ABSTRACT

JONES, AMANDA MARGARET. Association between Telehealth Utilization and Mental Health among High School Age LGBQ Youth. (Under the direction of Dr. Mary Haskett).

High school age youth in the US are experiencing substantial mental health challenges. These concerns are further exacerbated when youth are part of a minoritized group, such as LGBQ. The study thus explored any potential associations between use of telemental health services and mental health, including feelings of sadness, hopelessness, and suicidal ideation, within this vulnerable population during the COVID-19 pandemic. Drawing on data from the 2021 Adolescent Behaviors and Experiences Survey (ABES), the analysis included 1,218 LGBQ participants, focusing on differences in mental health indicators based on telehealth usage. Findings indicate that LGBQ youth who used telehealth services reported higher rates of sadness, hopelessness, and suicidal ideation compared to their peers who did not use these services. These results suggest that telehealth services are predominantly accessed by those experiencing the most severe mental health challenges. Exploratory analyses highlight some potential racial disparities, with Black LGBQ youth exhibiting unique patterns of suicidal ideation in relation to telehealth use. The study underscores the need for more accessible, equitable, and culturally competent mental health interventions tailored to the intersecting identities of LGBQ youth.

Association between Telehealth Utilization and Mental Health among High School Age LGBQ Youth

by
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DEDICATION

My great-grandfather, William T. Overby, attended NCSU from 1922-1926 and his legacy is still found in the archives of NCSU. He had no idea that less than 100 years later, I would find it in the form of a log book. I have thought about what I want future members of my family to see when they look at my academic legacy at NCSU. He attended this institution at a time when women were not openly encouraged to enroll and yet, here I am, not only gaining a bachelors (2013) but also a masters (2021) and now a Ph.D. I truly hope and dedicate this dissertation to those in my family–in particular my son, Oaklan- who come after me. I hope you are encouraged to speak the truth, even if your voice shakes.

For my friend, Lilly, and her wife, Renee who are courageous and strong in their love for each other and desire to make the world better in both small and large ways. I am so proud of you for doing the work even when our society tells you not to. You both make me a better person.

And finally, for my husband, David. Not once have you ever said no to one of my dreams, or blown out my flame. I am constantly in awe of how open, kind and patient you are with me and our son. Thank you for making my life so joyful and having deep enriching conversations, particularly about this dissertation. We are finally at the finish line. What a wild ride–I again say, I will always choose to sit with you on our back porch steps and eat popcorn. I love you, always.

BIOGRAPHY

Amanda M. Jones was born in Ann Arbor, Michigan in 1990, the oldest of three daughters, to Lori and John Jones. In high school, her Advanced Placement Psychology teacher instilled in her a curiosity for psychology that led to her obtaining a BA in Psychology from North Carolina State University in 2013. While earning her bachelor's degree in psychology, she also nurtured her love of critical thinking and learning by simultaneously receiving a BA in Religious Studies and minor in Linguistics. After working with youth and adults experiencing homelessness in Raleigh, NC, and collaborating on research studies with preschoolers across the Raleigh-Durham area, Amanda decided to go back to school for a doctorate in school psychology. She currently lives with her husband, her greatest supporter, and son. Her two cats keep her grounded (and happy) and in her free time she enjoys daydreaming about where she will travel to next and learning how to make even better sourdough than she did during the pandemic.

ACKNOWLEDGMENTS

For the faculty of NCSU's school psychology program, but in particular Dr. Mary Haskett, my advisor, who has given her time to help me craft this dissertation to be more advocacy-focused than I initially thought was possible & to Dr. Kate Norwalk, who's own advocacy reminds me that the most important task we can do is try to prevent harm to others. Thank you for encouraging me the entire way.

LIST OF TABLES

Introduction

High school in the United States is a time of massive developmental change. Norms about the ultimate goal of high school start exerting pressure on students to not only balance an increased course load, but also begin strategizing about the future, particularly in regards to laying out plans for life beyond education. At the personal level, most high school age youth are physically changing while also exploring their own identities, including gender and sexuality. Discovering who they are can sometimes lead to high anxiety and stress among teenagers and their primary supports. All of these transitions paired with the current cultural landscape of the United States (e.g., increased fears of an economic recession, women's and Lesbian, Gay, Bisexual, Transgender & Queer/Questioning [LGBTQ+] rights being revoked, heated political elections) can lead to an increased need for various kinds of emotional support, including services from mental health professionals, particularly among minoritized LGBTQ+ youth. Telehealth services may be one way adolescents can receive such support. Exploring the interplay between telehealth-based care and the mental health of LGBTQ+ youth will help mental health providers structure interventions in potentially new and novel ways to better serve and ultimately support adolescents in the midst of a national mental health crisis. Such was the purpose of this study.

Mental Health Crisis

In order to truly understand why telehealth is a worthwhile support to consider for teenagers, it is important to understand the current overall mental health status of adolescents. Mental health, much like physical health, is a broad concept which can be defined and interpreted in numerous ways. Depression, anxiety and suicidality are some of the most commonly explored aspects of mental health status. Depression has been steadily rising among

12-17 year olds since 2004 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2019). Among teenagers aged 12-17 years in 2021, 20.1% experienced a major depressive episode in the past year, representing 5 million people in the United States (SAMHSA, 2021). Similar statistics were seen globally during the first year of the Covid-19 pandemic; one in four children and adolescents reported clinically elevated levels of depression and one in five children and adolescents reported experiencing clinically elevated anxiety symptoms (Racine et al., 2021). According to data from the National Youth Behavior Risk Survey (YRBS) from 2021, 42% of adolescents reported that they felt so sad almost every day that they stopped doing their usual activities (Centers for Disease Control and Prevention, 2023). Due to these and other compelling data, the US Surgeon General published a 2021 report announcing a youth mental health crisis in the United States (Office of the Surgeon General, 2021). Clearly, there is increasing concern about the state of adolescent mental health in this country. This is not a silent epidemic–adults and children are aware of and desire change to mental health support systems. To illustrate, a 2024 survey distributed to both parents and youth showed that there is understanding by both groups that mental health for teenagers is at a crisis state (Common Sense Media). However, a closer examination of the research shows that the crisis has not impacted all adolescents equally; some groups are at higher risk for mental health concerns and at greater disadvantage in receiving needed services than others.

Gender and Sexual Identity

Two very important identities to consider when exploring adolescent mental health are gender identity and sexual identity status. Though these two identity factors are typically used interchangeably, they are two distinct aspects of identity that may overlap. Gender identity is a complex label. Gender is *heavily* influenced by cultural norms and expectations but is also

internal; the feeling or sense of being male, female, both, or something outside of the male/female binary is gender identity (Marquez et al., 2023). Importantly, a person's gender identity is not always the same as the *sex* that was assigned to the person by others at birth. Gender identity is complicated because though it is a deeply internal state, it is also inferred by others through social displays. Clothing choices (Strübel & Goswami, 2022), linguistic patterns (Anderson & Leaper, 1998) and subtle differences in how people move and position their bodies (Butkowski, 2021) all convey information whether intentional or not that others use to determine gender. Similarly, sexual identity carries with it expectations for how people interact with others and the world at large. Sexual identity status refers to how a person categorizes their emotional, sexual and/or romantic attraction to other people (Marquez et al., 2023). However, like gender identity, sexual identity status also has a social categorization. Sexual identity is socially constructed based on the incorrect assumption that there are only two categories of sexuality: heterosexual and homosexual (Bradford, 2004; Hartman, 2013). Furthermore, heterosexuality and being assigned a male gender, are considered part of the heteronormative ideal and convey in some spaces the highest amounts of power (Connell & Messerschmidt, 2005; Boyer & Lorenz, 2020). When considering adolescent identity and mental health, understanding how sexuality and gender identity interconnect is important because of how minoritized people are treated.

Though gender identity has always appeared in many cultures beyond the male/female binary, nonbinary gender identity has not been wholly *accepted* in the United States. For adolescents, gender and sexual identity are both continuing to develop (Branje, 2022) and discovering that one exists outside of the dominant heteronormative ideal can lead to lower mental health scores. A 2023 study in the United Kingdom analyzing the mental wellbeing of over 30,000 adolescents found that LGBTQ+ teenagers reported the lowest levels of wellbeing

when compared to their non LGBTQ+ peers (Marquez et al.). Adolescents who identify outside of the male/female gender ideology (i.e., nonbinary or gender described in a different way) were found to report the most substantial levels of negative affect and distress. This trend of greater challenges in wellbeing for LGBTQ+ adolescents is also seen in the United States.

Indeed, extremely high levels of anxiety and depression have been shown to be associated with the gender and sexual identities of LGBTQ+ adolescents, a group that has been minoritized in the United States. Few nationally-representative surveys have been conducted specifically for data related to this group; however, since 2020 an annual survey has been released with a focus on identifying challenges that LGBTQ+ youth face. Conducted by The Trevor Project, a national non-profit focusing on supporting the mental health of LGBTQ+ youth, a yearly cross-sectional online survey with a reach of 15,000+ youth ages 13-24 has shown year after year that these youth experience higher levels of mental health challenges than their non-LGBTQ+ peers. For example, 70% of LGBTQ+ adolescents between 13-17 reported experiencing symptoms of anxiety and 57% reported experiencing symptoms of depression. Even more sobering, 41% of LGBTQ+ youth reported experiencing suicidal thoughts, with the highest proportions from trans and nonbinary youth (The Trevor Project, 2023). When examining depressive symptoms among racial identities of LGBTQ+ youth, there are also noticeable differences. 56% of Black LGBTQ+ youth reported depressive symptoms compared to 50% of their white LGBTQ+ peers (The Trevor Project, February 2023). This increased risk is likely due to structural oppression against both racial and sexual identities: anti-LGBTQ+ legislation and living in geographic areas with hostile racial relations have both been linked to increased risk of suicide among Black LGBTQ+ youth (English et al., 2022; Jackson et al., 2023).

Though more than half of LGBTQ+ adolescents who completed the survey struggled with their mental health, the youth were not without hope. When asked to describe a world where all LGBTQ+ people are accepted, common answers included “better”, “happier”, “peaceful”, and “free” (The Trevor Project, 2023). Youth are resilient and desire a better world. Therefore, the solution to a problem of this magnitude is to consider the mental health crisis holistically (e.g. consideration of intersecting identities) and increase resources strategically. One area that requires more attention is how adolescents access mental health care.

Challenges Associated with Receiving Mental Health Care

In 2023, nearly all (81%) LGBTQ+ youth wanted mental health care; however, due to a mix of individual and systems-level barriers, of those who desired support, only 44% were able to receive care (The Trevor Project, 2023). The Trevor Project survey data found that the top three barriers were related to interpersonal concerns: fear of talking about mental health with someone else, not wanting to have to ask for parent/caregiver’s permission, and fear of not being taken seriously (The Trevor Project, 2023). Structural barriers were also identified, specifically inability to afford mental health care and low trust that a therapist would understand sexual or gender identity related issues due to perceived lack of therapist training. A qualitative study from Ireland conducted in 2020 found similar individual and sociocultural barriers reported by youth including lack of support from caregivers, cultural stigma surrounding a mental health diagnosis and the potential weaponization of a diagnosis, as well as not wanting a caregiver to know they need help (Higgins et al., 2021).

One theme from both studies is that the caregiver is the “gatekeeper” for mental healthcare access. For LGBTQ+ adolescents, caregiver actions and beliefs about identity are magnified. If caregivers do not trust mental healthcare or do not believe that their children

require those services, consent for services will not be given, which inhibits care (Toure et al., 2022). Furthermore, parental beliefs imbued with homophobia and transphobia can lead to the forced use of "conversion therapy", a harmful attempt at changing a person's sexual identity status which has been associated with increased levels of depression, suicidal thoughts and suicide attempts (Ryan et al., 2020). Clearly, caregiver attitudes towards their LGBTQ+ child have a direct impact on access to mental healthcare services.

Beyond the role of caregivers, there are two important structural barriers to consider: transportation and affordability. Among families with annual incomes lower than $50,000, transportation is a top explanation for why treatment for mental health concerns is abandoned (Riley et al., 2023). When thinking about transportation and youth, there is an added level of potential stress; that is, reliance on caregivers potentially means having to ask permission to either use a vehicle or be driven to a mental healthcare facility. As mentioned earlier, this means when a child is living with an unsupportive caregiver, gatekeeping occurs via lack of transportation. Even when a caregiver is supportive, families with low-incomes may not have the financial resources to pay for transportation to and from the facility itself. Region-specific infrastructure is another major consideration. Lack of adequate public transportation means one less option to get to a mental healthcare facility. Furthermore, if there are few mental health facilities and they are located far from the youth, then the expectation of regular therapy becomes unrealistic. Transportation to and from the mental healthcare centers can be the most salient reason for lack of care and is in many cases a direct result of poverty.

As alluded to above, mental healthcare is expensive, and becomes even more of a burden when poverty is also affecting a family. Much like physical health care, not all services are covered by insurance, and even so, not all families have health insurance. Among those who do

have insurance, coverage varies widely. Medicare and Children's Health Insurance Program (CHIP) access has kept the rate of uninsured children (5.1%) substantially lower than uninsured nonelderly adults (11.3%) (Tolbert et al., 2023); however, not all mental healthcare services are covered by these programs. Community mental healthcare services are often booked out months in advance and since there are far fewer of those options available, families with lower incomes end up having to spend time waiting for an available therapist.

Finally, the training and experiences of mental health providers themselves must be considered as a potential barrier. LGBTQ+ youth as well as the therapists who provide services identify providers' lack of understanding of LGBTQ+ issues as a barrier to entry into therapy (The Trevor Project, 2023; Carrington & Sims, 2023). Training for best serving LGBTQ+ people has historically been minimal (Alderson, 2004; Bidell, 2014) and up until recently, courses on multiculturalism have been used as a "catch-all" to teach cultural competency to students in mental health training programs. Carrington and Sims (2023) conducted interviews with five therapists to understand how graduate-level counseling programs could better prepare trainees to work with LGBTQ+ clients. Key findings were related to the importance of integrating LGBTQ+ cultural competency *throughout* the training curriculum. The 2020 National Association of School Psychologists (NASP, 2020) Professional Standards for Graduate Preparation of School Psychologists echo this sentiment by including a domain related to equity and specifically states the need for students to be able to:

> understand principles and research related to diversity in children, families, schools, and communities, including factors related to child development, religion, culture and cultural identity, race, sexual orientation, gender identity and expression, socioeconomic status, and other variables. (p. 8)

Given the very high need for mental health support among youth who identify as LGBTQ+, lowering the many barriers to service delivery for this population should be a high priority. Broadly, addressing affordability and accessibility was the focus of this study. Specifically, this study was designed to examine whether use of telehealth as a mental health services delivery modality could be beneficial for youth who identify as LGBTQ+.

Accessing Care: How Telehealth Can Help

Telehealth mental health services refers to therapeutic mental health services accessed via a telephone or video call service. Telehealth services were available prior to the Covid-19 pandemic, but were not utilized to the extent that they are today for several reasons. On a systems level, telehealth medicine coverage under Medicaid, a federal program that insures four out of every ten children in the US (Rudowitz et al., 2023), differed among states and included restrictions on the types of services, who could provide those services, as well as rules against allowing people to access telehealth from their own residence (Guth & Hinton, 2020). In March of 2020, the Trump Administration successfully expanded telehealth benefits to address many of the above barriers for Medicaid in response to the Covid-19 pandemic, coverage which continues through at least December 2024 (Centers for Medicare & Medicaid Services). Delving beyond the governmental limitations, prior to the Covid-19 pandemic, it was more commonplace for mental healthcare providers to carry bias against the use of telehealth modalities, with some postulating that the bias was specifically related to the lack of a "human" element of therapy and low usability (Sansom-Daly & Bradford, 2020). In contrast, Sansom-Daly and Bradford (2020) argue that intimacy is not all lost in telehealth services; though clinicians may miss out on the ability to see the full body and potential nonverbal cues, such as body posturing, they do get a new kind of intimacy in which a client is in their safe space with a clear view of the client's

facial expressions. Furthermore, when looking specifically at provider perceptions of telehealth to Medicaid-enrolled youth (<18 years old), five interconnected facilitators were identified: temporal, digital, cultural, financial and geographical access (Cummings, 2023). The interplay of these factors stands out when considering all of these facilitators together. One therapist commented that nearly all families have digital access by having at least one smartphone. This digital access leads to more flexibility with scheduling (temporal) as well as increased geographical range. Therapists are able to help a broader range of clients because of the lack of commute.

However, adolescent youth do not all experience the same things; they are not a monolithic unit of people and their identities are made up of many factors, as mentioned earlier. The literature supports how diversity plays a role even when it comes to telehealth utilization. A cross-sectional sample of 532 teens aged 13-17 from the National Opinion Research Center's AmeriSpeak Teen Panel from March-May 2021 indicated half of mental health care users utilized telehealth, and text-based communication and chat was most prevalent among racially minoritized youth, possibly due to the increase in privacy (Campos-Castillo & Laestadius, 2022). Interestingly, Black teens who could access care were less likely to report face-to-face visits; however, the teens who could not access care preferred face-to-face visits over telehealth (Campos-Castillo & Laestadius, 2022). Indeed, the literature suggests that minoritized racial groups tend to use telehealth *less* than their white peers (Sen et al., 2023; Pritchard et al., 2023). What this research conveys is that policies and interventions should take into account not only multiple modalities (i.e. telehealth and face-to-face) but also various aspects of identity to increase access and become more equitable for *all* clients, not just the culturally dominant identities (i.e. straight and white).

Current Study

The Trevor Project (2023) indicated that 56% of LGBTQ+ youth who wanted mental healthcare were unable to access it in 2023; however, over 75% of all LGBTQ+ youth felt comfortable accessing telehealth services at home. Telehealth is clearly an area of potential growth among this group of individuals, but to date, few studies have examined how the mental health of LGBTQ+ youth in particular may or may not benefit from increased access to telehealth support. Therefore, the aim of this study was *to examine the potential association between telehealth utilization and mental health of Lesbian, Gay, Bisexual and Questioning (LGBQ) youth in the United States.* Furthermore, because identity is multifaceted, the racial identity of participants was also considered to further examine telehealth utilization and mental health among LGBQ youth (Erney & Weber, 2018; Park et al., 2022).

The study makes use of extant data from the 2021 online Adolescent Behaviors and Experiences Survey (ABES) administered to youth in 128 high schools across the United States. The research question and hypotheses are below.

Research Question: Among LGBQ youth, is there a difference in mental health indicators between those who have used telemental health and those who have not?

First hypothesis: LGBQ youth who used telemental health services will report significantly better mental health during the Covid-19 pandemic when compared to LGBQ youth who did not access telemental health services.

Second hypothesis: LGBQ youth who used telemental health services for mental healthcare will report feeling sad or hopeless significantly less often when compared to LGBQ youth who did not access telemental health services.

Third hypothesis: LGBQ youth who used telemental health services will be significantly less likely to report considering suicide when compared to their LGBQ peers who did not use telemental health services.

Method

Participants

Participants for the study were drawn from the sample of adolescents who participated in the 2021 online administration of the ABES. Between January-June 2021, 7,998 high school students in 128 schools across the United States completed the ABES. The total response rate (obtained from the student response rate [48.0%] and the school response rate [37.8%]) was 18.1%. To create a nationally representative sample, developers created a sampling frame from the National Center for Education Statistics (NCES) databases and reached out to regular public and private schools with grades 9-12 in all 50 states and the District of Columbia. To ensure that representation of the sample aligned with national population demographics, data were weighted based on student-reported gender and grade. The survey used a stratified, 3-stage cluster sample design. The first stage used primary sampling units (PSUs) at the county level. 81 PSU's were selected across 16 primary strata by urban and non-urban locations and percentages of non-hispanic Black and Hispanic or Latino students in that PSU. The second stage consisted of 335 secondary sampling units (SSU's) which were physical schools with grades 9-12. Finally, the third stage consisted of selection of one or two classes within each grade of an SSU. To adjust for nonresponses and oversampling of Black and Hispanic students, weighting was applied to each student record.

In total, 7,998 students completed the survey, but surveys of 293 students failed quality control measures and were excluded, resulting in a total of 7,705 surveys that were analyzable.

Among these 7,705 participants, 49.6% identified as male and 49.8% were white and non-Hispanic, 25.4% were Hispanic, 12.9% were Black and non-Hispanic, 5.8% identified as multiple races and non-Hispanic, 4.9% were Asian and non-Hispanic, 0.7% were American Indian or Alaska Native, 0.5% were Native Hawaiian or other Pacific Islander and non-Hispanic. Most (77.5%) students identified as straight, 13.2% identified as gay, lesbian, or bisexual, and 9.3% reported that they were questioning their identity or identified as another sexual identity. 26.7% of students were in 9th grade, 25.5% in 10th grade, 24.3% in 11th grade and 23.6% were in 12th grade. Finally, the vast majority of surveys submitted were in English (99.4%) but a small percentage (0.6%) were done in Spanish. For the purposes of this study, only youth who identified as lesbian, gay, bisexual, or questioning/some other way were included in the final sample, for a total of 1,218 participants. Detailed descriptive statistics about the sample are reported in the results section and can be found in Table 1.

Measure

The Adolescent Behaviors and Experiences Survey (ABES) is a one-time national survey of high school students examining the effects of the Covid-19 pandemic on youth. While knowledge that school closures and the rapid switch to virtual-instruction had negative outcomes on youth, other ancillary health effects of the pandemic were not as well understood. For this reason the Centers of Disease Control and Prevention, through federal funding from the Coronavirus Aid, Relief, and Economic Security (CARES) Act created a 110-question online survey. The survey provides insight into economic and food insecurity, abuse by parents, and alcohol and drug use. Similar to the Youth Risk Behavior Survey (YRBS), the ABES survey also includes questions on unintentional injuries, violence, tobacco product use, as well as sexual and dietary behaviors.

Variables

Dependent Variables: Mental Health Indicators

Three ABES items relate to the mental health of adolescents (Ethier, Jones, Kilbourn-Shear & Dittus, 2023). Those three items represent low mental health during the pandemic, persistent feelings of sadness or hopelessness, and suicidal thoughts during the 12 months prior to the survey. The specific questions are:

Low mental health: "During the Covid-19 pandemic, how often was your mental health not good? (poor mental health includes stress, anxiety and depression)". Participants selected from the following five options: Never, rarely, sometimes, most of the time, always. This variable is coded such that "never" is 1, "rarely" is 2, "sometimes" is 3, "most of the time" is 4, and "always" is 5.

Sad or hopeless: "During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?" Participants selected from two options: Yes or no. The variable is coded such that 1=Yes and 2=No.

Suicidal ideation: "During the past 12 months, did you ever seriously consider attempting suicide?" Participants selected from two options: Yes or no. The variable will is coded such that 1=Yes and 2=No.

Independent Variable: Telehealth Utilization

Participants were asked "During the COVID-19 pandemic, did you get mental health care, including treatment or counseling for your use of alcohol or drugs, using a computer, phone or other device (also called telemedicine)?". Participants selected from two options: Yes or no. The variable is coded such that 1=Yes and 2=No.

Exploratory Analysis: Race/Ethnicity

Race/Ethnicity was determined by a variable created from two questions: "What is your race? (Select one or more responses.) They selected from five options: American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; and White. The second question was "Are you Hispanic or Latino?" Participants selected from Yes or No. From these two questions, a new variable was produced with eight possible options coded as follows: 1=American Indian/Alaskan Native, 2=Asian, 3=Black or African American, 4=Native Hawaiian or other Pacific Islander, 5=white 6=Hispanic/Latino 7=Multiple-Hispanic/Latino 8=Multiple-Non-Hispanic/Latino. This variable was recoded such that American Indian/Alaskan Native, Native Hawaiian or other Pacific Islander & Asian identities are all one new category defined as "other": 1= Other 2=Black, 3=white, 4=Hispanic/Latino, 5-Multiple-Hispanic/Latino, 6=Multiple/Non Hispanic/Latino.

Results

All statistical analyses were conducted on unweighted data using SPSS v. 28. First, descriptive statistics were conducted to explore demographic characteristics of participants and features of the primary study variables. Then a series of Chi-Square analyses were used to test the primary study hypotheses.

Descriptive Statistics

Descriptive statistics were conducted on all unweighted variables of interest. Of the possible 7,705 participants, 215 (17.7%) identified as gay or lesbian, 762 (62.6%) identified as bisexual, and 241(19.8%) identified as questioning/some other way, for a total of 1218 participants who were included in the present study. Of those 1218 participants, 951 (78.1%) identified as female and 249 (20.4%) identified as male while 18 (1.5%) participants did not

answer the question. 178 (14.6%) students identified as Black, 69 (5.7%) as Hispanic/Latino, 560 (46.0%) as white, 233 (19.1%) as multiple races and Hispanic, 102 (8.4%) as multiple races and not Hispanic, 15 (1.2%) as American Indian/Alaskan Native, 49 (4.0%) as Asian and 6 (.5%) as Native Hawaiian/Other Pacific Islander and 6 students did not answer the question. Participants were distributed across various grade levels. A total of 353 (29%) youth were in the 9th grade, 321 (26.4%) were in the 10th grade, 280 (23%) were in the 11th grade, and 262 (21.5%) were in the 12th grade. 2 (0.2%) participants were categorized as being in an ungraded or other grade.

Primary Analyses

To test each of the three hypotheses, separate Chi-Square analyses were run for each of the three dependent variables. The analysis included all 1,218 LGBQ youth in a single group as opposed to examining each subgroup separately due to low subsample sizes.

For all Chi-Square tests, the independent variable was telemental healthcare utilization (yes/no). A 2x5 Chi Square test was used to examine the relationship between LGBQ youth use of telemental healthcare and their report of how often during the pandemic their mental health was not good (never, rarely, sometimes, most of the time, or always). Two 2x2 Chi-Square tests were then used to examine the relationship between the use of telemental healthcare as related to the dependent variables of (a) feeling sad or hopeless every day (yes/no) and (b) considering suicide (yes/no).

Findings indicated that telemental healthcare utilization was associated with sad/hoplessness *[χ^2 (1, N = 1155) = 10.72, p* = .001], suicidal ideation [χ^2 (1, N = 1147) = 31.40; p < .001] and low mental health during Covid [χ^2 (4, N = 1160) = 22.92; p < .001] at statistically significant levels (see Tables 2, 3 and 4). To further examine the statistically significant results, adjusted residuals $\geq$ 1.96 were examined (Agresti, 2002). In contrast to expectations, those who

reported feeling sad or hopeless utilized telehealth more than expected while those who did not have those feelings utilized telehealth services less than expected. Those who considered suicide utilized telehealth services more than expected while those who did not consider suicide did not use telehealth services as much as expected. Finally, those who reported their current mental health as always being bad were significantly more likely to utilize telehealth than expected.

Exploratory Analysis

Because identity is multifaceted, racial and ethnic identities were layered into the analysis by first dividing up LGBQ students by racial and ethnic identities and then running separate Chi-Square analysis for each variable of interest. Racial and ethnic identity was explored because the literature has shown that some differences in mental health functioning exist between youth based on their racial and ethnic identities (Fox et al., 2020; Tamla Rai et al., 2024). These differences are complex but occupying multiple minoritized identities has been theorized to cause higher levels of stress which over time can lead to lower mental and physical health outcomes (Meyer, 2003; Rivas-Koehl et al., 2023). Thus, Chi-Square analyses were conducted to test the three hypotheses separately for each of the six race groups. (i.e., Black, white, Hispanic, Multiple Races/Ethnicities-Hispanic, Multiple Races/Ethnicities-Non-Hispanic, Other). Asian, American Indian/Alaska Native and Native Hawaiian/Other Pacific Islander were included in the Other category due to low sample sizes in each of those groups. Using a Bonferonni correction to adjust for the risk of false-positive results due to the large number of Chi-square analyses (18), a *p*-value of 0.002 was used to determine statistical significance (.05/18). Results indicated the association between telehealth utilization and suicidal ideation was statistically significant for Black students [$\chi^2 (1, N = 162) = 12.559, p < .001$]; specifically, Black students who utilized

telehealth reported considering suicide more often (76.2%) than students who did not use telehealth (35.5%). No other analyses yielded significant results based on the adjusted *p*-value.

Discussion

High school is a transformative time for the vast majority of students. LGBQ youth, much like their peers, experience all kinds of changes, but they are simultaneously under immense pressures that their straight peers do not have to face. For many of these youth, the extra challenges beyond navigating high school can lead to poor mental health. Compounding these struggles are significant barriers to accessing the necessary services, creating a need for solutions beyond the standard live face-to-face mental healthcare model. One promising avenue to improve access to care for this vulnerable group is telehealth. By examining the associations between mental health functioning and telemental health services for adolescents, interventions may be more effectively implemented, potentially alleviating the mental health crisis experienced by LGBQ youth. The purpose of this study was therefore to explore the relationship between mental health and the use of telemental health services among LGBQ adolescents.

Hypotheses & Results

Prior research indicates that LGBQ youth experience greater levels of stress than their straight peers due to their minoritized identities (Green et al., 2022; Robinson, 2023). Given this increased stress load, exploring the use of telehealth as an avenue to access care is an important step in developing ways to best support LGBQ students. Of note, only 18% of the youth in this study reported using telemental health during the pandemic. That only one-fifth of LGBQ students used telemental healthcare raises concerns about the extent to which telehealth services are accessible to and utilized by a broader population of LGBQ youth who might benefit from early intervention before reaching crisis levels.

Because use of telehealth decreases some known barriers to receiving services, it was hypothesized that LGBQ youth who utilized telemental health services would experience significantly better mental health functioning compared to their peers who did not access these services. Using a positive lens, the overall assumption was that mental healthcare of any sort would benefit these youth. However, the results offer an alternative, more nuanced, understanding of the association between telehealth utilization and mental health functioning. Although there was indeed a statistically significant association between telemental health usage and mental health during the Covid-19 pandemic, the findings were not as expected. In contrast to expectations, only 3.3% of LGBQ youth who used telehealth reported *rarely* having poor mental health, compared to 7.7% of those who did not use telehealth. Furthermore, a stark 40.7% of LGBQ youth who used telehealth services reported *always* experiencing poor mental health, whereas only 25.4% of those who did not use telehealth reported always having poor mental health. These findings do not support the initial hypothesis.

The second hypothesis proposed that those who used telemental health services would report feeling sad or hopeless in the past year significantly less often than those who did not. The data did not support this hypothesis. Among the LGBQ youth surveyed, 83.7% of those who accessed telehealth services reported feeling sad or hopeless, in contrast to 72.8% of their peers who did not use these services.

The final hypothesis suggested that LGBQ youth who utilized telemental health services would be less likely to consider suicide compared to those who did not. Once again, the results were contrary to expectations. Alarmingly, 66.2% of LGBQ youth who used telehealth services had considered suicide, whereas 44.7% of those who did not use telehealth reported similar thoughts.

The results obtained from this study, while counterintuitive to the initial hypotheses, warrant careful interpretation. The data suggest that telehealth services are predominantly utilized by LGBQ youth who exhibit the most significant mental health challenges. This finding, though highlighting some troubling trends, simultaneously indicates that those who are most in need of support are the ones accessing these services. This pattern, while it diverges from the initial hypothesis that telehealth would broadly increase access and thereby support for all LGBQ youth, underscores the selective utilization of these services by those with mental health needs.

Exploratory Analysis: Race/Ethnicity

Identity is multifaceted and complex. In order to get an accurate and fuller picture of the LGBQ youth in the sample, a set of exploratory analyses was conducted to determine if the association between telehealth utilization and mental health differed based on youth's racial identity. Six racial categories were explored using Chi-Square analyses examining the associations between telehealth utilization and mental health during Covid-19, feelings of sad/hopelessness, and consideration of suicide. With one exception, results showed that the link between telehealth use and mental health functioning did not vary by race. The single significant finding was that 76.2% of Black youth who utilized telehealth services reported considering suicide, whereas only 23.8% of Black LGBQ youth who used telehealth services did not consider suicide. Among Black youth who did *not* utilize telehealth services, only 35.5% of youth reported considering suicide, whereas 64.5% of LGBQ Black youth did not. These findings expand on the above results that show that LGBQ youth who used telehealth reported considering suicide more often by showing there may be potential racial based differences in these results; however, it is important to note that the total number of Black LGBQ youth who

utilized telehealth in this dataset was low (*n*=21). More research is needed to better understand the nuances behind these results.

Perhaps the most stunning overall finding of this study is the alarmingly high rates of poor mental health, sadness, hopelessness, and suicidal ideation experienced by LGBQ youth during the pandemic. Symptoms of poor mental health were elevated regardless of race/ethnicity and regardless of whether youth accessed telehealth services to address mental health needs. High distress among the youth was not unexpected given prior research from the Trevor Project and other studies, but findings were nonetheless shocking. Post-hoc analysis revealed 74.9% of LGBQ youth in the sample reported they felt sad or hopeless, significantly higher than the 36.5% of straight students who reported having these feelings. Furthermore, 48.6% of LGBQ youth in the sample reported that they had considered suicide, compared to 13.4% of straight youth. What these comparisons show clearly is that LGBQ youth were struggling during the pandemic at high levels that were above and beyond their straight peers.

Application with schools

The findings from this study, combined with results of prior research, show significant need for mental health support among students who identify as LGBTQ+. School psychologists are uniquely positioned to support LGBTQ+ students' mental health through direct services and via fostering inclusive school environments. McDermott and colleagues (2023) offer a comprehensive understanding of the mechanisms that make interventions for LGBTQ+ students effective by identifying three causal pathways: (1) promoting LGBTQ+ visibility and facilitating "usualising" (acclimatizing people to the presence of LGBTQ+ identities), school belonging, and recognition; (2) developing safety and coping through talking and support; and (3) fostering school belonging, empowerment, recognition, and safety through institutional culture change.

These recommendations also align with the official NASP position statement on safe and supportive schools for LGBTQ youth (NASP, 2018).

What McDermott found was that interventions need to happen at various levels: directly to the students (i.e., therapeutic services), to the staff, and to the community at large. School psychologists have the expertise to deliver robust professional development sessions for staff, ensuring that educators are equipped with the tools to support LGBTQ+ students effectively. Initiating or supporting the formation of Gender and Sexuality Alliances (GSAs) within schools is another vital action school psychologists can take. GSAs provide a safe space for LGBTQ+ students to connect with peers, fostering a sense of belonging and reducing isolation, particularly when paired with school wide anti-bullying policies (Day, Fish, Grossman & Russell, 2020). Visual symbols of support, such as ally flags or LGBTQ+ affirming signs in school psychologists' offices or email signatures, also contribute to an environment where students feel recognized and safe.

Two interventions specifically tailored to support LGBTQ+ mental health show promising outcomes. The RESPECT professional development workshop developed by the Centers for Disease Control and the American Psychological Association has been shown to increase support for LGBTQ+ students. Survey data indicated that 3-4 months post intervention, respondents reported higher efforts to start or support GSAs, increased frequency of reaching out to their local LGBTQ+ rights organizations to share more information, and being more visible with their support (e.g., more signage) (Centers for Disease Control and Prevention, 2020). Additional research is needed to determine whether these effects lead to positive outcomes for the youth. Second, the Affirmative Cognitive Behavioral Therapy for Lesbian, Gay, Bisexual, Transgender and Questioning (LGBTQ+) Populations (AFFIRM) has been shown to decrease

depression and increase healthy decision making in this population (Craig, et al., 2021). AFFIRM is an 8 week, adapted-CBT manualized group-based intervention that has been used in a variety of environments, including schools. The California Evidence Based Clearinghouse for Child Welfare (CEBC) has labeled the program as having "promising research evidence"; however, a randomized control trial with follow up is needed to further bolster claims of lowering depression and increased feelings of support by LGBTQ+ youth (CEBC, 2023).

Limitations and Future Directions

The present study, while informative, is constrained by several notable limitations, particularly in the context of the dataset utilized. A primary limitation of the ABES is that the data were collected at a single point in time, which means there could not be an examination of the *change* in mental health due to new or increased access and use of services via telehealth. While the correlational analysis used in this study provides a useful overview of potential relationships between variables, it does not establish causality. A longitudinal study that tracks mental health outcomes over time, both before and after the implementation of telehealth services, and includes a control group, would offer more definitive insights into the efficacy of telehealth interventions. Furthermore, this study used a single survey item to represent each variable. To make a more robust and nuanced argument, use of multiple raters (i.e., students, parents, and teachers) and methods of data collection for youth mental health (i.e., interviews and surveys) would provide a more interesting view of the association between mental health and telehealth utilization among LGBQ youth in the United States.

It is also not known whether the youth who accessed telehealth services received optimal intervention. Implementing an evidence-based intervention, such as the AFFIRM Youth CBT program mentioned previously, and collecting data before and after its introduction via

telehealth, would provide a clearer understanding of its impact compared to the effects of the same interventions delivered via traditional face-to-face modalities.

Finally, the ABES survey items related to sex and gender present another limitation. The current categorization of gender, which conflates "sex" with gender, lacks the inclusivity needed to accurately capture the experiences of gender-diverse populations. Expanding the survey to include categories such as nonbinary, transgender, and gender expansive would allow for a more nuanced exploration of the mental health experiences of these groups. This categorization is important because expecting students to answer truthfully about very vulnerable aspects of their lives (such as sexual habits and drug use) requires trust that the researchers value everyone's views, especially those who are minoritized.

Conclusion

High school age youth in the United States are struggling with their mental health. But there are differences in what stressors are weighing on high school age youth based on various facets of their identity. LGBTQ+ youth in particular may face feelings of loneliness, bullying and increases in overall stress during what is considered a hard transition from childhood to adulthood. When looking at ways to best support this, telehealth is one modality that may help. To further explore telehealth use among a minoritized population, this study examined associations between telehealth utilization and mental health, feelings of sad/hopelessness, and suicidal ideation. Results indicated that better mental health outcomes are not associated with telehealth utilization among LGBQ youth. Further studies should examine any change in mental health after utilization of telehealth services for mental health, in particular when using evidence-based interventions.

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Table 1. Demographics: Characteristics of LGBQ Sample.

Participants	N	%
Sexual Minority Status		
LGBQ Only	1218	-
Gay or Lesbian	215	17.7
Bisexual	762	62.6
Questioning/Some Other way	241	19.8
Gender		
Female	951	78.1
Male	249	20.4
No Answer	18	1.5
Grade		
9th	353	29
10th	321	26.4
11th	280	23
12th	262	21.5
Ungraded/Other grade	2	0.2
Race/Ethnicity*		
American Indian/Alaska Native	15	1.2
Asian	49	4
Black	178	14.6
Hispanic or Latino	69	5.7
Multiracial, Hispanic	233	19.1

Table 1. (Continued)		
Multiracial	102	8.4
Native Hawaiian or Other Pacific Islander	6	0.5
White	560	46
Missing	6	0.5

*Non-Hispanic unless otherwise noted

Table 2. Crosstabulation of Telemental Health Utilization and Feelings of Sad/Hopeless: all LGBQ Youth. *(N=1155)*

Sad/Hopeless Daily	Telehealth Utilization		$\chi 2$	*df*
	Yes (%)	*No (%)*		
Yes	174 (83.7)	689 (72.8)		
No	34 (16.3)	258 (27.2)		
			10.72*	1

*p=.001.

Table 3. Crosstabulation of Telemental Health Utilization and Suicidal Ideation: all LGBQ students. *(N=1147)*

Considered Suicide	Telehealth Utilization		$\chi 2$	*df*
	Yes	*No*		
Yes	137 (66.2)	420 (44.7)		
No	70 (33.8)	520 (55.3)		
			31.40*	1

*$p < .001$.

Table 4. Crosstabulation of Telemental Health Utilization and Low Mental Health during Covid-19 Pandemic: All LGBQ Youth. *(N = 1160)*

Low Mental Health	Telehealth Utilization		$\chi 2$	*df*
	Yes (%)	*No (%)*		
Never	6 (2.9)	48 (5.0)		
Rarely	7 (3.3)	73 (7.7)		
Sometimes	39 (18.7)	223 (23.4)		
Most of the time	72 (34.4)	365 (38.4)		
Always	85 (40.7)	242 (25.4)		
			22.92*	4

*$p < .001$.