

INCREASED PREVALENCE OF SUICIDE IN THE ADOLESCENT POPULATION WITHIN  
THE LGBTQ+COMMUNITY COMPARED TO ADOLESCENTS IN THE HETEROSEXUAL  
POPULATION: AN INTEGRATIVE REVIEW

A Scholarly Project

Presented to the

Faculty of Liberty University

In partial fulfillment of

The requirements for the degree

Of Doctor of Nursing Practice

By

Natasha Denese Causey

Liberty University

Lynchburg, VA

February, 2023

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Scholarly Project Chair Approval:

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**ABSTRACT**

According to research, young Americans who identify as lesbian, gay, bisexual, transgender, queer, and more (LGBTQ+) are currently experiencing a mental health crisis. Suicide ideations reportedly begin sooner in LGBTQ+ adolescents, 13 to 18 years of age. Suicide ideation is defined by the National Alliance of Mental Illness (NAMI), as having serious thoughts about suicide with a plan. This involves LGBTQ+ adolescents shifting from suicidal ideation to planning more quickly than their heterosexual (straight) peers. Adolescents who identify as LGBTQ+ showed a higher lifetime risk of suicide thoughts than their heterosexual peers (26.1 percent to 13 percent, respectively). Additionally, 5.4 percent of heterosexual adolescents and 16.6 percent of LGBTQ+ adolescents were more likely to contemplate suicide. In addition, compared to 5.4 percent of heterosexual adolescents, LGBTQ+ adolescents had a higher rate of suicide attempts at 12 percent. Research has shown that LGBTQ+ adolescents were more likely to report suicidal thoughts, plans, attempts, and actual suicide at younger ages. Those under the age of 15 exhibited riskier suicidal behaviors than those who were 15 and older. An extensive review of the literature on this topic has revealed that the experiences of having suicidal thoughts and acting on them differ. The research concluded that when compared to heterosexual adolescents, LGBTQ+ adolescents were more likely to act on suicidal thoughts leading to a suicide and mental health crisis among this group in United States.

*Keywords:* LGBTQ+, adolescents, heterosexual, suicide, suicidal ideations, mental illness.

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**List of Abbreviations**

Advanced Practice Registered Nursing (APRN)

American Association of Colleges of Nursing (AACN)

Centers for Disease Control and Prevention (CDC)

Commission on Collegiate Nursing Education's (CCNE)

Department of Health and Human Services (HHS)

Doctor of Nursing Practice (DNP)

Human Immunodeficiency Viruses (HIV)

Integrated Review (IR)

Lesbian, Gay, Bisexual, Transgender, Queer, and more (LGBTQ+)

Mental Health America (MHA)

National Alliance on Mental Illness (NAMI)

National Institute of Mental Health (NIMH)

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)

Sexually Transmitted Diseases (STDs)

Substance Abuse and Mental Health Services Administration (SAMHSA)

## SECTION I: FORMULATING THE REVIEW QUESTION

### Introduction

Everyone has a gender identity and sexual orientation. Who you are romantically or physically attracted to is your sexual orientation. Gender identity is a sense of being male, female, both, and neither that exists independently of your biological sex (National Alliance on Mental Illness [NAMI], 2022). Mental Illness and the Lesbian, Gay, Bisexual, Transgender, Queer, and more (LGBTQ+) Community, refers to those who have a different sexual orientation or gender identity than most people. According to Pachankis et al. (2022), being LGBTQ+ is not a mental condition, but many LGBTQ+ adolescents struggle with mental illness, specifically suicide ideations, with attempts and completion. Within the LGBTQ+ community, bisexual and transgender adolescents have the highest prevalence of mental health issues with 31% of adolescents reporting depression and anxiety and 39% reporting serious thoughts of suicide. (Mental Health America [MHA], 2022). The LGBTQ+ community's adolescent members face the greatest mental health challenges of all age groups. They are particularly vulnerable to feelings of shame, anxiety, discrimination, and unpleasant or traumatic occurrences (NAMI, 2022).

### Background

According to the Centers for Disease Control and Prevention [CDC], 2017, suicide is the second-leading cause of death among people ages 15 to 24 in the U.S. LGBTQ+ adolescents reported having a higher risk of suicidal ideation over their lifetime compared to their heterosexual peers at 26.1 % compared to 13% and 16.6 % of LGBTQ+ adolescents had a higher risk of suicidal planning than 5.4 % of heterosexual adolescents. Twelve percent of LGBTQ+ adolescents had a higher risk of suicide attempts compared to 5.4 % of heterosexual adolescents

(CDC, 2020). Society and healthcare delivery institutions have historically marginalized, neglected, and ignored the LGBTQ+ adolescent community (Ream et al., 2021). A complex combination of factors can impact youth health outcomes. LGBTQ+ adolescents are at greater risk for depression, suicide, substance use, and sexual behaviors that can place them at increased risk for suicide ideations and/or suicide attempts with completion (Mandrachia et al., 2018). Understanding sexual minorities' mental health needs and the causes of mental health disparities is a fast-emerging topic of research, particularly in terms of mental health outcomes with policy implications. Individuals who identify as LGBTQ+ are frequently stigmatized and discriminated against (Diana et al., 2022). When compared to heterosexual and cis-gendered people, this group is projected to have worse mental health outcomes, which is a fact that healthcare providers should be aware of and address (Willging et al., 2021).

### **Defining Concepts and Variables**

The interest for this integrative review (IR) stemmed from a desire to understand the phenomenon of higher suicide rates among adolescents in the LGBTQ+ community compared with those of the heterosexual community. Therefore, the population of interest comprises LGBTQ+ and heterosexual adolescents 13 to 18 years of age. According to Toronto and Remington (2020), establishing this criterion is required. LGBTQ+ is an abbreviation for lesbian, gay, bisexual, transgender, queer or questioning, intersex, asexual, and more (CDC, 2017). According to research by CDC (2022) a woman who has an ongoing emotional, romantic, or physical attraction to other women is referred to as a lesbian. The term gay refers to people who consistently feel attracted to members of the same sex on a physical, romantic, or emotional level, mainly males who are attracted to other men sexually. The CDC (2022) further defines the term bisexual as the ability to have strong physical, romantic, and/or emotional feelings for

people of either their own gender or from different sexes. The term transgender refers to people whose gender identification and/or gender expression do not correspond to that which is traditionally associated with the sex to which they were born. People who identify as transgender may refer to themselves in a variety of ways, including as transgender or nonbinary. Gender identities that are neither exclusively male or female are referred to as non-binary (CDC, 2022). The CDC (2022) describes someone who adds a "Q" to the end of the LGBT acronym as someone who is unsure of their sexual orientation or gender identity. All gender identities and sexual orientations that letters and words are unable to properly explain are represented by the "plus/+" symbol. Romantic attraction, sexual attraction, or sexual conduct between individuals of the opposite sex or gender is referred to as heterosexuality. Heterosexuality is a sexual orientation that refers to an ongoing pattern of feelings of emotional, romantic, or sexual attraction toward people who are the other sex. It also describes a person's sense of identity based on these feelings, associated behaviors, and belonging to a group of people who have similar feelings (Applegate, 2018). These terms are used to describe a person's sexual orientation or gender identity.

Adolescents are referred to as those between the ages of 10 to 19 years of age (Diana et al., 2022). For this review, adolescents between the ages of 13 to 18 years of age were used. Determining if there is a prevalence of increased suicide among this age group, but within different sexual orientation and sexual identities is paramount to this review. According to research by Kneale et al. (2021) the definition of discrimination is the unfair or unfavorable treatment of distinct categories of individuals, particularly on the basis of race, age, sex, or disability. Adolescent gender identity and sexual orientation discrimination is the unjust or prejudicial treatment of an adolescent related to their gender identity or sexual orientation.

According to CDC (2020) suicide is the act of killing oneself intentionally. When commenting the act of suicide one may perform several unsuccessful attempts before completion or death is fulfilled. Suicide ideations is defined as having constant thoughts of killing oneself with or without a plan on how to carry out the act (CDC, 2020). In U.S. locations with a lack of mental health professionals were home to an estimated 122 million people as of 2022. When an LGBTQ+ adolescent faces discrimination in addition to the shortage, their overall mental well-being diminishes. (Kneale et al., 2021).

### **Problem Statement**

According to research by Hammack et al. (2022) sexual orientation and sexual identification acceptance by the overall community can be very stressful and challenging for adolescents in the LGBTQ+ population. LGBTQ+ adolescents experienced harassment or violence at school at a rate of 86% in 2019, which had a negative impact on their mental health (Proulx et al., 2019). According to Clark et al. (2020) noted that compared to heterosexual young people, LGBTQ+ adolescents are more likely to experience violence. Violence encompasses actions such as physical assault, harassment, bullying, and teasing. Often this treatment begins in the home of the LGBTQ+ adolescent. According to the CDC, 2017; Manzar et al., 2021; MHA, 2022; NAMI, 2022; Ream et al. (2021), 33% of LGBTQ+ adolescents were bullied in school compared to 7% of heterosexual adolescents; 63% of LGBTQ+ adolescents suffer from depression compared to 3.2% of heterosexual adolescents; 48% of LGBTQ+ adolescents suffered from hopelessness compared to 26% of heterosexual adolescents; 23% of LGBTQ+ adolescents used illicit drugs compared to 7% of heterosexual adolescents; 22% of LGBTQ+ adolescents have experienced rape in their lifetime compared to 5% of heterosexual adolescents; 24% of LGBTQ+ adolescents abused prescription opioids compared to 16.2% of heterosexual

adolescents and 39% of LGBTQ+ adolescents were rejected by their family or members of their family compared to 10% of heterosexual adolescents. When compared to heterosexual adolescents, the LGBTQ+ population is projected to have worse mental health outcomes leading to suicide, and often neglect to seek help due to discrimination and sexual prejudice (Williams et al., 2021).

### **Rationale for Conducting the Review**

The Trevor Project is an American nonprofit organization founded in 1998. Focused on suicide prevention efforts among LGBTQ+ adolescents, they are the creators of the 1994 Academy Award–winning short film *Trevor*, a dramedy about Trevor, a gay 13-year-old boy who, when rejected by friends because of his sexuality, makes an attempt to take his life. When the film was scheduled to air on HBO television in 1998, the filmmakers realized that some of the program's young viewers might be facing the same kind of crisis as Trevor and began to search for a support line to be broadcast during the airing. They discovered that no such helpline existed and decided to dedicate themselves to forming the resource: an organization to promote acceptance of LGBTQ adolescents, and to aid in crisis and suicide prevention among this group. New research from the Trevor Project's 2022 National Survey on LGBTQ+ Youth Mental Health underlines a consistent trend: lesbian, gay, bisexual, and transgender adolescents are still at increased risk of suicide. One of the most startling statistics included the fact that 50 % of LGBTQ adolescents (age 13–18) seriously considered attempting suicide in the past calendar year 2021 and 18% made a suicide attempt. This is more than twice the rate of suicide attempts among all U.S. adolescents. Therefore, the rationale for conducting this IR was to search, review, critique, and analyze relevant data may provide insight to the relationship between increased suicide rates among adolescents in the LGBTQ+ community.

**Purpose of the Project**

In general, the purpose of an Integrated Review (IR) is to provide a comprehensive summary of past empirical or theoretical literature of what is known about a particular subject area and to share the synthesis of literature regarding a healthcare topic or phenomenon to the interested groups (Whittemore & Knafl, 2005). The purpose of this IR was to search, collect, review, analyze, and synthesize relevant literature published from 2017–2022 to determine if suicide is higher amongst adolescents in the LGBTQ+ community compared to adolescents in the heterosexual community. Preliminary literary research for this IR suggested favorable evidence that supported this inverse relationship. Suicide occurs at any age and was the leading cause of death for people aged 15 to 24 worldwide in 2020 (CDC, 2020). Suicide is a global epidemic that affects adolescents in all parts of the world, not only high-income nations (Manzar et al., 2021). The goal of this project was to highlight the prevalence of suicide amongst adolescents (13-18 years) in the LGBTQ+ community compared to the adolescents (13-18 years) in the heterosexual community. This evidence-based information can be used to assist clinicians in preventing suicide, diagnose mental illness, and improve patient care outcome treatments in the LGBTQ+ adolescent community (Willging et al., 2021).

**Clinical Question**

The CDC (2020) listed LGBTQ+ adolescents as having an increased risk of suicide in 2020. Depression, substance abuse, a lack of proper social support, and a lack of feeling safe at school are risk factors. In comparison to their cisgender, heterosexual counterparts, LGBTQ+ adolescents have a two to four times higher risk of suicide ideation and attempts, according to large population-based research studies conducted over the previous seven years. Why do

LGBTQ+ adolescents experience suicide at a higher rate than adolescents from the heterosexual community?

### **Project Goals**

The clinical question will be based on two main goals:

- To identify mental health illnesses that increase the risk for suicide within the adolescent LGBTQ+ population
- To identify patterns of psychiatric behavior that influence suicidal ideations with the intent to act within the adolescent LGBTQ+ population

Focused objectives will be necessary to carry out these goals that will include developing eligibility criteria, finding information sources, and then conducting a thorough search of electronic search engines and databases.

### **Building the Scholarly Project**

In this review, higher suicide rates among the LGBTQ+ adolescent population was the phenomenon of interest. Even though there have been numerous studies conducted on this topic, it is rarely discussed outside of the psychiatric community and requires more attention from the public health community (Kneale et al., 2021). It was necessary to thoroughly review the current literature in order to identify the most recent and pertinent evidence-based practices that could be applied in the community while examining the socioeconomic determinants of health and their risk for suicide.

### **Formulate Inclusion and Exclusion Criteria**

A clinical question must be clearly defined to establish a comprehensive literary research method to initiate a literature review (Toronto & Remington, 2020). After a clinical question has been formalized, inclusion and exclusion criteria must be identified to help guide the data search.



Inclusion criteria for this project were peer-reviewed studies and journal articles that evaluated the relationship between suicide rates of the LGBTQ+ adolescents compared to the suicide rates of heterosexual adolescents. Exclusion criteria were newspaper articles, dissertations/theses, trade publication articles, and journal studies that were narrowly focused, such as those that solely studied suicide from the viewpoint of adults, men, women, race, and ethnicity (Toronto & Remington, 2020). Research selection search included use of electronic databases to identify full text, peer reviewed relevant literature published between 2017–2022 and targeted the subject area increased suicide amongst adolescents in the LGBTQ+ community compared to adolescents in the heterosexual community. Research efforts were further refined with the specificity of search terms and keywords: LGBTQ+, adolescents, heterosexual, suicide, suicidal ideations, and mental illness. Five databases were accessed: Cochran Database, MEDLINE, CINAHL, PubMed, and ProQuest (See Appendix A for Inclusion and Exclusion Table).

### **Conceptual Framework**

The conceptual framework used for this IR is a version of Whitemore and Knafel's (2005) constant comparison method. This process required and involved a methodical rigor evaluation of primary literature data in evaluating each article's relativeness to the research question and to each other. Each article obtained for this IR was evaluated, analyzed (i.e., reduced, displayed, compared, and categorized), and conclusions were drawn based on recurring themes in the findings (Toronto & Remington, 2020). The scientific underpinning framework for this IR was based on the premise that a relationship between increased suicide in adolescents in the LGBTQ+ community compared to heterosexual adolescents exists (CDC, 2017). The research was initiated using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) reporting guidelines (Moher et al., 2009) and Melnyk and Fineout-Overholt's (2015)

pyramid levels of hierarchy tool. According to the scientific framework that served as the foundation for this IR, when compared to adolescents in the heterosexual population, adolescents in the LGBTQ+ group have greater suicide rates (CDC, 2020). By reducing the suicide rate, a better understanding of the reasons behind the rising suicide rates among adolescents in the LGBTQ+ community may contribute to better adolescent mental health outcomes (McDermott et al, 2021). Appendix A provides a graphic representation of the literary matrix using Melnyk and Fineout's hierarchy and Overholt's levels, and Appendix B provides a graphic representation project leader's PRISMA Flow Diagram.

### **Essentials of Doctoral Education for Advanced Nursing**

These essentials outline the subjects that Doctor of Nursing Practice (DNP) programs must cover. The four nationally recognized Advanced Practice Registered Nursing (APRN) roles which includes nurse practitioners, clinical nurse specialists, nurse anesthetists, and nurse midwives, as well as all other advanced nursing practice roles are described in the Commission on Collegiate Nursing Education's (CCNE) Essentials for schools seeking accreditation for DNP Programs.

#### ***Essential I***

The practice doctorate in nursing provides the terminal academic preparation for nursing practice. The scientific underpinnings of this education reflect the complexity of practice at the doctoral level and the rich heritage that is the conceptual foundation of nursing (AACN, 2006). The practice doctorate in nursing provides the terminal academic preparation for nursing practice. DNP graduates possess a wide array of knowledge gleaned from the sciences and have the ability to translate that knowledge quickly and effectively to benefit patients in the daily demands of practice environments. The scientific underpinning framework for this IR was based

on the premise that a relationship between increased suicide in adolescents in the LGBTQ+ community compared to heterosexual adolescents exists (CDC, 2017).

### ***Essential II***

Organizational and Systems Leadership for Quality Improvement and Systems Thinking according to the AACN (2006) is demonstrated by utilizing organizational and systems models and a myriad of clinical science knowledge to support health care delivery approaches (AACN, 2006). This IR focused on the phenomenon of higher suicide rates among adolescents in the LGBTQ+ community than for those of the heterosexual community. Challenges for this demographic were discussed, including the lack of access to adequate mental health care and the disparities that prevent access, which contribute to higher suicide rates among LGBTQ+ adolescents (Berger et al., 2022). The evaluation of organizational culture and populations, including patients and providers, served as the earliest demonstration of Essential II.

### ***Essential III***

Clinical Scholarship and Analytical Methods for Evidence-Based Practice attainment according to the AACN (2006) is shown by engaging and leading clinical scholarship at the highest level of nursing practice. A variety of viewpoints on a phenomenon are supported by an integrated review, which has been argued to be crucial for nursing science and nursing practice (Whittemore & Knafl, 2005). Clinical scholarship was the driving force behind this IR, as recent data revealed a link between greater suicide rates and the absence of appropriate mental health care due to several health inequities (Diana et al., 2022). Finding this quality gap among healthcare providers as well as the increased suicide incidence among adolescents in the LGBTQ+ community highlighted the need for literature reviews to better inform practice and for the establishment of guidelines and policy. The integration of theoretical and empirical evidence

in practice was facilitated by the collection and review of existing information using a sound methodological approach. By reviewing previous research and offering a current state of knowledge that draws attention to difficulties that research has not yet resolved, the initiative specifically provided a platform for clinical scholarship (AACN, 2006).

#### ***Essential IV***

Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care. A rigorous, methodical search approach was implemented accessing the following five databases: Cochran, MedLine, CINAHL, PubMed, ProQuest. DNP graduates must also be proficient in the use of information systems/technology resources to implement quality improvement initiatives and support practice and administrative decision-making (AACN, 2006). Data from these databases, as described in the inclusion and exclusion section, were collected, reviewed, analyzed, and used to compare the phenomenon of increased suicide rates in LGBTQ+ adolescents as compared to those of heterosexual adolescents.

#### ***Essential V***

In this IR, the use of the proper policies and procedures related to mental healthcare was shown to support quality patient care outcomes, raise awareness, and secure the foundations necessary to effectively prevent, diagnose, treat, and bring to the attention of the medical community the rising rate of suicide among adolescents who identify as LGBTQ+ (The Trevor Project, 2022). Essential V combines nursing knowledge with information from other fields to help lay the groundwork for a solution to a critical practice problem. The DNP student researcher also conducted a meaningful literature review using a scientifically founded theory. The cumulative result of these initiatives improves the support and delivery of health care (AACN, 2006).

***Essential VI***

Throughout the course of this review, interprofessional collaboration for improving patients and the population was demonstrated in Essential VI. To improve patient and population health, interprofessional teams were led by a Doctor of Nursing Practice (DNP), according to the AACN (2006) to produce the highest-quality, patient-focused care. The AACN, 2006, adds that strong leadership and communication abilities are essential to the success of collaborative teams as designed by the DNP. Effective leadership and communication abilities are essential for reducing or eliminating suicide rates among adolescents in the LGBTQ+ community as well as in the heterosexual community (Willging et al., 2021).

***Essential VII***

According to the AACN, Essential VII, the DNP's responsibility is to enhance clinical preventative and community health. These initiatives assisted in accomplishing the national objective of raising the standard of living in the United States (AACN, 2006). Researchers are concerned that a surge in youth depression and anxiety could drive a spike in youth suicide rates (Ream et al., 2021). The community, environmental, and cultural facets of health were examined while considering the needs of adolescent individuals suffering from mental illness who are at risk for suicide. This validated suggested treatments to increase health care providers' knowledge of the effects of inadequate mental health access and treatment and to think about ways to evaluate the suggested initiatives (Diana et al., 2022).

***Essential VIII***

This scholarly research project helped to identify problems in clinical practice. According to the AACN (2006), Essential VIII specifies that the DNP should be given experiential opportunities adequate to guide practice decisions and comprehend the ramifications of those

decisions for patient care. Opportunities were found and examined to develop actions that would enhance results. The DNP student researcher was better equipped because of the experiences to forge and maintain relationships and partnerships, exhibit advanced levels of system thinking, mentor and guide colleagues, offer transitional education, and use conceptual and analytical skills to analyze relationships between important practice issues (AACN, 2006). In order to compare the suicide rates of adolescents in the LGBTQ+ community with those of heterosexual adolescents, data from both recent and earlier studies of the topic were gathered. This gave the researcher the chance to support advanced practice intervention and develop ideas for additional investigation (AACN, 2006).

## **SECTION TWO: COMPREHENSIVE AND SYSTEMATIC SEARCH**

### **Search Organization Reporting Strategy**

Sources for this IR were obtained using a thorough systematic search approach (Toronto & Remington, 2020) of five databases ( e.g., Cochran Database, MEDLINE, CINAHL, PubMed, ProQuest). As described in the inclusion and exclusion section, data were collected, reviewed, analyzed, and sorted. Based on Melnyk and Fineout-Overholt's (2015) pyramid levels of hierarchy tool, data for this IR were categorized first based on data type strength. There were 21 articles that met the inclusion requirements for this IR. The Melnyk and Fineout-Overholt (2015) evidence tool qualifies literature sources based on defined hierarchy levels. Level I is rated the highest and level VII the lowest in terms of rigor. Level I is assigned to literature that includes a systematic review and meta-analysis of randomized controlled clinical trials (RCTs), to which six articles were assigned. Level II is assigned to literature that includes one or more RCTs, to which four articles were assigned. Level III is reserved for studies that include controlled cohort and non-randomized studies, to which six articles were assigned. Level IV

includes studies that are uncontrolled and cohort in nature. Five of the 21 articles retained for this review met this level of evidence. Hierarchy Level V is reserved for literature that describes a review of descriptive and qualitative case studies or series, evidenced-based project implementations, or quality improvement projects. There were no articles that met this level of evidence. There were no articles that met this level of evidence VI; single descriptive or qualitative studies, and VII, expert opinion, as it relates to the clinical question. Appendix A provides a graphic representation of the literary matrix using Melnyk and Fineout-hierarchy Overholt's levels.

An IR requires a cohesive reporting method. The PRISMA tool is used to systematically and in a categorical way, organize literature findings (Moher et al., 2009). The PRISMA tool was adapted for this IR to provide a logistical visual flow of research data analyzed throughout this IR to assist in the minimization of bias while increasing rigor of the review (Toronto & Remington, 2020). The flow chart starts with a list of potentially relevant articles identified through the following databases: CINAHL (41 articles), PUBMED (252 articles), MEDLINE (130 articles), Cochran Database (65 articles), and ProQuest (50 articles) giving a total of 538 identifiable articles. Additionally, one relevant article included the Trevor Project's 2022 National Survey. Articles that were duplicated in the search through the use of multiple databases were immediately removed which left 403. At this point, a thorough scrub was completed to leave only those articles that addressed the main objectives of the clinical question. In that process, 275 articles were excluded. The remaining 128 articles were then screened for eligibility by using the inclusion and exclusion criteria and 107 were excluded with reason. The remaining 21 peer-reviewed studies that addressed increased suicide rates in the LGBTQ+ population compared to their heterosexual peers were used in this IR. The flow chart

demonstrates the literary flow of topics: LGBTQ+, adolescents, heterosexual, suicide, suicidal ideations, mental illness, and the associated number of data that resulted from the search.

Appendix B provides a graphic representation of the Project Leader's PRISMA Flow Diagram.

### **Terminology**

To minimize confusion in this IR, the word *database* refers to searchable electronic collection of published materials that include professional peer-reviewed journals and publicly available government statistical data (Toronto & Remington, 2020). Furthermore, the term search engine used in this IR describes an electronic library search of multiple databases using the Jerry Falwell library located at Liberty University (Toronto & Remington, 2020).

### **SECTION THREE: MANAGING THE COLLECTED DATA**

The design method aligns with the activities associated with an evidenced-based IR process that requires enhanced rigor and analysis (Whittemore and Knafl, 2005). The process was initiated with a preliminary literature review, evaluation, appraisal, and synthesis of the best available scientific evidence (Melnik and Fineout-Overholt, 2015) relevant to increased suicide rates within the LGBTQ+ adolescent population, heterosexual adolescent suicide rates, and how they compare. Abstracts of the articles were read and evaluated for topic relevancy, followed by a thorough evaluation for result relevancy. An evidence-based literature synthesis matrix may be seen in Appendix A and was completed by one reviewer. The studies were evaluated for quality, bias, and clinical question relevancy using the constant comparison method (Toronto & Remington, 2020). The PRISMA flowchart was used to visually screen the article selection process (Moher et al., 2009; see Appendix B).



## **SECTION FOUR: QUALITY APPRAISAL**

### **Sources of Bias**

Bias is any information that systematically distorts research findings as a result of the reviews methodology (Melnik & Fineout-Overholt, 2015). Scholarly research requires methods that ensure internal validity and that reduce bias (Toronto & Remington, 2020). Reduction of bias in this IR article database search was established using the PRISMA framework (Moher et al., 2009) and Melnyk and Fineout-Overholt's levels of hierarchy tool, which involved the review, evaluation, analysis, and sorting of each article. (Melnik & Fineout-Overholt, 2015). This analysis was completed to establish topic relevancy for use in this IR (Melnik & Fineout-Overholt, 2015). This effort yielded no findings of bias.

### **Internal Validity**

When the research results are obtained using proper scientific methods, validity can be established. Internal validity is important to establish because it relates the believability of research results when the findings are obtained using appropriate scientific methods without bias (Toronto & Remington, 2020). If internal validity is not established, external validity will not be applicable. If external validity or generalizability cannot be established, the usefulness and applicability of the findings in this IR to populations outside of this review are unlikely (Melnik & Fineout-Overholt, 2015).

### **Appraisal Tools (Literature Matrix)**

Critical appraisal of the evidence is highly recommended, but the appraisal tools and methods used should align with the type of literature being reviewed (Toronto & Remington, 2020). With over 100 appraisal tools available for use, no gold standard appraisal tool has been established to confirm quality ratings (Toronto & Remington, 2020). For this IR, empirical and

theoretical data were evaluated first for topic relevancy and second for rigor of methodology (Whittemore & Knafl, 2005). Diverse primary data collected were appraised for relevance and quality using the Melnyk and Fineout-Overholt framework. The evidence was placed into a matrix and categorized using Melnyk & Fineout-Overholt's levels of evidence that ranks data from I to VI (Melnyk & Fineout-Overholt, 2015) as previously described. Article themes were an additional categorical method used to categorize and synthesize articles based on their theme trend (See Appendix A).

### **Applicability of Results**

The 21 articles selected for this IR were critically appraised and relevant to increased suicide rates within the LGBTQ+ adolescent population, heterosexual adolescent suicide rates, and how they compare. The literary data were organized and placed in the matrix by title, research purpose, sample size, methodology, intervention/outcomes, results, and strength of the study. (Melnyk & Fineout-Overholt, 2015). Following a thorough review and categorization of data based on themes observed in the literature reviewed, the data suggest that LGBTQ+ adolescents were not inherently prone to suicide risk because of their sexual orientation or gender identity but rather placed at higher risk because of how they are discriminated against and stigmatized in society (Hammack et al., 2022). Additionally, LGBTQ+ adolescents are more than four times as likely to attempt suicide than their heterosexual peers (CDC, 2017).

### **Reporting Guidelines**

Integrated Reviews are a data reporting method that allows for methodologies of diverse foundations that offer varied perspectives of a phenomenon and are important to nursing science and practice (Whittemore & Knafl, 2005). Each article in this IR was evaluated for the applicability of relevancy to increased suicide rates within the LGBTQ+ adolescent population,

heterosexual adolescent suicide rates, and how they compare. To minimize bias and increase transparency, PRISMA reporting and Melnyk and Fineout-Overholt's (2015) appraisal tools were used to arrange and report data (Toronto & Remington, 2020).

## **SECTION FIVE: DATA ANALYSIS AND SYNTHESIS**

### **Data Analysis Methods**

According to Whitemore and Knafl (2005), the analysis of data in the research of a phenomenon requires that the primary data sources be ordered, coded, categorized, summarized, and meshed into a unified conclusion. The primary goal is to provide additional insight to the IR clinical question, LGBTQ+ adolescents experiencing suicide at a higher rate than adolescents from the heterosexual community. Therefore, each article was placed in the Melnyk and Fineout-Overholt's (2015) level of evidence categorizing system, which allowed for repeated comparisons of primary sources for topic relationship and then synthesized based on the themes observed during the evaluation process. Moreover, research design, purpose, and data results were key evidence information used to compare data for topic relevance and applicability.

### **Descriptive Results**

This integrative review examined 21 articles from diverse data sources with variable design styles enhancing a holistic understanding of increased suicide rates within the LGBTQ+ adolescent population, heterosexual adolescent suicide rates, and how they compare (Whitemore & Knafl, 2005). The articles covered a recent time period from 2017–2022 with the interests of capturing studies that reflect the current state of the problem. Themes and visual aids (see Appendices A and B) have been included to improve the logistics in the presentation of the IR data. This IR has presented a literature analysis that answered the clinical question surrounding the relationship between increased suicide rates within the LGBTQ+ adolescent population,

heterosexual adolescent suicide rates, and how they compare. The data presented support the phenomenon of an inverse linear relationship between increased suicide in the adolescent LGBTQ+ community, heterosexual suicide rates, why these increases of suicide occur within the LGBTQ+ adolescent community, and how these rates compare to heterosexual adolescent suicide rates. This correlation was validated with the data reliability demonstrated in Melnyk and Fineout-Overholt's (2015) appraisal tool. Subsequently, almost half (48%) of bisexual adolescents seriously considered attempting suicide in the past year, and 27% attempted suicide. The literature further concluded that among gay or lesbian adolescents, 37% seriously considered suicide and 19% attempted suicide. Among heterosexual adolescents, 14% seriously considered suicide and 6% attempted suicide. Consequently, suicide risk disparities among LGBTQ+ adolescents remain constant across gender identity and race/ethnicity (CDC, 2020).

### **Synthesis**

The 21 articles presented in this IR have provided information that answered the clinical question (Toronto & Remington, 2020). Adolescents in the LGBTQ+ community commit suicide at a rate of 12%, compared to adolescents in the heterosexual community at a rate of 5.4% (CDC, 2017, 2020; Diana et al., 2022; Hammack et al., 2022; Mandracchia et al., 2018; Manzar et al., 2021; MHA, 2022; NAMI, 2022; Ream et al., 2021; Russell et al., 2018; The Trevor Project, 2022; Willging et al., 2021; Williams et al., 2021). Other articles presented supported increased LGBTQ+ suicide by demonstrating a linear relationship between mental illness, social discrimination, social stigmatization, and lack of family support (Applegate, 2018; Berger et al., 2022; Clark et al., 2020; Jonas et al., 2022; Kneale et al., 2021; McDermott et al., 2021; Pachankis et al., 2022; Proulx et al., 2019). Three articles supported health care professionals'

responsibilities to LGBTQ + adolescent as well as prevention of social victimization or bullying against this group (Clark et al., 2020; Diana et al., 2022; Proulx et al., 2019).

### **Ethical Considerations**

The IR project leader did not have direct contact with human participants or exposure to identifiable participants' data; therefore, ethical concern was not applicable to this review.

Successful electronic submission and approval for this IR was received by the Liberty University IRB and status of exemption was given (See Appendix D).

## **SECTION SIX: DISCUSSION**

### **Implications for Practice**

Both physical and mental health are crucial and are inextricably linked. One of the main causes of disability in the United States is mental health issues which affect an estimated 18.1% (or 43.6 million) of Americans on any given year. Nearly 10 million (9.8 million) Americans suffer from a severe incapacitating mental illness (NAMI, 2022). Unfortunately, when mental health is ignored, suicide rates start to rise. Between 1999 and 2016, the suicide rate in the US increased by 25.4%. Over 48,000 people nationwide died by suicide in 2018, and there were 1.4 million suicide attempts nationwide (MHA, 2022). As a result, it ranks as the tenth most common cause of death in the U.S. According to the National Institute of Mental Health (NIMH, 2022), the LGBTQ+ adolescent population reported suicidal ideations at 26.1% compared to 13% within the heterosexual adolescent population. LGBTQ+ adolescents attempted suicide at a rate of 16.6%, compared to 5.4% of heterosexual adolescents. In comparison to 5.4% of heterosexual adolescents, 12% of LGBTQ+ adolescents attempted suicide with completion (NIMH, 2022; CDC, 2020).

**Suicide Prevention Collaboration**

Collaboration amongst health care professionals, parents, teachers, family, and friends can aid in preventing suicide among adolescence in the LGBTQ+ community (CDC, 2017; CDC, 2020). Adolescents who identify as LGBTQ+ are frequently stigmatized and discriminated against (Proulx et al., 2019). LGBTQ+ adolescents experience bullying in school at a rate of 43% compared to 18% for heterosexual adolescents (Williams et al., 2021). Proulx et al. (2019) noted that evidence-based policies, practices, and initiatives can be implemented in schools to support a healthy environment for all students, particularly LGBTQ+ students. For example, studies have shown that LGBTQ+ students were less likely to encounter threats of violence, miss school because they felt unsafe, or attempt suicide in schools with LGBTQ+ support groups, such as gay-straight alliances, than those students in schools without LGBTQ+ support groups. According to Willging et al. (2021) LGBTQ+ adolescents were less likely to consider or try suicide when their schools had gay-straight alliances and policies against displaying homophobia for at least three years. When compared to heterosexual and cis-gendered adolescents, LGBTQ+ adolescents are projected to have worse mental health outcomes, which is a fact that healthcare providers should be aware of and address (Pachankis et al., 2022).

**Suicide Prevention Screening and Early Detection**

For a healthcare provider, basic suicide screening is the first step in the suicide risk identification process. To help in this task, the National Institute of Mental Health has developed a resource called the Ask Suicide-Screening Questions (ASQ) Toolkit. The backbone of the toolkit is a set of four questions that take less than 20 seconds to ask. According to NIMH, 2022, the ASQ detected 97% of LGTBQ+ adolescent suicide risk when it was added to a patient care

visit. It is suggested by the NIMH that all healthcare professionals receive training in suicide risk assessment and be knowledgeable of the suicide crisis hotline.

### **National Suicide and Crisis Lifelines**

According to NIMH (2022) the 988 Suicide and Crisis Lifeline is a national network of more than 200 crisis centers that helps thousands of people overcome crisis situations every day. These centers are supported by local and state resources, as well as the Department of Health and Human Services' (HHS) Substance Abuse and Mental Health Services Administration (SAMHSA). The 988 Lifeline provides 24/7, confidential support to people in suicidal crisis or mental health-related distress. By calling or texting 988, a provider can be connected to mental health professionals within the Lifeline network. NIMH (2022) identified the main risk factors for suicide which include personal history of depression, other mental disorders, substance use disorder, chronic pain, a personal history of suicide attempts, family history of a mental disorder or substance use, family history of suicide, exposure to family violence, including physical or sexual abuse, presence of guns or other firearms in the home, having recently been released from prison or jail, and exposure, either directly or indirectly, to others' suicidal behavior, such as that of family members, peers, or celebrities. To identify these risk factors a thorough comprehensive health assessment is needed that includes a health history and psychosocial assessment (CDC, 2020). Stressful life events, such as the loss of a loved one, legal troubles, or financial difficulties, as well as interpersonal stressors, such as shame, harassment, bullying, discrimination, or relationship troubles, may contribute to suicide risk, especially when they occur along with suicide risk factors (NIMH, 2022).

The Trevor Project is a nonprofit U.S. organization founded in 1998 that aides in crisis and suicide prevention among LGBTQ+ adolescents. With a focus on LGBTQ (lesbian, gay,

bisexual, transgender, queer, and questioning) adolescent suicide prevention, they provide a toll-free phone number where experienced counselors can offer private, confidential support. The Trevor Project created a national helpline, (866) 488-7386, and can be used to prevent suicide among LGBTQ+ adolescents. The project's stated objectives are to offer crisis intervention and suicide prevention services to young adults (those under 25 according to the organization), as well as to provide advice and resources to parents, healthcare providers, and educators in order to create environments that are safe, accepting, and inclusive for all adolescents at home, in schools, and in colleges.

Healthcare providers can use virtues of compassion, respect, and hope when caring for the LGBTQ+ adolescent. The health professional can address the needs of the LGBTQ+ adolescent with compassion and empathy. Confidentiality in the information provided to the provider by an adolescent LGBTQ+ patient can be used to demonstrate respect. Through the resources available to LGBTQ+ adolescents, healthcare professionals can provide them hope in the fight against suicide. Understanding LGBTQ+ minorities' mental health needs and the causes of mental health disparities is a fast-emerging topic of research, particularly in terms of mental health outcomes with policy implications (Proulx et al., 2019). Mental health is essential for proper psychological processes, healthy relationships, and a happy existence. Mental health promotion, protection, and restoration are critical for individuals, communities, and societies all over the world and play a major part in effective patient care outcomes (Hammack et al., 2022).

### **Dissemination**

This IR presented data which demonstrates that the provision of early intervention, appropriate and thorough therapy, and family support are just a few of the various strategies for enhancing mental health care and preventing suicide in the LGBTQ+ adolescent community.



Dissemination of the projected will first be displayed by publication in Liberty University Scholarly Crossing. In order to improve patient care outcomes for LGBTQ+ adolescents, information will be disseminated to the Sexually Reproductive Health (SRH) and Family Planning (FP) clinic Committee of the Alexandria Health Department (AHD) to enhance the annual education competency of our healthcare providers. The researcher will further disseminate the evidence collected by providing patient advocacy to adolescents in the LGBTQ+ community. The Dissemination of information in this IR may be presented in a publication, poster format, or in its current format.

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**Appendix A****Table 1***Inclusion and Exclusion Criteria*

<b>Inclusion</b>	<b>Exclusion</b>
Publication from 2017-2022	Publication < 2017
LGBTQ+ adolescents 13-18 suicide rate	LGBTQ+ adults suicide rate
Heterosexual adolescents 13-18 suicide rate	Heterosexual adult suicide rate
Outpatient setting	Hospital setting
Peer-reviewed journals	Non-peer-reviewed articles
Full-text articles	Abstract only articles
Publications written in English language	Publications written in a foreign language

**Table 2***Results LGBTQ+ Suicide Increased Prevalence Level of Evidence (LOE) Pyramid*

<b>Author, (Year)/Focus</b>	<b>Study Purpose Objectives</b>	<b>Design, Sampling Methods, and Subjects</b>	<b>LOE</b>	<b>Intervention and Outcome</b>	<b>Results</b>	<b>Study Strength</b>
Applegate, J. (2018). <i>Cultural humility and LGBTQ communities in the healthcare environment: Leadership in healthcare and public health</i>	To evaluate treatment of patients/clients with cultural humility in the case of LGBTQ community.	Quasi-Experimental N=4,000 annual patients	Level III/Secondary	<b>Intervention</b> Education initiative designed to certify health providers in delivery of culturally humble, medically appropriate care for transgender, transsexual and gender non-conforming (TGNC) individuals. <b>Outcome</b> (1) provider-patient relations, (2) patient education and empowerment efforts, and in (3) larger organizational	In order to reduce health disparities in the LGBTQ community, attention must be paid to both provider and patient education, provider-patient interactions, and organizational structures, processes, policies and practices.	Provides descriptive data which helps with clarifying the importance of cultural sensitivity and cultural humility when involvement with LGBTQ+ members

				policy and employment practices.		
Berger, M.N., Taba, M., Marino, J.L., Lim, M.S.C., Skinner, S.R. (2022). <i>Social media use and health and well-being of lesbian, gay, bisexual, transgender, and queer youth: Systematic review.</i>	To identify how LGBTQ youths and adolescents use social media for connection with other LGBTQ peers and groups, identity development, and social support and how these affect mental health and well-being.	PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) procedures were used to guide this review. Searches were conducted in ACM Digital Library, CINAHL, Ovid Embase, Ovid MEDLINE, and Web of Science in March 2021. This review focused on LGBTQ youths aged 10 to 24 years.	Level I/Secondary	The support mechanisms that LGBTQ youths used via social media (qualitative: 5/18, 28%; quantitative: 4/11, 36%; mixed methods: 2/3, 67%). Subthemes in the qualitative data on LGBTQ youths using social media	Being able to view and interact with others expressing similar LGBTQ identities was validating for youths Seeing other youths, including schoolmates, engaging in LGBTQ-orientated activities on social media allowed for further identity exploration and understanding This exposure to other LGBTQ youths helped affirm one's identity and prove that LGBTQ people exist	The findings may inform interventions to promote social media health literacy and the mental health and well-being of LGBTQ+ adolescents.



Centers for Disease Control and Prevention. (2017). <i>LGBTQ+ youth.</i>	National Youth Risk Behavior Survey (YRBS)	Clinical Practice Guidelines	Level I/Primary	1.National Survey 2. To help promote health and safety among LGBTQ+ youth	Compared with other students, negative attitudes toward LGB persons may put these youth at increased risk for experiences with violence.	This Clinical Practice Guideline lays the foundation for the importance of risk behaviors of LGBTQ+ youth.
Centers for Disease Control and Prevention. (2020). Suicide Prevention	Suicide Data and Statistics	Clinical Practice Guidelines	Level I/Primary	National Statistics and data on suicide rates since 2020	National statistics and data of suicide rates since 2020	This Clinical Practice Guideline lays the foundation for the importance of suicide prevention
Clark, K.A., Cochran, S.D., Maiolatesi, A.J., Pachankis, J.E. (2020). <i>Prevalence of Bullying Among Youth Classified as LGBTQ Who Died by Suicide as Reported in the National Violent Death Reporting</i>	To determine whether bullying is a more common antecedent among LGBTQ youth who die by suicide	Narrative reports using postmortem records from the 2003-2017 National Violent Death Reporting System (NVDRS).	Level V/Secondary	Intervention: categorized decedents precoded as lesbian, gay, bisexual, transgender, or same-sex partnered as LGBTQ (n = 194). To capture LGBTQ status for suicides that occurred before	LGBTQ-classified decedents evidenced 4.92 times the odds of being bullied compared with non-LGBTQ-classified decedents (95% CI, 3.58-6.82; P < .001). Younger LGBTQ-classified	The study adds to the body of knowledge regarding the phenomenon of discrimination experienced by LGBTQ+ adolescents.

<i>System, 2003-2017.</i>				these codes (2003-2012)	decedents were at greatest risk; 21 of 31 (67.7%) LGBTQ-classified youth aged 10 to 13 years were classified as being bullied.	
Diana, P., Esposito, S. (2022). <i>LGBTQ+ Youth Health: An Unmet Need in Pediatrics.</i>	To determine if LGBTQ+ adolescents suffer discrimination in the health care framework.	This is a narrative review of the literature on LGBTQ+ youths' care in pediatrics.	Level V/Primary	<b>Outcome:</b> Pediatricians have limited knowledge about and comfort with many items regarding the care of LGBTQ+ youths. The present review supports the necessity for greater consciousness and knowledge of the specific and exclusive needs of LGBTQ+ adolescents, including dedicated pediatric	The findings suggest the urgency of specific training for pediatric residents and pediatricians in terms of LGBTQ+ care, including how to talk about sexual orientation, sexual attraction, and gender identity while taking a sexual anamnesis from a sexually active adolescent; how to identify	Inclusive care by providers are needed to look after the health of LGBTQ+ adolescents is needed. LGBTQ+ adolescents suffer discrimination in the health care framework.

				LGBTQ+ health training	specific risks such as depression, suicidal thoughts, transmitted sexual infections; and how to support LGBTQ+ parents and families.	
Hammack-Aviran C, Eilmus A, Diehl C, Gottlieb KG, Gonzales G, Davis LK, Clayton EW. (2022). <i>LGBTQ+ perspectives on conducting genomic research on sexual orientation and gender identity.</i>	To better understand the deep nuances and complex perspectives of genomic research on sexual orientation and gender identity among a sample of LGBTQ+ adolescents	In-depth interviews with LGBTQ+ adolescents (n = 31) in the greater Nashville, Tennessee area.	Level I/Primary	<b>Intervention:</b> Interviewees were divided on the acceptability of genomic research investigating genetic contributions to sexual orientation and gender identity. <b>Outcome:</b> Participants identified and discussed a range of potential benefits, hopes, risks, and concerns relating to genomic	Areas of concern included threats of pathologizing and medicalizing LGBTQ+ identities and experiences, undermining reproductive rights, gatekeeping of health or social systems, and malicious testing or misuse of genetic results, particularly for	Yes, validated LGBTQ+ identities, and should the need of improved access to and quality of healthcare and other resources, and the need for increased acceptance in familial, socio-cultural, and political environments.

				research using SOGI data and the role of genetic contributions to sexual orientation and gender identity from the perspectives of what it would mean for themselves and their communities.	LGBTQ+ youth.	
Jonas, L., Salazar, G., Shum, M., Nosarti, C. (2022). <i>A systematic review and meta-analysis investigating the impact of childhood adversities on the mental health of LGBT+ youth.</i>	To identify the severity and pervasiveness of adverse childhood experiences of LGBTQ+ adolescents compared to their heterosexual and cisgender counterparts that lead to mental illness and suicide	A systematic literature search of Medline, Embase, PsycINFO, PubMed and Web of Science was conducted from the date of their inception until the 1st September 2021. 2.Systematic review and meta-analysis	Level I/Secondary	LGBTQ+ individuals face a significant and poorly understood set of ACEs (adverse childhood experiences) and bear a higher burden of mental health disorders than the general cohort.	Proved that adverse childhood exposure has been directly related to an increased risk of mental health problems and suicide in the LGBTQ+ adolescent than that of heterosexual adolescent	Yes, this gives view of the childhood traumas that could cause adverse effects in the life of a LGBTQ+ adolescent leading to suicide.
Kneale, D., Bécares, L. (2021).	To assess the mental health and experiences of	Cohort study (prospective)	Level III/Secondary	Mental health was assessed with the 4-item	The LGBTQ+ community exhibited high	The study showed that during adverse

<p><i>Discrimination as a predictor of poor mental health among LGBTQ+ people during the COVID-19 pandemic: Cross-sectional analysis of the online Queerantime study</i></p>	<p>discrimination among lesbian, gay, bisexual, transgender, queer (LGBTQ) people at the start of the COVID-19 pandemic.</p>	<p>A cross-sectional online survey targeted at LGBTQ+ people, which collected data on mental health, experiences of discrimination and a number of other pandemic-related experiences. N= 310 LGBTQ+ respondents</p>		<p>Perceived Stress Scale and with the 10-item Center for Epidemiological Studies Depression scale (CES-D-10). Respondents were ask about discriminatory experiences because of their LGBTQ+ identity during the coronavirus pandemic.</p>	<p>levels of depression, stress and experienced discrimination during the coronavirus pandemic. High levels of poor mental health were partially explained by experiences of discrimination, which had a large, consistent and pernicious impact on mental health.</p>	<p>environmental situations LGBTQ+ adolescents are often discriminated without reason.</p>
<p>Mandrachia, J., To, Y., Pichette, S. (2018). <i>Suicidality in the Deep South: Risks for adolescent Mississippians.</i></p>	<p>The purpose of this paper is to better understand suicidality among adolescent Mississippians.</p>	<p>1. Mississippi-specific data were obtained from an existing national health data set and utilized for two hierarchal linear regressions 2. Exploratory study</p>	<p>Level I/Secondary</p>	<p>Highest risk for adolescent suicidality is for females with poor body image and a history of traumatic experiences</p>	<p>Poor mental health is associated with increased suicidality</p>	<p>This study shows adolescent suicidal behavior in different geographical locations, also show female LGBTQ+ behavior</p>
<p>Manzar MD, Albougami A, Usman N,</p>	<p>Suicide incidences among adolescents and</p>	<p>A purposive sampling of Google news</p>	<p>Level IV/Secondary</p>	<p>The most common suicide causalities were</p>	<p>1. Out of 23-student victims, 14 were school-</p>	<p>This study shows online adolescent</p>

<p>Mamun MA. (2021). <i>Suicide among adolescents and youths during the COVID-19 pandemic lockdowns: A press media reports-based exploratory study.</i></p>	<p>youths during the Coronavirus Disease 2019 (COVID-19) lockdowns have been reported across the world.</p>	<p>between 15 February and 6 July was performed. After excluding duplicate reports, the final list comprised a total of 37-suicide cases across 11 countries.</p>		<p>related to mental sufferings such as depression, loneliness, psychological distress, and so forth, whereas either online schooling or overwhelming academic distress was placed as the second most suicide stressors followed by TikTok addiction-related psychological distress and tested with the COVID-19.</p>	<p>going students. Hanging was the most common suicide method accounting in 51.4% of cases. 2. The most common suicide causalities were related to mental sufferings such as depression, loneliness, psychological distress. 3. Online schooling or overwhelming academic distress was placed as the second most suicide stressors followed by TikTok addiction-related psychological distress</p>	<p>suicidal behavior in different geographical locations behavior, and the effects of social media as it relates to the mental health of LGBTQ+ adolescents and heterosexual adolescents.</p>
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McDermott, E., Eastham, R., Hughes, E., Pattinson, E., Johnson, K., Davis, S., Prymachuk, S., Mateus, C., Jenzen, O. (2021). <i>Explaining effective mental health support for LGBTQ+ youth: A meta-narrative review.</i>	Intended to build a theoretical framework to explain effective mental health early intervention support for LGBTQ+ adolescents by the healthcare community	A meta-narrative review of 88 systematic review studies	Level I/Secondary	None	Despite having higher rates of poor mental health, LGBTQ+ children underutilize mental health services and frequently receive little care.	This study will help in building the education needed for the medical staff caring for LGBTQ+ adolescents
Mental Health America. (2022). <i>LGBTQ+ communities and mental health.</i>	Discrimination against LGBTQ+ persons has been associated with high rates of psychiatric disorders, substance abuse, and suicide.	A systematic literature search based on National Guidelines	Level I/ Secondary	None	LGBTQ+ teens are six times more likely to experience symptoms of depression than non-LGBTQ+ identifying teens.	This provides evidence that there is an increase of suicide in LGBTQ+ adolescents
National Alliance on Mental Illness. (2022). <i>LGBTQI.</i>	Important Risk Factors of LGBTQI Mental Health Adolescents	Clinical Practice Guidelines	Level I/ Primary	None	The LGBTQI community faces many forms of discrimination, including labeling,	These guidelines support the rate of suicide and mental illness along with discrimination in the LGBTQ+

					stereotyping, denial of opportunities or access, and verbal, mental and physical abuse. They are one of the most targeted communities by perpetrators of hate crimes in the country.	adolescent community.
Pachankis, J.E., Williams, S.L., Behari, K., Job, S., McConocha, E.M., Chadoir, S.R. (2022). <i>Brief online interventions for LGBTQ young adult mental and behavioral health: A randomized controlled trial in a high-stigma, low-resource context.</i>	To identify scalable interventions for improving sexual minority mental health and health-risk behavior	In consultation with sexual minority young adults (n = 108) in Appalachian Tennessee using randomized controls	Level 1/Primary	Participants, representing diverse sexual and gender identities and socioeconomic backgrounds, were randomly assigned to participate in a 3-session expressive writing intervention, self-affirmation intervention, or neutral control. Participants completed mental health and	Compared to the neutral control, expressive writing exerted 3-month improvements in depressive symptoms. Participants who were exposed to greater contextual minority stressors common in rural regions (i.e., discrimination and victimization) experienced significantly greater 3-month reductions in depression from expressive writing and self-affirmation compared to	This study aides in viewing the behavior of LGBTQ+ adolescents from high negative stigma and low resource settings



				health-risk behavior measures at baseline, postintervention, and 3-month follow-up.	control. Those who experienced greater discrimination also experienced significantly greater 3-month reductions in suicidality from self-affirmation compared to control. Future research can consider strategies for population-level implementation, especially in high-stigma, low-resource settings	
Proulx, C. N., Coulter, R., Egan, J. E., Matthews, D. D., & Mair, C. (2019). <i>Associations of lesbian, gay, bisexual, transgender, and questioning-inclusive sex education with mental health outcomes and school-based</i>	The purpose of this study was to test whether a specific type of LGBTQ-inclusive curricula, LGBTQ-inclusive sex education, is associated with mental health disparities and victimization among SMY.	Data analysis of representative data from the CDC 2015 Youth Risk Behavior Survey and the 2014 School Health Profiles	Level II/Secondary	Students in states with a greater proportion of LGBTQ-inclusive sex education have lower odds of experiencing school-based victimization and adverse mental health.	Interventions that promote positive school climate may reduce the risk of victimization and adverse mental health outcomes in SMY.	These findings can be used to guide intervention development at the school and state levels.

<i>victimization in U.S. high school Students.</i>						
Ream G, Peters A. (2021). <i>Working With Suicidal and Homeless LGBTQ+ Youth in the Context of Family Rejection.</i>	The purpose of this study was to fine A model that combines suicidal risk factors and minority stress theory is useful in clinical practice. Prevalence of homelessness, suicide with LGBTQ+ adolescents	Data from the CDC National Violent Death Reporting System, the American Psychological Association, the Trevor Project.	Level III/Secondary	An LGBTQ+ affirming therapeutic approach is recommended.	LGBTQ+ individuals are at increased risk of suicide. Homelessness further increases the risk, as does family-of-origin rejection.	This study shows the family influence and that LGBTQ+ youth are often at least temporarily rejected by their parents and other members of their families of origin, and family rejection is a significant LGBTQ+ specific risk factor for suicide.
Russell, B., Toomey et al., (2018). <i>Transgender adolescent suicide behavior.</i>	The primary objective was to examine prevalence rates of suicide behavior across 6 gender identity groups: female; male; transgender, male to female; transgender,	A secondary data analysis was conducted of the Profiles of Student Life: Attitudes and Behaviors survey, which was collected by the Search Institute via community partnerships. The	Level II/Secondary	Suicide prevention efforts can be enhanced by attending to variability within transgender populations, particularly the heightened risk for female to male and nonbinary	Nearly 14% of adolescents reported a previous suicide attempt; disparities by gender identity in suicide attempts were found. Female to male adolescents	These results highlight each gender identity and their suicide rates within and outside (heterosexual) the LGBTQ+ adolescent community.

	female to male; transgender, not exclusively male or female; and questioning. The secondary objective was to examine variability in the associations between key sociodemographic characteristics and suicide behavior across gender identity groups.	survey included 160 self-report items that are used to assess US adolescents' (age 11–19 years) developmental opportunities, relationships, values, skills, and wellbeing.		transgender adolescents.	reported the highest rate of attempted suicide (50.8%), followed by adolescents who identified as not exclusively male or female (41.8%), male to female adolescents (29.9%), questioning adolescents (27.9%), female adolescents (17.6%), and male adolescents (9.8%).	
The Trevor Project. (2022). <i>Trevor project's 2022 national survey on LGBTQ+ youth mental health.</i>	Focused on suicide prevention efforts among lesbian, gay, bisexual, transgender, queer, and questioning (LGBT+) adolescents	CDC National Guidelines for LGBTQ+ adolescents	Level III/Secondary	Outcome To offer guidance and resources to parents and educators in order to foster safe, accepting, and inclusive environments for all youth, at home, schools and colleges.	Provide crisis intervention and suicide prevention services for youth	The Trevor Lifeline is the only nationwide, around-the-clock crisis and suicide prevention helpline for LGBTQ youth in the United States.

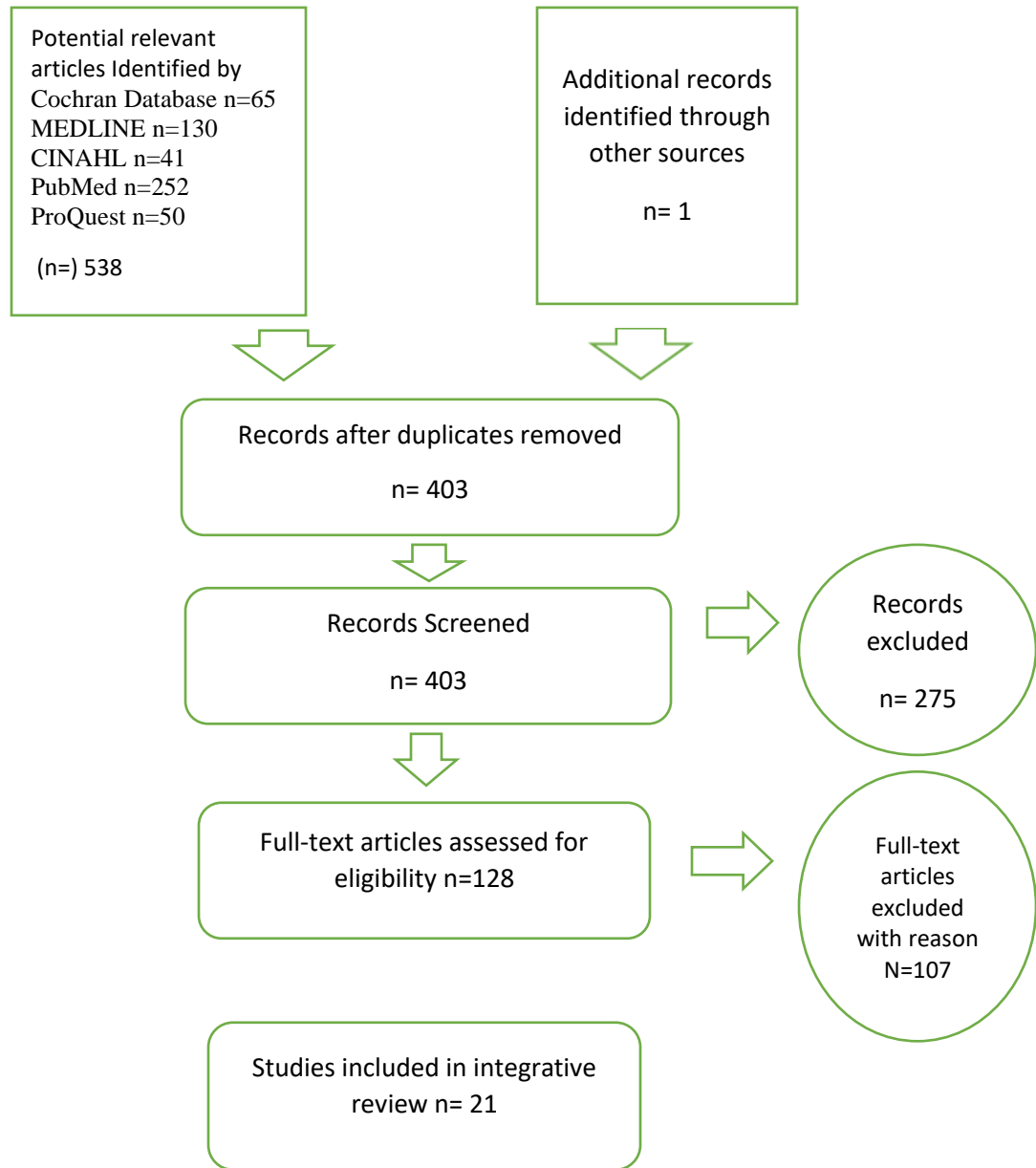
<p>Willing, C.E., Green, A.E. &amp; Ramos, M.M. (2021). <i>Implementing school nursing strategies to reduce LGBTQ adolescent suicide: A randomized cluster trial study protocol</i></p>	<p>To assess whether LGBTQ students and their peers in RLAS (Reduce LGBTQ Adolescent Suicide) intervention schools report reductions in suicidality, depression, substance use, bullying, and truancy related to safety concerns compared to those in usual care schools.</p>	<p>A 5 year cluster randomized controlled trial n=20 from RLAS schools and n=20 from non RLAS schools</p>	<p>Level II/Primary</p>	<p><b>Intervention</b> School nurses were provided with a one-day in-person training that coincides with an annual conference sponsored by the NM School Nurses Association. The training covered leadership that supports effective EB strategy implementation. <b>Outcome</b> To prepare nurses to be strong change agents in schools and to negotiate interdisciplinary (Implementation Resource Team) IRTs to be implemented within high schools</p>	<p>The RLAS keeps with national priorities to (a) improve school-based services for pediatric populations, (b) focus on LGBTQ youth mental health, and (c) revolutionize the role of nurses in U.S. healthcare.</p>	<p>The importance of a multidisciplinary team to influence the reduction of bullying, discrimination, and suicide rates in high schools.</p>
<p>Williams, A. J., Jones, C., Arcelus, J.,</p>	<p>A systematic review and meta-analysis to</p>	<p>Quantitative research papers from MEDLINE, Scopus,</p>	<p>Level II/Secondary</p>	<p>A random effects model was calculated, using the generic inverse</p>	<p>Victimization and mental health were key risk factors across the</p>	<p>The key findings of this meta-analysis strongly</p>

<p>Townsend, E., Lazaridou, A., &amp; Michail, M. (2021). <i>A systematic review and meta-analysis of victimization and mental health prevalence among LGBTQ+ young people with experiences of self-harm and suicide.</i></p>	<p>investigate the prevalence of risks among young people throughout the LGBTQ+ umbrella with experiences across the dimension of self-harm, suicidal ideation and suicide behavior; and how they may differ between LGBTQ+ umbrella groups.</p>	<p>EMBASE, PsycINFO, and Web of Science.</p> <p>Articles included were empirical quantitative studies, which examined risks associated with self-harm, suicidal ideation or suicidal behavior in LGBTQ+ young people (12–25 years).</p>		<p>variance method, to examine the prevalence of victimization as a risk associated with experiences of self-harm, suicidal ideation or suicidal attempt among LGBTQ+ young people. Sixty-three estimates from 31 individual samples were reported, representing 331,321 participants in total.</p>	<p>dimension self-harm and suicide identified through all analyses. A pooled prevalence of 0.36 was indicated for victimization and 0.39 for mental health difficulties within LGBTQ+ young people with experiences of self-harm or suicide.</p>	<p>support previous research</p>
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Appendix B

Figure 1

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)



Flowchart of search and screening process. Adapted from “Preferred reporting items for systematic reviews and meta-analysis: The PRISMA statement” by Moher et al., 2009, Annals of Internal Medicine, 151, p. 267. Copyright 2009 by PRISMA Group

Appendix C



Completion Date 18-Jul-2022  
Expiration Date 17-Jul-2025  
Record ID 49877809

This is to certify that:

**NATASHA CAUSEY**

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

**Biomedical Research - Basic/Refresher**

(Curriculum Group)

**Biomedical & Health Science Researchers**

(Course Learner Group)

**1 - Basic Course**

(Stage)

Under requirements set by:

**Liberty University**



**Appendix D****LIBERTY UNIVERSITY.**  
INSTITUTIONAL REVIEW BOARD

September 21, 2022

Natasha Causey

Folashade Odedina

Re: IRB Application - IRB-FY22-23-300 INCREASED PREVALENCE OF SUICIDE IN THE ADOLESCENT (13-18) POPULATION WITHIN THE LGBTQ+COMMUNITY COMPARED TO ADOLESCENTS IN THE HETEROSEXUAL POPULATION: AN INTERGRATED REVIEW

Dear Natasha Causey and Folashade Odedina,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds that your study does not meet the definition of human subjects research. This means you may begin your project with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your study is not considered human subjects research because it will not involve the collection of identifiable, private information from or about living individuals (45 CFR 46.102).

Please note that this decision only applies to your current application. Any modifications to your protocol must be reported to the Liberty University IRB for verification of continued non-human subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at

[irb@liberty.edu](mailto:irb@liberty.edu). Sincerely,

G. Michele Baker, MA, CIP  
Administrative Chair of Institutional  
Research Ethics Office