBTQ+ young people to learn and receive support while still allowing for anonymity (Berger et al., 2022; Gordon et al., 2023). As social support and connection to one's community were not measured in this study, their potential influence on the relationship between stigma and mental health will remain unknown.

An additional confounding factor that may impact the relationship between structural stigma and mental health is socio-economic status. Socioeconomic status (American Psychological Association, 2017) is considered a social determinant of health as it has the ability to determine one's access to proper health care, nutrition, and other important factors related to well-being. When included in the association between victimization and structural stigma, socioeconomic status acts as a moderator (Branström et al., 2023). Individuals with a lower socioeconomic status experience higher rates of victimization when residing in higher structural stigma areas. Likewise, higher socioeconomic status acts as a protective factor against experiencing victimization as predicted by the additional freedom and access to safer or more accepting neighborhoods or occupations (Branström et al., 2023). As socioeconomic status was not among the demographic variables measured in this study, additional research should be conducted to determine if differences in socioeconomic status impact the relationship between structural stigma and mental health in young LGBTQ+ adults.

Although weak, the indirect effect found between structural stigma and symptoms of anxiety via interpersonal stigma remains as an important finding in this study. These results suggest that the interaction between the two types of stigmas influences the individual lives of

LGBTQ+ young adults. An individual's surroundings is created by structural stigma existing within the macrosystem and interpersonal stigma existing within the mesosystem and microsystem. This indirect effect suggests that the two inner systems, mesosystem and microsystem are the essential contexts transmitting the influence of structural stigma onto the individual.

There are multiple ways in which structural and interpersonal stigma may be interacting to create this effect, though small. For example, structural and interpersonal stigma have been found to influence individual stigma (Bränström & Pachankis, 2021; Hatzenbuehler et al., 2024; Pachankis et al., 2021; Petrou & Lemke, 2017). Individual stigma is the psychological process individuals go through in response to stigma (Pachankis, 2007). For LGBTQ+ individuals, individual stigma can materialize as internalized stigma, concealing of one's LGBTQ+ identity, or perceived stigma (Hatzenbuehler et al., 2024). Individual stigma has been found to have a negative influence on the well-being of LGBTQ+ individuals (Bränström & Pachankis, 2021; Pachankis et al., 2020; Petrou & Lemke, 2017). In environments with higher levels of structural or interpersonal stigma, individual stigma has been found to have a stronger negative impact on mental health (Fredrick et al., 2021; Pachankis et al. 2021; Petrou & Lemke, 2017).

Another factor connected to the association between structural and interpersonal stigma is mental health care and treatment (Hatzenbuehler et al., 2024). Previous studies have found that structural stigma influences the access, usage, and engagement with healthcare among LGBTQ+ individuals through increases in anticipation and experiences of mistreatment (Hatzenbuehler et al., 2024; TTP, 2023). Some individuals report hesitation to mental health care usage due to fear of "not being taken seriously" and fear of LGBTQ+ identity being revealed (TTP, 2023). Future research should continue to investigate the links between these different forms of stigma and

access to important resources to best understand influences on individual mental health. This type of research would also inform the creation of interventions to reduce stigma related barriers, which attenuate the effectiveness of therapeutic interventions (Hatzenbuehler, 2017).

There is a lack of research in therapeutic interventions for LGBTQ+ individuals but some studies emerge with encouraging results (Van Der Pol-Harney & McAloon, 2018). Some recommended techniques include affirmations of LGBTQ+ identity and the recognition of stigma on one's self-identity (Van Der Pol-Harney & McAloon, 2018). Recommendations specifically for young adults include therapeutic environments that promote trust, respect, and teaching of coping skills (Van Der Pol-Harney & McAloon, 2018). Social support and self-compassion are among other recommendations for LGBTQ+ individuals to increase their emotional well-being (Helminen et al., 2023). Social support especially can be increased through engagement in safe, queer, and gender-affirming spaces (McDermott et al., 2024; TTP, 2021). It is important that access and visibility of these spaces are present in all communities. Organizations like Everywhere is Queer are working to create greater awareness to these types of spaces through a public resource in the form of a searchable map that lists queer-owned and operated businesses (Everywhere Is Queer, 2023). However, much work remains in identifying and developing more of these necessary spaces.

4.3 Limitations

4.3.1 MAP Policy Talley

The first limitation that must be noted is that the MAP Policy Talley is a proxy measure of structural stigma. This tool is used to track seven categories of supportive and inclusive policies that pertain to LGBTQ+ individuals. Structural stigma is a concept that is more complex and cannot be fully measured by policies alone. By definition, structural stigma affects

stigmatized individuals through societal norms, conditions, and policies (Hatzenbueler, 2014). When using a measure of policies only, there is a chance that societal "norms and conditions" are not entirely captured. A large number of anti-LGBTQ+ policies in a particular area is an indicator of high structural stigma, however, there are other factors that could be included to more accurately measure this concept. For example, past studies have included both an objective measure, such as a policy tally, and a measure of social attitudes towards marginalized individuals (Hatzenbeuler, 2014).

Additionally, measuring structural stigma only at the level of the state may also limit the accuracy of structural stigma affecting an individual. Incorporating both distal, such as national and state, and more proximal areas, such as county or town, provides a more comprehensive view of the social climate an individual experiences (Hatzenbuelter, 2016). A wide range of variability may exist when comparing the structural stigma in a state versus a town within that state. For example, North Carolina has a MAP Tally of 6.75 or 44.5 total points being categorized as having low protections and support for LGBTQ+ individuals (MAP, 2024b). However, in Durham County, NC there are full protections against discrimination for sexual orientation and gender identity in the areas of employment, housing, and public accommodations (MAP, 2024b). The differences between proximal and distal measures of structural stigma were not able to be analyzed in this study due to data access restrictions of the secondary dataset utilized.

Nevertheless, the MAP Policy Talley provides valuable information regarding the social and political climate of each state, especially considering the attention to policies in seven categories for both sexual orientation and gender identity. As the sample in this study includes individuals of both sexual and gender minorities it was necessary to utilize a tool that captures

legislation in regards to both sexual orientation and gender identity. Additional rationale for the use of this measure is provided by previous studies that have used this and similar state policy indexes as measures of *structural stigma* and *societal stigma* (Clark et al., 2022; Flentje et al., 2022; Schlehofer et al., 2023).

4.3.2 Secondary Dataset Limitations

One major limitation to this study was acquiring access to a secondary dataset that included demographic information on LGBTQ+ identities. Identifying within this community can create a significant difference in one's experiences both internally and externally. Thus, the most general research recommendation to come from this study is to include demographic questions of LGBTQ+ identities in social science research. This allows for research of LGBTQ+ experiences to continue whether or not that is the specific focus of the study.

Within the secondary dataset used in this study, there were some limitations. First, the data used in this study was cross-sectional. As a result, the path analysis conducted was not able to provide predictions, only associations between the variables. This limits the ability of the study to generalize findings to the broader population. Secondly, there was no comparison group used in this study. A comparison group of heterosexual and cis-gender individuals would have provided the ability to compare the effects of structural stigma both between groups and within groups.

Covid-19 Pandemic: Data collection for the NCHAT study occurred in 2020 and 2021. During this time, the Covid-19 pandemic was in full swing in the United States (CDC, 2023). Due to the restrictions of lock down protocol, interpersonal interactions were limited (CDC, 2023). Thus, the experiences of interpersonal stigma captured may not reflect the typical experiences of the participants. Additionally, there was an increased focus in media and politics

on the coverage of the pandemic (CDC, 2023). Thus, there was less focus on the anti-LGBTQ+ legislation at this time. It is possible that the full effect of these policies on individual health was not able to be captured given the political and social environment.

Relationship Quality. Relationship status for LGBTQ+ individuals is found to have varying impacts on individual mental health (Baams et al., 2014; Bauermeister et al., 2010; Whitton et al., 2018). In comparison to heterosexual individuals, LGBTQ+ individuals are more likely to experience discrimination and conflicts with friends and family due to their relationships along with general societal devaluation of their relationships (Frost et al., 2017; Whitton et al., 2018). While these experiences may seem predictive of negative mental health, there is some evidence to support the positive impact of relationship status for LGBTQ+ young people (Whitton et al., 2018). For example, romantic relationships can buffer the negative psychological impact of individual sexual orientation victimization and harassment among high schoolers who are LGBTQ+ (Whitton et al., 2018). In contrast, some studies have found that relationship status provides little to no effect on psychological well-being, specifically anxiety and depression (Baams et al., 2014; Bauermeister et al., 2010). Overall, the direct effect of being in a relationship on mental health for LGBTQ+ individuals is inconclusive. As a result, the dataset from the NCHAT study was considered appropriate for use in this study.

While relationship status is not necessarily connected to mental health, relationship quality is found to be related to individual well-being. Relationship quality is found to predict positive mental health when coupled with discrimination in LGBTQ+ individuals (Frost et al., 2016; Robles et al., 2022; Sarno et al., 2022; Starks et al., 2023). However, the significance of relationship quality as a predictive factor against discrimination is inconsistent in research comparing supportive and non-supportive environments (Frost et al. 2016; Starks et al., 2023).

Thus, relationship quality was included as a measure in this study. Overall, relationship quality was not found to be associated with interpersonal stigma or symptoms of anxiety or depression. As a result, it was not included as a covariate in the final model.

- Other considerations that are necessary to point out are the possible connection between relationship status and identity development for young adults. Identity development includes identity exploration and commitment (Luyckx et al., 2013). Both of these processes are most prominent and active in emerging adulthood and begin to slow once an individual enters their late 20s (Luyckx et al., 2013). Throughout one's 20s, identity commitment becomes an increasingly important indicator of well-being as this is associated with a stronger sense of self-definition and a lack of depression (Luyckx et al., 2013). Without identity commitment, exploration continues into later stages of adulthood unaccompanied by the exhilaration and curiosity experienced in emerging adulthood (Luyckx et al., 2013).

Identity development is currently understood to be this linear process and is consistent with a heteronormative and gender binary perspective (Morgan, 2012). For LGBTQ+ young adults, identity development may differ slightly from this process as these individuals often have widely different experiences, unable to be categorized in a consistent, sequential order (Morgan, 2012). Many individuals will have experiences of exploration, self-identification, and commitment but not necessarily in this respective order (Morgan, 2012). These individuals may also face additional challenges such as forced identity disclosure that may disrupt the identity development process (Torkelson, 2012). However, LGBTQ+ young adults who enter romantic relationship may experience benefits for their identity development as relationships can affirm

one's identity and provide additional social support (Hsu & Mernitz, 2024). Ultimately, the participants in this sample may not be entirely representative of the LGBTQ+ community given their relationship status and the possible connection to identity commitment and mental health symptomatology.

Lack of Racial and Ethnic Diversity. An additional limitation in this study was the lack of diversity in the sample as the majority of participants identified as white. It is important to note that the original dataset for The National Couples Health and Time study did have a fully representative sample. Kamp Dush and colleagues conducted additional recruitment sessions to achieve a fully powered sample from individuals who identified as Black and Latino after initial fieldwork did not provide sufficient diversity (2023).

However, this study does provide a basis to continue research focusing on young LGBTQ+ adults and the pathways in which structural stigma influences individuals. Future research should strive to include a representative sample size to best understand the effect of structural stigma, given differences in discrimination by individuals with intersecting identities. Additional considerations for future research should include measures of race-related stigma. This was not included in this study but would have provided meaningful insight to the differences in the types of stigmas experienced by individuals who identify as BIPOC and LGBTQ+.

Lack of State Diversity. Another area lacking in variability was the geographic location of individuals. The final 255 sample did not include an equal distribution of individuals from different states. While there was no one state representing the majority of individuals, the sample included more individuals from states with lower structural stigma, or a more supportive environment, compared to states with higher structural stigma. The lack of representation from

all types of environments may have contributed to the lack of significant results found in this study.

Lack of Clinical Depression Symptom Scores. The final limitation of note for this study was the overall low scores found for depression symptoms from the overall sample, which may have impacted the lack of significant results found in model 1. The range of possible scores for the CES-D 10, the measure for depressive symptoms in this study, are 10 to 40. Items for this scale were scored from 1 to 4 by the original NCHAT study (2023). Standard use of the CES-D 10 uses a scale from 0 to 3 with scores over 10 indicating a clinical level of depressive symptoms (Powers et al., 2002). For this study, translating the original threshold would indicate that scores over 20 are considered to represent clinical levels of depression. The average score in depressive symptoms found for this sample was just beyond this threshold at 21.3. However, for a sample of LGBTQ+ young adults with a high risk for symptoms of depression, it would be expected that overall score would reach further than just beyond the threshold for clinical depression (TTP, 2023; Wilson & Liss, 2022). For example, in this study, it was found that gay and lesbian individuals did not average clinical depressive symptoms while bisexual and queer individuals did. Furthermore, the entire sample was composed of individuals in a committed relationship. While the impact of relationship status and mental health is inconclusive, there is a chance that relationship quality impacted these results but the effect was not identified (Baams et al., 2014; Bauermeister et al., 2010; Frost et al., 2016; Frost et al., 2017; Robles et al., 2022; Sarno et al., 2022; Starks et al., 2023; Whitton et al., 2018)

4.4 Conclusion

Overall, the results from this study provide a greater understanding of the way in which structural stigma influences interpersonal stigma and symptoms of anxiety among LGBTQ+

young adults. The main implications from this study provide a foundation to continue to investigate the pathway between structural stigma and the mental health of young LGBTQ+. Additional research should provide specific attention to individuals who identify as transgender and nonbinary given the high rates of interpersonal stigma found in this study.

The present research contributes to the growing body of evidence that structural stigma in the form of discriminatory laws and policies are harmful towards LGBTQ+ individuals. Specifically, this research provides information on LGBTQ+ young adults, who are not traditionally the focus of research on structural stigma. Young adults are also not the general focus of the recent spike in anti-LGBTQ+ legislation. This trend targets a multitude of areas including access to proper health care for individuals (mostly minors) who are transgender or nonbinary, participation in sports, restrictions on bathroom access, and restrictions on drag shows (HRC, 2015; HRC, 2023a). One particular focus of these policies has been public education in the areas of curriculum censorship and restrictions (American Civil Liberties Union, 2024). These policies directly affect the public education system from grades K-12, teachers, school administrations, and staff. These policies do not necessarily influence the daily lives of young people who are LGBTQ+ considering they are beyond grade-school age. Nevertheless, there was a small effect found in this study suggesting structural stigma indirectly impacts symptoms of anxiety in young LGBTQ+ adults. The implications from these findings further support the idea that harmful and discriminatory legislation influences more than those directly affected, displaying the widespread impact of these policies.

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