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Identifying Barriers to Healthcare Access and Utilization Experienced by LGBTQ+ Adults with Chronic Diseases Through the Lens of the Social Ecological Model

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Abstract:

The purpose of this literature review is to comprehensively examine and synthesize existing research on present barriers to health access and utilization that contribute to the disparities in chronic disease prevalence within the adult LGBTQ+ population. In the context of this review, the social-ecological model (SEM) was used to describe the nuanced and multifaceted nature of healthcare access and utilization. This literature review was based upon the following question: ‘Using the social-ecological model, what are the barriers to health access and utilization that contribute to high rates of chronic disease in LGBTQ+ adults?’ Outcome measures of interest included the following chronic diseases: cardiovascular disease, cancer, diabetes, and respiratory diseases. The selected literature was analyzed for themes surrounding healthcare access and utilization, which were then categorized by applicable levels of influence within the SEM. While all identified literature addressed the intrapersonal level, with factors such as socioeconomic status, insurance status, and utilization of preventative care services, only three articles discussed community level factors such as provider competency and social stigma. Future work is needed to utilize existing data to guide policy and programming and promote

additional research on areas of deficit that could ultimately improve healthcare access and health service utilization.

Identifying Barriers to Healthcare Access and Utilization Experienced by LGBTQ+ Adults with Chronic Diseases Through the Lens of the Social Ecological Model

This literature review will examine the current state of research surrounding the barriers to healthcare access and health service utilization experienced by lesbian, gay, bisexual, transgender, queer plus *(*LGBTQ+) adults in the United States. The relationship between health status and an individual's access to and utilization of health services is entirely intertwined and influenced by social, structural, and environmental factors out of an individual's control. To adequately address and understand the nuanced public health disparities impacting the LGBTQ+ community, it is vital to consider the context in which a person's or a population's health exists.

Study Aims

By examining and synthesizing existing research on barriers to health access and utilization that contribute to the disparities in chronic disease prevalence within the adult LGBTQ+ population, this study will provide insight into the specific factors that influence the health of this community. Ultimately, this review will provide a foundation for future research, policy development, and targeted interventions to improve the health and wellbeing of this diverse and historically underserved population.

Through thorough assessment of current research, this literature review aims to accomplish the following through the lens of the social-ecological model (SEM): 1) identify and classify barriers to healthcare access and utilization, 2) critically analyze existing research within the context of the SEM, and 3) highlight gaps in current research and provide a basis for future research and interventions.

Aim 1: Identification and Classification of Barriers

This review will critically analyze the current state of healthcare access, as well as present barriers to healthcare utilization experienced by the LGBTQ+ population. Applying the social-ecological model to this public health problem will shed light on specific areas of strength or deficiency in healthcare access and utilization for LGBTQ+ persons. I will categorize identified barriers to care by their levels of influence, allowing for identification of areas of strengths and deficiency that can be used as a basis for future research.

Aim 2: Critical Analysis of Existing Research

By synthesizing and critically evaluating the existing body of research, this review aims to investigate the social, structural, and environmental determinants contributing to chronic disease disparities within the LGBTQ+ community.

Aim 3: Identification of Gaps

Through the identification of issues within the multi-leveled framework of this model, this study aims to clearly outline the gaps in understanding of how these levels of impact interact and affect health outcomes.

Research Question

This literature review expects to answer the question, “Using the SEM, what are the barriers to healthcare access and utilization that contribute to high rates of chronic disease in LGBTQ+ adults?” By answering this question and examining the factors contributing to LGBTQ+ health disparities, this review seeks to promote health equity and improved health outcomes for the LGBTQ+ community, providing a resource for researchers, policymakers, and healthcare professionals.

Chapter 2 – Background

A longstanding concern for marginalized populations is access to healthcare, marked by disparities and discrimination that have often hindered their ability to receive quality and inclusive medical services (Albuquerque et al., 2016).

The LGBTQ+ Population

It is important to note that while the terms LGBTQ+ and sexual and gender minority (SGM) are used as a means of identifying this population and its members as a single group, they are ultimately umbrella acronyms containing individual populations with unique social and health needs. To best discuss the LGBTQ+ population and ensure clarity, a visual portrayal of working definitions for key terms and how they relate to one another has been included (see Appendix A).

This community is a culmination of identities and expressions that are often self-identified by its members. For the purposes of this review, it is crucial to understand that SGM persons ultimately determine their own identity, or the way a person perceive themselves and their gender, and expressions, or the way a person presents their gender to others.

A 2023 Gallup survey found that 7.2% of Americans 18 years old and older self-identify as members of the LGBTQ+ community (Gallup, 2023). Annual surveys of the same nature indicate a growth in LGBTQ+ self-identification, signaling an even greater need to address health disparities experienced by this community. Ensuring equitable access to healthcare for the LGBTQ+ community is an essential aspect of promoting overall wellbeing and dismantling systemic inequalities.

Intersectionality of Identities

Intersectionality refers to the concept that describes the interconnected nature of social systems such as race, gender, and sexuality, and emphasizes how these identities may intersect with one another to create systems of privilege and oppression (Crenshaw, 1989). The relationship between race and LGBTQ+ identity illuminates how systemic discrimination, societal biases, and cultural norms can disproportionately affect individuals who occupy multiple marginalized positions (Veenstra, 2011). For racial and ethnic minority individuals who also identify as LGBTQ+, the experience of discrimination and stigma can be compounded, as they confront unique challenges related to their race, sexual orientation, and gender identity. These challenges can include increased vulnerability to violence, disparities in healthcare access, and complex negotiations of cultural and familial expectations (Lopez & Gadsden, 2016). It is critical to note that the experiences of LGBTQ+ persons are unique and can be greatly influenced by factors operating outside of their SGM identity.

Chronic Disease in LGBTQ+ Populations

Chronic diseases are health conditions that persist for one or more years and require regular medical attention or limit a person’s activities of daily living (Centers for Disease Control and Prevention [CDC], 2022). As of 2021, two of the top three leading causes of death for all adults in the United States can be attributed to chronic diseases (CDC, 2023a). Chronic diseases impact six in ten adults in the United States and can be attributed to 90% of the country’s annual healthcare expenditures (CDC, 2023b). Based on currently available literature and identified gaps in research, this review will focus on the following chronic diseases: cardiovascular disease, cancer, diabetes, and respiratory diseases (asthma, chronic obstructive pulmonary disease [COPD]).

Disease Burden

SGM persons experience disproportionate rates of chronic disease, with 50% of SGM persons ages 18 to 64 reporting living with a chronic disease, a rate five percent greater than that of their non-LGBTQ+ counterparts (Dawson et al., 2023). LGBTQ+ persons ages 45 to 64 carry most of this chronic disease burden, with 70% of LGBTQ+ individuals in this age range reporting having one or more chronic diseases (Dawson et al., 2023). LGBTQ+ persons have been found to have greater proportions of chronic disease across age groups and have poorer overall health compared to non-LGBTQ+ persons (Dai & Meyer, 2019; Fredriksen-Goldsen et al., 2017; Fish et al, 2021; Gonzales et al, 2017).

Pinnamaneni et al. (2022) utilized Behavioral Risk Factor Surveillance System (BRFSS) data from 2014 to 2020 to compare the chronic disease burden of SGM and non-SGM persons and found that SGM persons were reported to have 27% higher odds of being diagnosed with asthma, and 30% higher odds of being diagnosed with COPD, emphysema, or chronic bronchitis compared to non-SGM persons. SGM persons were also found to have 8% higher odds of having hypertension and 14% higher odds of having cardiovascular disease compared to non-SGM persons. Similarly, SGM persons were also found to have 17% higher odds of having diabetes compared to non-SGM persons. Gonzales & Zinone (2018) found similar disparities in cancer diagnosis amongst the LGBTQ+ population, with gay men having 50 percent higher odds of developing cancer than heterosexual men. Bisexual women were also found to have 70 percent higher odds of developing cancer than heterosexual women (Gonzales & Zinone, 2018).

The US Department of Health and Human Services (HHS) did not begin collecting sexual orientation data in its National Health Interview Survey (NHIS) until 2013 which has led to a scarcity of historical data on the subject (see Appendix B). It is also important to note that present surveys fail to differentiate between cisgender (an individual that identifies with the gender they were assigned at birth) and transgender (an individual that does not identify with the gender they were assigned at birth) persons when collecting data on LGBTQ+ persons, leading to even less understanding of the health needs of this group (Heslin & Alfier, 2022).

Contributing Factors

High rates of chronic disease within the LGBTQ+ community can be attributed to many intertwined factors; however, currently available research surrounding the root causes is minimal. Increased health risk behaviors are believed to be the most significant factors that contribute to chronic disease across all populations (CDC, 2022). Health risk behaviors are closely associated with the development of chronic disease**.** Paired with decreased healthcare utilization, these behaviors put individuals at even greater risk of developing chronic disease.

Disease Prevention

Disease prevention occurs through three stages: primary prevention, secondary prevention, and tertiary prevention. Primary prevention involves averting the onset of disease by addressing risk factors before they appear (Kisling & Das, 2024). This level of prevention consists of interventions such as lifestyle modifications and public health campaigns focused on reducing exposure to risk factors in the susceptible population. Primary prevention efforts target healthy individuals to prevent a disease from occurring and are closely tied to promoting equitable access to preventive services and health education.

At the secondary level of prevention, an emphasis is place on early disease detection in individuals at subclinical levels of disease. At this stage, individuals appear otherwise healthy, but have may still be experiencing physiological changes caused by the beginnings of a disease process (Kisling & Das, 2024). Screenings are a common form of secondary prevention, as no outward disease symptoms may be present, but internal changes are still detectable. Secondary prevention aims to prevent the onset of illness. Improved access to diagnostic tools and regular check-ups facilitates early intervention, potentially averting the progression of diseases and preventing complications.

In tertiary prevention, individuals experiencing symptomatic disease are targeted. The goal of tertiary prevention is to minimize the impact of already existent disease. This stage involves rehabilitative efforts, reducing disability, and improving the quality of life for individuals already experiencing disease (Kisling & Das, 2024). Much of tertiary prevention also involves disease management and the upkeep of health, which heavily rely on ongoing healthcare access and utilization for disease management.

Healthcare Access and Heath Service Utilization

Healthcare access refers to a person’s ability to use health services in a timely manner to ultimately achieve optimal health outcomes (Institute of Medicine (US) Committee on Monitoring Access to Personal Health Care Services, 1993). Inadequate or lack of health insurance coverage is considered one of the largest barriers to healthcare access as well as a significant contributor to health disparities (Lavarreda et al., 2011; Ndugga & Artiga, 2023). A 2022 Kaiser Family Foundation (KFF) study found that fewer LGBTQ+ persons held private insurance compared to non-LGBTQ+ persons, and that 21% of surveyed LGBTQ ages 18-64 held Medicaid insurance, compared to 16% of surveyed non-LGBTQ+ individuals (Dawson et al., 2023).

Access to healthcare plays a large role in effective prevention and management of chronic diseases. Timely and equitable access to healthcare services enables individuals to receive early diagnosis, comprehensive treatment, and ongoing support for chronic conditions.

Compared to non-LGBTQ+ persons, LGBTQ+ individuals have been found to have lower odds of seeking care due to prohibitive cost barriers and have also reported greater odds of delaying or forgoing medical tests and medication due to cost barriers (Dai & Meyer, 2019; Pinnamameni et al., 2022).

Healthcare utilization, or the quantification of health services used by a person for the means of preventing and curing health issues, or promoting health and wellbeing, is closely tied to health outcomes (Carrasquillo, 2013). For those with chronic diseases, effective management often includes regular medical visits, pharmacological compliance, and lifestyle changes (CDC, 2023d; Reynolds et al., 2018). It is important for individuals with and without chronic diseases to engage with their healthcare provider for appropriate management of their health. Despite having similar rates of uninsurance, LGBTQ+ persons reported lower rates of having a regular care provider. Having a usual care source has been associated with improved health outcomes as well as increased health service utilization (Dawson et al., 2023).

The Social Ecological Model

The SEM is a conceptual framework for better understanding the interplay of factors that influence health and wellbeing at multiple levels of a more extensive social system (Bronfenbrenner, 1977; Golden & Earp, 2012; McLeroy et al., 1988). In the context of public health, the SEM emphasizes that health is not solely determined by individual choices but is greatly influenced by the broader social and environmental context in which individuals live. The SEM consists of five nested levels, each representative of a different level of influence: 1) intrapersonal or individual, 2) interpersonal or relationship, 3) organizational or institutional, 4) community, and 5) public policy (see Appendix C). By considering multiple levels of influence and how they shape a person’s health outcomes, the SEM offers a comprehensive approach to understanding and addressing public health issues.

In the context of this review, the SEM framework can be used to describe the nuanced and multifaceted nature of healthcare access and utilization. At the intrapersonal level, education and economic status can directly impact one’s ability to access care. Interpersonal factors include support networks, whose support or lack thereof is critical in predicting health outcomes in LGBTQ+ persons (Humble, 2021). Organizational factors can encompass healthcare systems and the cultural humility training of providers that will ultimately care for LGBTQ+ patients. Factors at the community level may consist of support groups or interventions that target the norms that influence acceptance or rejection of LGBTQ+ individuals. Policy level factors include legislation at the local, state, or federal levels that can impact protections for LGBTQ+ persons or protect hate speech against marginalized groups.

The SEM can be applied to complex and multifaceted public health issues, and it is my intention to examine the relationship between barriers to healthcare access and utilization that contribute to chronic disease in the LGBTQ+ population. It is unrealistic and incorrect to attribute an entire population’s health outcomes to a single factor without considering the influence of the social, structural, and environmental contexts surrounding them. Health is complex, and it is essential to consider the many components that contribute to it. Ultimately, the use of the SEM provides a structured framework for both identifying and addressing gaps in research and interventions by highlighting the interconnectedness of the different levels of influence on health.

Existing Knowledge and Research Gaps

At present, there is a scarcity of research describing the barriers contributing to chronic disease in the LGBTQ+ population. Additionally, no published articles that apply the SEM to LGBTQ+ health and chronic disease have been identified. Currently, available research examining the broad topic of LGBTQ+ health through the SEM focuses primarily on the issues of substance use disorders and mental health (Treloar et al., 2021; Watson et al., 2020; Zimmerman et al., 2015). Utilizing the SEM as a framework for organizing and summarizing currently available knowledge provides a tool for identifying gaps in research, improving interventions, and guiding future health equity work.

Through evaluation of presently available literature related to chronic disease in the LGBTQ+ population, much of the focus is placed on HIV and AIDS. While a critical area of research, action, and intervention, HIV and AIDS currently pose less of threat to the LGBTQ+ population compared to the chronic diseases in this review. Failing to address these highly prevalent chronic diseases through research efforts demonstrates a lack of understanding of the imminent threats to SGM persons.

Chapter 3 – Methods

Search Strategy

This literature review was based upon the following question: ‘Using the social-ecological model, what are the barriers to healthcare access and utilization that contribute to high rates of chronic disease in LGBTQ+ adults?’

The following databases were consulted: US National Library of Medicine National Institutes of Health (PubMed – NCBI), Excerpta Medica Database (Embase), and the Cumulative Index of Nursing and Allied Health Literature (CINAHL). A hand search was also conducted utilizing both Google and Google Scholar. A research librarian was consulted before and following the initial search to confirm effective strategies were being utilized and to provide suggestions on inclusion and exclusion criteria based on the available literature.

Identified keywords were used in conjunction with the following database-specific controlled vocabulary: Medical Subject Headings (MeSH) terms, Embase Subject Headings (Emtree), and CINAHL Subject Headings (Headings) (see Appendix D and Table 1D). The Boolean operators AND and OR were also utilized to increase the relevance of search results. Despite differences in the controlled vocabulary terms between databases, the same search strategy was utilized in each search. Broad searches were narrowed using keywords and Boolean operators to yield more applicable search results.

Collection Period, Inclusion, and Exclusion Criteria

The collection period of this review was between September 2023 and February 2024. Articles published between 2010 and 2023 were surveyed and analyzed following the establishment of all inclusion and exclusion criteria. Outcome measures of interest included the following chronic diseases: cardiovascular disease, cancer, diabetes, and respiratory diseases (asthma, COPD). This specific grouping of chronic diseases will henceforth be referred to by the general term “chronic diseases.”

Inclusion and Exclusion Criteria

A literature search was conducted utilizing the following inclusion criteria: peer-reviewed cross-sectional, cohort, case-control, prevalence, and qualitative research or reports focused specifically on the barriers to healthcare access or utilization experienced by LGBTQ+ persons and/or LGBTQ+ persons with cardiovascular disease, cancer, diabetes, and/or respiratory diseases; literature written in English and based on LGBTQ+ persons 18 and older living in the United States; and original articles with full text available online or through requested manuscripts. The exclusion criteria were duplicated publications; research published in non-scientific journals; literature focused primarily on HIV/AIDS, mental health, and substance use; and non-original articles such as opinion pieces, editorials, and communication briefs.

Data Extraction

Articles were first screened for title and abstract. Remaining articles were then screened for full text to determine relevance. The resulting literature was managed utilizing the software Zotero (Corporation for Digital Scholarship, 2023). Studies were documented in a digital standardized form that collected information title, authors, journal database, date of publication, study sample, funding source, SEM levels of influence present (individual, interpersonal, organizational, community, policy), chronic disease-specific outcomes, critical findings, and conflicts of interest. This information was exported into a spreadsheet format for simplified management and data extraction.

Quality Assessment

The risk of bias was assessed using tools designated by the Joanna Briggs Institute, depending on the design of the study being evaluated. Cross-sectional, cohort, qualitative, prevalence, and case-control studies were identified through the screening and data extraction processes. Critical appraisal tools were selected based on identified study design (Joanna Briggs Institute [JBI], n.d.). Checklists were completed for each article. A narrative report on quality of studies in aggregate can be found in the results section.

Chapter 4 – Results

Search Results

The database search conducted yielded a total of 564 identified records. After removing 184 duplicate records identified through manual selection, 380 records were screened, and 324 were excluded due to the following reasons: irrelevant to study (n=38), wrong outcome (n=165), wrong study design (n=62), ineligible date of publication (n=16), location of study (n=15), wrong population (n=27), and not in English (n=1). The remaining 56 records were screened for full text, and 45 were excluded due to not meeting inclusion criteria. The remaining 11 records were selected following full text review and moved forward for data extraction (see Appendix E).

Summary of Findings

The 11 selected articles were each focused on chronic diseases within the LGBTQ+ population as a whole or within specific sub-groups of the LGBTQ+ population (see Appendix F). Every selected article was published by a peer-reviewed journal between 2016 and 2022, with five published prior to 2020 and six published following 2020. The majority of selected articles were of a cross-sectional design (n=10), while the remaining was a cohort study (n=1).

Selected articles were required to report on one or more designated chronic diseases. Each article selected reported outcomes of at least one chronic disease, and all but one article reported on more than one chronic disease outcome. Selected articles reported on the following chronic disease outcomes: cardiovascular disease including hypertension, myocardial infarction, angina pectoris, coronary artery disease, and congestive heart failure (n=8), respiratory disease, including asthma, COPD, emphysema, and chronic bronchitis (n=7), diabetes, including pre-diabetes and type 2 diabetes mellitus (n=7), and cancer (n=6). It should be noted that two studies measured each of these outcomes, however, chronic disease was not separated based on specific disease and thus, the article was categorized separately.

There was variation on the demographic characteristics of each study's population of interest. The selected articles had the following populations of interest: lesbian, gay, and bisexual

(LGB) persons aged 18 and older (n=4), LGB persons aged 50 and older (n=2), LGBT persons aged 18 and older (n=2), LGBT persons aged 50 and older (n=1), transgender, non-binary (TGNB), and gender non-conforming (GNC) persons aged 18 and older (n=1). Of the selected studies, 10 include populations consisting of individuals from across the United States, while the remaining two articles consisted of a population from specific states within the United States. Additional variation occurred in the way LGBTQ+ population data was reported. Some studies reported sexual or gender identity-stratified data for LGBTQ+ populations by each individual sexual and/or gender identity (n=9), while others reported LGBTQ+ grouped all respondents together into a SGM groups (n=2).

Level of Influence: Intrapersonal/Individual

All eleven of the articles discussed intrapersonal/individual factors contributing to health access and utilization in LGBTQ+ adults with chronic disease.

Socioeconomic Status

Socioeconomic status and its role in disease burden, health access, and health service utilization was explored in seven articles included in this literature review. In the Fredriksen-Goldsen et al., (2017) study examining the key health indicators in sexual minority persons over 50, it was found that sexual minority older women had higher household incomes, education levels, and employment rates compared to heterosexual older women. In the same study, sexual minority men were found to have higher education levels than heterosexual men, but no difference was seen in income or employment rates. Pharr (2021) also examined the health of sexual minorities aged 50 and over. In this research, it was found that transgender women were least likely to have a college degree or an annual income of $75,000 or more.

Pinnananeni et al., (2022) examined disparities in physical health among adults 18 and older and found that, compared to non-SGM persons, SGM persons surveyed were more likely to have a lower income than a higher income and were more likely to be out of work. This was reaffirmed in Fredriksen-Goldsen et al., (2023), where it was found that sexual minority women were more likely than straight women and men, respectively, to be at or below 200% of the federal poverty guidelines. This study also found that sexual minority women were more likely to have lower education levels, but higher employment rates than non-sexual minority women. While sexual minority men were found to have lower employment rates than heterosexual men, no difference in education status was noted (Fredriksen-Goldsen et al., 2023).

Health Insurance Status

Insurance status was most cited as a contributor to chronic disease burden in LGBTQ+ persons. Older sexual minority women were found to be more likely than older heterosexual women to hold insurance coverage, and no difference was noted in having a usual source of care amongst persons in either sexual orientation group (Fredriksen-Goldsen et al., 2017). Dai & Meyer (2019) found that men aged 55 to 64 were less likely than heterosexual men to be uninsured. Fredriksen-Goldsen et al. (2022) found that sexual minority persons 18 and older were more likely than their heterosexual counterparts to have health insurance. Trinh et al., (2017) and Pinnamaneni et al., (2022), conversely found no difference in health insurance status among sexual minority women. Fredriksen-Goldsen et al. (2017) found no difference between factors impacting access to care amongst older men of any sexual orientation, while Trinh et al. (2017) noted that black sexual minority men were more likely to be uninsured compared to black heterosexual men.

Preventative Care

Between LGBTQ+ subgroups, Pharr (2021) found significant differences between age 50+ LGBT persons and age 50+ non-binary persons having a designated medical provider and having had a preventative health visit within the last two years. This was further reaffirmed through Qureshi et al. (2017), which found that 80% of their LGBTQ+ respondents (n=347) did not seek regular healthcare. Underutilization of health services by SGM persons compared to non-SGM persons was further supported in Pinnamaneni et al., (2022). Trinh et al. (2017) further supported this idea, reporting that white sexual minority women were less likely to have a usual place of care compared to white heterosexual women.

Fredriksen-Goldsen et al., (2017), however, found that older men and women were more likely than their heterosexual counterparts to have obtained preventative care services in the year prior to the survey. Fredriksen-Goldsen et al. (2023), found that sexual minority women did not differ in their utilization of preventative health services compared to heterosexual women despite sexual minority women being less likely to have a health care provider. Sexual minority men, however, were found to be more likely than their heterosexual counterparts to have utilized preventative health services and to have a regular healthcare provider (Fredriksen-Goldsen, 2022).

Fear of Discrimination

Qureshi et al., (2017) reported underutilization of health services by LGBTQ+ persons because of an individual's fear of being mistreated due to disclosure of their sexuality to their healthcare provider. Though this theme was echoed in the discussion sections of nearly all the selected articles, it was only explicitly measured in the previously mentioned study.

Level of Influence: Interpersonal/Relationship

Three articles discussed interpersonal/relationship factors contributing to healthcare access and utilization in LGBTQ+ adults with chronic disease.

Patient-Provider Relationships

Pinnamaneni et al. (2022) found no difference between SGM and non-SGM persons satisfaction with the quality of care received. Fish et al. (2021), however, found that gay and lesbian respondents reported significantly lower satisfaction with their most recent health care visit compared to heterosexual respondents. Sexual minority participants also reported significantly lower proportions of always receiving fair treatment due to their sexual identities compared to heterosexual participants (Fish et al., 2021).

Level of Influence: Organizational/Institutional

Eight of the articles discussed organizational/institutional factors contributing to healthcare access and utilization in LGBTQ+ adults with chronic disease.

Health Cost

Sexual minority persons reported less access to care, testing services, and prescription drugs due to cost than their heterosexual counterparts (Fish et al., 2021). Cost was also a notable factor in health service access (Fish et al., 2021; Fredriksen-Goldsen et al., 2023; Pinnamaneni et al., 2022; Trinh et al., 2017). Fredriksen-Goldsen et al. (2023), found that sexual minority persons of all genders were more likely than their heterosexual counterparts to experience financial barriers to accessing health services. Similarly, Trinh et al. (2017) found that white sexual minority men were 42% more likely than white heterosexual men to delay healthcare due to cost. Gonzales et al. (2016) reported that bisexual men and women were more likely to be uninsured compared to other sexual minority subgroups of the same sex. Gay, lesbian, and bisexual men and women were also more likely to have unmet medical needs due to cost compared to heterosexual people of the same sex (Gonzales et al., 2016). In Qureshi et al. (2017), 63% of respondents stated that they considered their lack of financial resources as a barrier to accessing health services.

Pinnamaneni et al. (2022) looked at the impact of cost on healthcare utilization within the context of the COVID-19 pandemic. They found that before the COVID-19 pandemic, those in the SGM group had 29% higher odds than the non-SGM group to not seek medical care due to cost. During the COVID-19 pandemic, these odds increased to 42% (Pinnamaneni et al., 2022).

Level of Influence: Community

Three articles discussed community factors contributing to healthcare access and utilization in LGBTQ+ adults with chronic disease.

Provider Competency

Qureshi et al., (2017) found that 53% of respondents (n=233) agreed that “lack of health professionals who are adequately trained and competent to deliver healthcare to LGBT people” was a barrier to seeking health services (Qureshi et al., 2017). It was also noted that LGBTQ+ respondents had experienced discrimination from healthcare providers who refused to provide care based on disagreement with sexual or gender identity, ultimately causing an additional barrier to seek care (Qureshi et al., 2017). Qureshi et al. (2017) also reported that 71% of transgender respondents believed that there was a need for adequate training in healthcare delivery to transgender persons. Pinnamaneni et el. (2022), however, noted no difference between SGM and non-SGM groups’ satisfaction with the medical care received.

Social Stigma

Stigmatization in care was a commonly occurring theme in the selected literature, and that this issue was heightened in those who did not identify as white. Qureshi et al. (2017) found that 41% (n=87) of white respondents and 47% (n=30) of black respondents agreed or strongly agreed with the statement that “doctors or other healthcare workers who refuse to provide services to LGBT people” was a contributing factor to their underutilization of health services (Qureshi et al., 2017). Fear of community repercussions was also noted as a perceived barrier to care amongst 90% (n=17) of Asian respondents, 59% (n=135) of white respondents, and 71% (n=51) of black respondents (Qureshi et al., 2017). Qureshi et al. (2017) also reported that 11% of respondents did not disclose their sexual orientation or true gender identity to their healthcare provider due to discomfort and fear of stigmatization.

Level of Influence: Public Policy

Eight of the articles posed discussions addressing LGBTQ+ chronic disease disparities from the public policy level of the social-ecological model.

Health Cost

See “Level of Influence: Organizational/Institutional” for additional information.

Medicare Status

Hughes et al. (2021) noted that, among insured individuals, 11% of transgender persons were enrolled in Medicare compared to the 9% of cisgender enrollees.

Medical Discrimination

Qureshi et al. (2017) reported 12% of respondents did not disclose their gender or sexual identity to their healthcare provider due to fear of being discriminated against. Out of all respondents, 54% reported feeling fearful that medical personnel will treat an LGBT individual differently if they find out their identity. It was also reported that half of transgender respondents had been refused services by health providers and other healthcare personnel at some point in their lives (Qureshi et al., 2017). This discrimination was found to be further compounded by race, with 47% of Black respondents reporting that doctors refusing to provide services to LGBT people was a barrier to their own access to care (Qureshi et al, 2017).

Quality Assessment

All included literature underwent quality assessment protocols dependent on the study's design (see Appendix G). All studies were determined to be appropriate for inclusion based on steps outlined by the Johanna Briggs Institute (Joanna Briggs Institute [JBI], n.d.). Ten of the eleven studies clearly defined study inclusion criteria and participant characteristics. Objective, standard measurement criteria as well as appropriate statistical analysis appeared to be used for in all studies. Seven of the eleven selected articles identified confounding factors and then discussed strategies for their management. Only one of the studies included information surrounding exposure measures as the remaining articles did not have a defined exposure to measure.

Chapter 5 – Discussion

Summary

This literature review aimed to answer the following question: "what are the barriers to healthcare access and utilization that contribute to high rates of chronic disease in LGBTQ+ adults and how can they be classified with the SEM?" A database search was conducted using keywords, database-specific controlled vocabulary, and Boolean operators. This review spans articles published between 2010 and 2023 and focuses on LGBTQ+ populations within the United States.

After screening an initial 564 articles, 11 articles were ultimately identified for inclusion in this literature review. Data extraction was conducted and managed using Google Forms and

Google Sheets, respectively. Following review of the selected literature, community-level contributors were found to be the most cited factors related to LGBTQ+ healthcare access and utilization. Intrapersonal influences such as health behaviors and service utilization were also highly cited in the literature examined. There was a notable lack of examples within the interpersonal level of influence.

Gaps in Evidence

SOGI Data Collection

The lack of standardization in collection protocols for sexual orientation and gender identity (SOGI) data is a significant contributor to the lack of knowledge about the factors contributing to the health status of LGBTQ+ persons. Insufficient and incomplete data collection practices limit the understanding of the prevalence and specific health needs of LGBTQ+ persons with chronic disease. When SOGI data combines the outcomes of all LGBTQ+ sub-groups, the individual health needs of each group are being overlooked. Without individualized data, the health status of LGBTQ+ individuals are oversimplified, ultimately impacting future interventions and research efforts.

Exclusion of Transgender and Gender Non-Conforming Persons

Of the eleven articles selected for this review, only four explicitly discussed the health and health needs of transgender and gender non-conforming persons. Throughout the article selection process, a large portion of literature concerning transgender and gender non-conforming persons focused on HIV/AIDS, hepatitis, or homelessness. While all important areas of health research, more work is needed to better understand the chronic health needs of gender minority persons, as well as the factors that contribute to inadequate access to and utilization of health services. Chronic disease disproportionately impacts this population, and without proper understanding of the barriers that contribute to this disparity, it can be expected that all health concerns will continue to be neglected by research, policy, and programming (Pharr, 2021).

Transgender and gender non-conforming persons have needs that differ from those of other LGBTQ+ community subgroups, and it is vital that adequate steps be taken to better understand the needs and challenges of this community. Continuing to conduct research on SGM persons, without considering the specific needs of subgroup members is ineffective and inaccurate.

Intersectionality of Identities

For members of the LGBTQ+ community, access and utilization of healthcare services are often made more difficult by unique challenges, including discrimination, stigma, and inadequate understanding of their specific healthcare needs. Considering the impact of the intersectionality of identities on LGBTQ+ persons of different racial and ethnic backgrounds is vital to adequately address the barriers limiting access to and utilization of health services.

Persons of different sexual identities and persons of different racial identities experience discrimination, bias, and stigmatization at greater rates than heterosexual, cis-gender, white persons (Trinh et al., 2017). It is shortsighted to not consider the amplification of inequities in healthcare access and health service utilization that come with intersectional identities. By failing to identify differences in outcomes experienced by non-white LGBTQ+ persons, their experiences and needs are being invalidated. Inclusive data collection contributes to creating an affirming healthcare environment that is adequately suited to the unique needs of all persons.

Implications and Recommendations

Future work is needed to better understand the health status and needs of LGBTQ+ persons. Currently, significant research focus is being placed on intrapersonal-level influences on health service utilization and access for LGBTQ+ persons with chronic disease. Every selected article discussed intrapersonal-level factors contributing to healthcare access and health service utilization among LGBTQ+ persons with chronic disease in some capacity. Similar attention is paid to organization and policy-level contributors. This information serves as a strong basis for guiding future policy, programming, and research aimed at addressing higher-level contributors to the barriers experienced by this population.

Preventative Care Services

LGBTQ+ utilization of preventative care services appears to vary between studies as well as subgroups of the community. Most selected studies identified lower preventative care utilization for LGBTQ+ persons across all ages, genders, and identities. Utilization of preventative care services such as regular checkups, pap-smears, and colon cancer screenings, is a crucial component of chronic disease prevention and management (CDC, 2023c). The regular utilization of health services can also be used as an opportunity for providers to strengthen the patient-provider relationship.

Increased utilization of preventative care services, however, is thought to be strongly dependent on an individual’s insurance status as well as their comfort with the medical system (Lines et al., 2014). Programs such as the Affordable Care Act and Medicaid are offered to expand access to health insurance and minimize lapses in coverage and have proven successful in reducing the number of uninsured persons in the US (Tolbert et al., 2023). Further expanding access to these programs can help to address the insurance gap experienced by LGBTQ+ persons. Increased levels of insurance can be expected to increase utilization of health services by LGBTQ+ persons, provided that this population feels safe in the healthcare environment in which they are being seen (Lines et al., 2014).

Medical Mistrust

The historical and ongoing ostracization of non-heterosexual behavior and how healthcare professionals approach LGBTQ+ persons have fundamentally shaped how SGM persons view the systems they interact with and exist within (Institute of Medicine, 2011). Mistrust experienced by the LGBTQ+ community has roots in centuries of discrimination, stigmatization, and marginalization and has been fueled by a multitude of factors, including social, legal, religious, and medical prejudices. Notable examples include the Lavender Scare of the 1950s and 1960s when the U.S. government targeted and purged thousands of gay and lesbian employees, citing concerns about national security, as well as the AIDS Epidemic of the 1980s, which disproportionately impacted LGBTQ+ community members and saw government inaction and medical stigmatization (Adkins, 2016; Institute of Medicine, 2011).

Within the LGBTQ+ community itself, mistrust has arisen due to issues like the exclusion of transgender individuals from early gay rights movements, which highlighted the need for greater unity and inclusion (Library of Congress, n.d.). Events such as these contribute to a legacy of skepticism towards institutions with the ability to support marginalized communities. Systemic mistrust can manifest in various ways, including hesitancy to access healthcare services due to fear of discrimination, reluctance to disclose one's sexual orientation or gender identity to employers, educational institutions, or healthcare providers, and skepticism towards government policies and institutions that have historically failed to protect LGBTQ+ rights.

A strong patient-provider relationship that fosters mutual trust is an important component of promoting access and utilization of health services by LGBTQ+ persons. A 2020 Center for American Progress survey reported that 37% of LGBTQ+ respondents had experienced discrimination from a healthcare provider in the last year, and that 59% of transgender respondents had experienced medical discrimination in the last year (Mahowald et al., 2021). Negative experiences such as these serve as a deterrent for healthcare access and a significant barrier to health service utilization by the LGBTQ+ population.

Legislative Protections for LGBTQ+ Persons

A recurring theme throughout the selected literature is the impact of stigmatization and discrimination have on healthcare utilization and access amongst LGBTQ+ persons with chronic disease. Lack of comprehensive non-discrimination policies hinders access to healthcare for LGBTQ+ individuals by limiting access to health services, penalizing healthcare providers for rendering care to LGBTQ+ persons and limiting healthcare funding for LGBTQ+ services (Mirza & Rooney, 2018; Peele, 2023). Policies such as these are harmful and further perpetuate stigmatization of LGBTQ+ persons.

Development and implementation of anti-discrimination policies in healthcare are an essential step in reducing the fear LGBTQ+ persons may have surrounding utilization of health services. Protections of this nature are in place for race and sex, and inclusion of sexual and gender identity in such polices will allow for greater safety for LGBTQ+ persons in healthcare settings. Passing legislation and supporting policies that protect against discriminatory actions by provider based on sexual orientation and gender identity can protect the health and wellbeing of LGBTQ+ persons while also fostering a more inclusive environment for vulnerable patients.

Enhancing Data Collection Procedures

Future research, policy, and programming is dependent on the standardization of SOGI data collection in national and state-level surveys. While collection of SOGI data is considered best practice for federal agencies, it is not currently a requirement for national surveys that are typically conducted at a state-level (The Office of the Chief Statistician of the United States, n.d.). Robust data collection policies that include SOGI data lead to more informed decision making at the local, state, and federal level, allowing for more appropriate intervention planning. Collecting SOGI data can also be impactful for medical practices as it provides valuable insight into patient demographics and can help to guide patient care.

Strengths and Limitations

Strengths of this study include the utilization of all peer-reviewed literature and assessment on the current state of research surrounding barriers to healthcare access and health service utilization by the LGBTQ+ population. This study also categorizes available research into specific social-ecological model levels of influence, providing a straightforward view of the content covered in current research. This study also pays particular attention to the impact of intersecting identities and their influences on healthcare access and healthcare utilization.

This study was limited by a single person conducting this review. While utilizing a single researcher allows for consistency in the evaluation of literature, there is potential for bias due to the singular viewpoint of a researcher. Collaborative approaches to literature reviews allow researchers to limit potential biases while also covering a greater amount of literature with more ease and enhancing the comprehensiveness of the review.

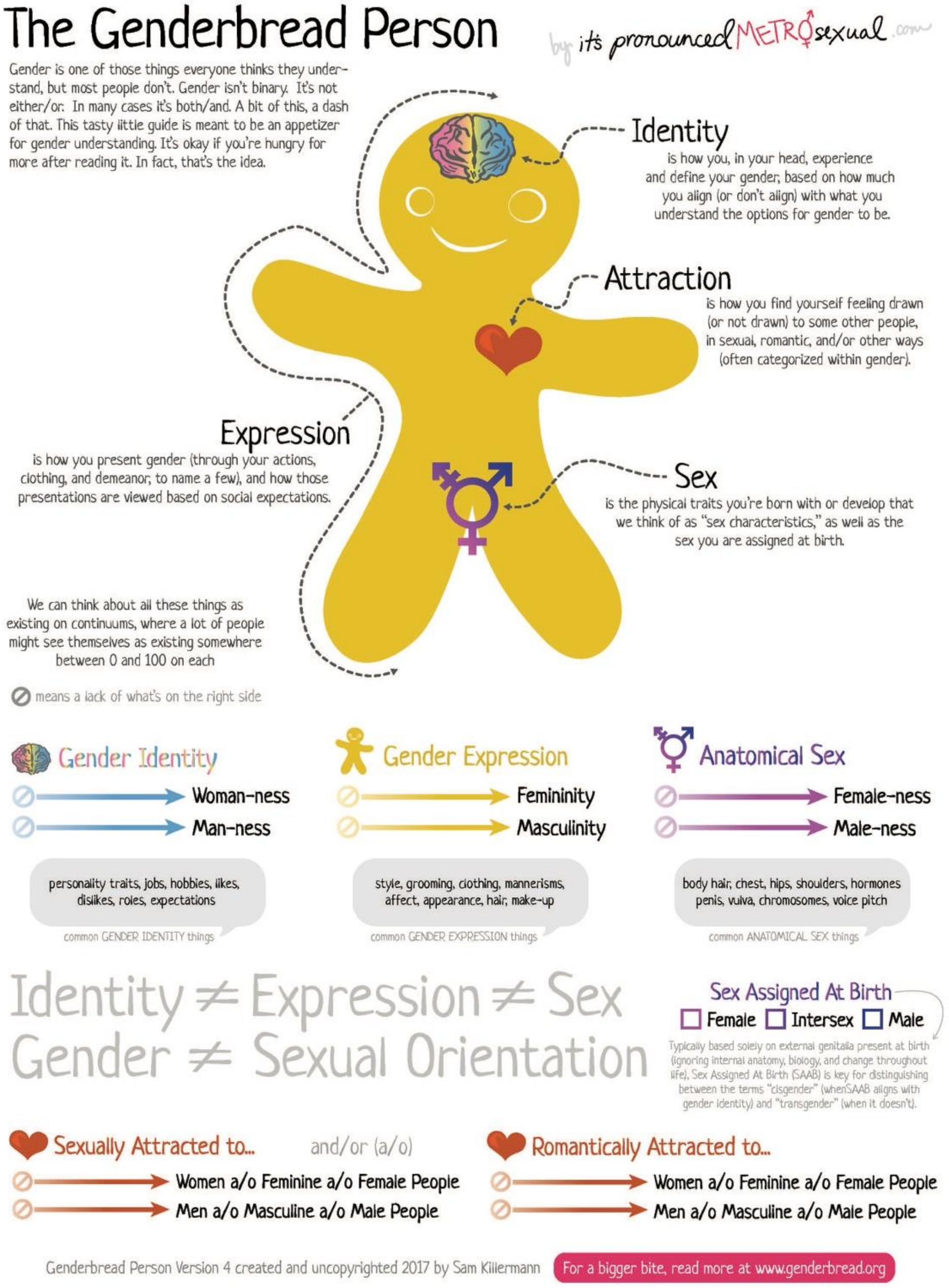
This review was also limited by the heterogeneity of studies and the specificity of the literature review itself. To the researcher’s knowledge, this is the first study of its kind. Currently available research appears to use similar data to report on prevalence and participant demographics. This similarity limits the conclusions that can be drawn from the entirety of literature assessed. Lack of variation in data sources led to difficulties in gleaning new conclusions from different pieces of literature.

Conclusions

This review provided insight into barriers to care and healthcare utilization for LGBTQ+ adults with chronic disease and uncovered a knowledge gap in research surrounding intrapersonal factors contributing to high levels of chronic disease. Currently available research focuses primarily on prevalence data but gives an incomplete view of LGBTQ+ health due to the frequent practice of reporting sub-group data as one single value. Future research needs to place greater attention on the interpersonal and community levels of the SEM to promote more robust solutions to healthcare access and utilization for LGBTQ+ persons. The interconnectedness of this issue highlights the need to design comprehensive intervention, programming, and policy to support the health and safety of LGBTQ+ persons in healthcare spaces and beyond.

Appendix A

Key Terms and Working Definitions



The Genderbread Person

by it's pronounced METROsexual .com

Gender is one of those things everyone thinks they understand, but most people don't. Gender isn't binary. It's not either/or. In many cases it's both/and. A bit of this, a dash of that. This tasty little guide is meant to be an appetizer for gender understanding. It's okay if you're hungry for more after reading it. In fact, that's the idea.

Identity

is how you, in your head, experience and define your gender, based on how much you align (or don't align) with what you understand the options for gender to be.

Attraction

is how you find yourself feeling drawn (or not drawn) to some other people, in sexual, romantic, and/or other ways (often categorized within gender).

Expression

is how you present gender (through your actions, clothing, and demeanor, to name a few), and how those presentations are viewed based on social expectations.

Sex

is the physical traits you're born with or develop that we think of as "sex characteristics," as well as the sex you are assigned at birth.

We can think about all these things as existing on continuums, where a lot of people might see themselves as existing somewhere between 0 and 100 on each

⊘ means a lack of what's on the right side

Gender Identity

⊘ → Woman-ness

⊘ → Man-ness

personality traits, jobs, hobbies, likes, dislikes, roles, expectations

common GENDER IDENTITY things

Gender Expression

⊘ → Femininity

⊘ → Masculinity

style, grooming, clothing, mannerisms, affect, appearance, hair, make-up

common GENDER EXPRESSION things

Anatomical Sex

⊘ → Female-ness

⊘ → Male-ness

body hair, chest, hips, shoulders, hormones penis, vulva, chromosomes, voice pitch

common ANATOMICAL SEX things

Identity ≠ Expression ≠ Sex
Gender ≠ Sexual Orientation

Sex Assigned At Birth

☐ Female ☐ Intersex ☐ Male

Typically based solely on external genitalia present at birth (ignoring internal anatomy, biology, and change throughout life), Sex Assigned At Birth (SAAB) is key for distinguishing between the terms "cisgender" (whenSAAB aligns with gender identity) and "transgender" (when it doesn't).

Sexually Attracted to... and/or (a/o)

⊘ → Women a/o Feminine a/o Female People

⊘ → Men a/o Masculine a/o Male People

Romantically Attracted to...

⊘ → Women a/o Feminine a/o Female People

⊘ → Men a/o Masculine a/o Male People

Genderbread Person Version 4 created and uncopyrighted 2017 by Sam Killermann

For a bigger bite, read more at www.genderbread.org

Appendix B

Age- and survey year-adjust percentages of health status in those 18 years and older in the United States by biological sex

Table 1B: Age- and survey year-adjusted percentages of health status among men aged 18 and over, by sexual identity: United States, 2013-2018

	Gay	Bisexual	Heterosexual
Respiratory - Asthma	19.3*	23.1*	19.6
Cancer	12.1*	7.9*	8.1
Diabetes	8.6	10.9	10
CVD - Heart Disease	6.3	9.1*	5.7
CVD - Hypertension	35.1*	33.5	31.8

* Significantly different from heterosexual ($p < 0.05$)
** Significantly different from bisexual ($p < 0.05$)
Source: National Center for Health Statistics, National Health Interview Survey, 2013-2018
Adapted from Heslin, K., & Alfier, J. (2022). *Sexual Orientation Differences in Access to Care and Health Status, Behaviors, and Beliefs: Findings from the National Health and Nutrition Examination Survey, National Survey of Family Growth, and National Health Interview Survey*. National Center for Health Statistics (U.S.).

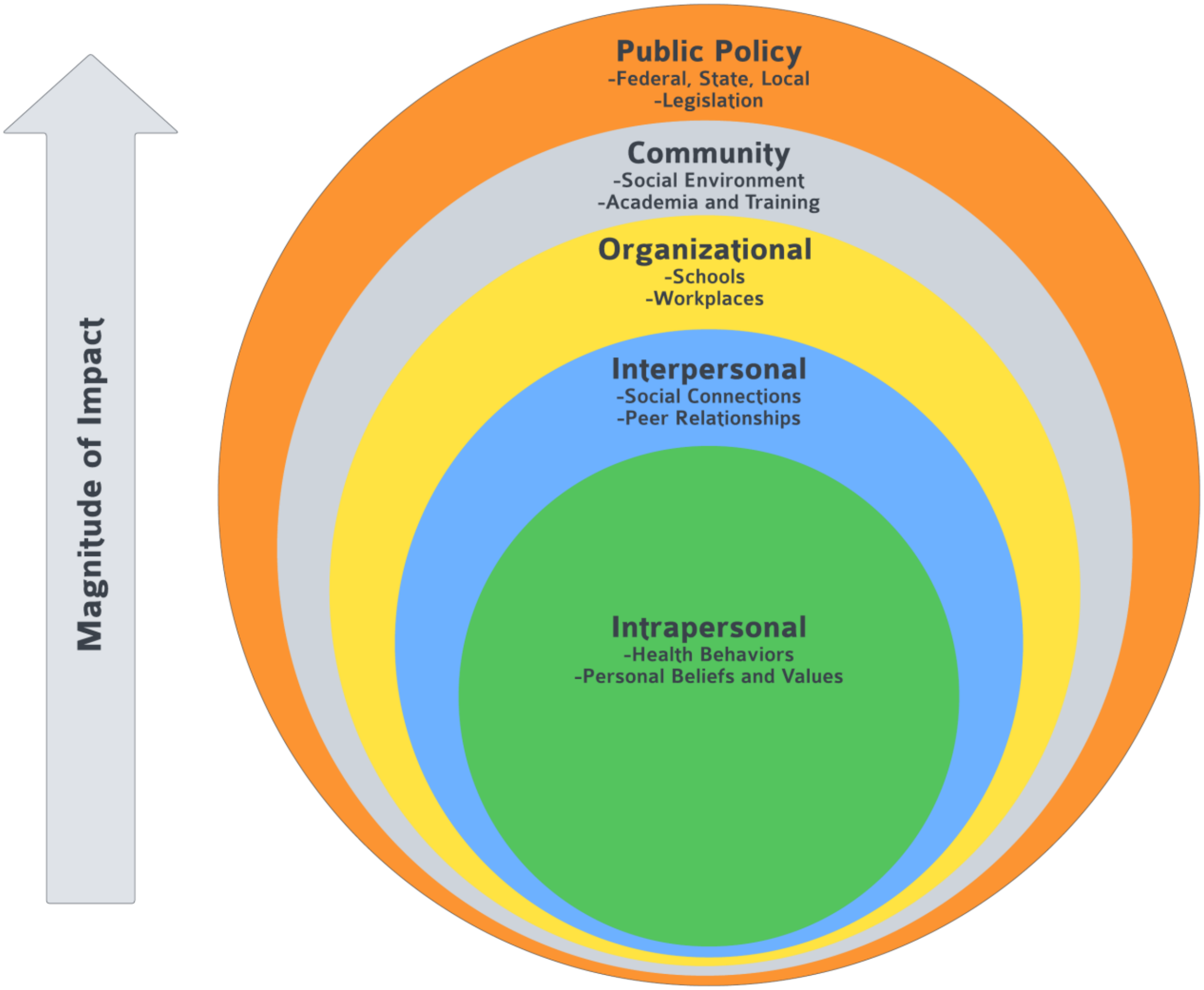
Table 2B: Age- and survey year-adjusted percentages of health status among women aged 18 and over, by sexual identity: United States, 2013-2018

	Gay	Bisexual	Heterosexual
Respiratory - Asthma	21.2*	23.6*	14.4
Cancer	11.3**	14.9	9.7
Diabetes	11.2**	12.9*	9
CVD - Heart Disease	3.4	4.4	3.3
CVD - Hypertension	29.4**	37*	29.9

* Significantly different from heterosexual ($p < 0.05$)
** Significantly different from bisexual ($p < 0.05$)
Source: National Center for Health Statistics, National Health Interview Survey, 2013-2018
Adapted from Heslin, K., & Alfier, J. (2022). *Sexual Orientation Differences in Access to Care and Health Status, Behaviors, and Beliefs: Findings from the National Health and Nutrition Examination Survey, National Survey of Family Growth, and National Health Interview Survey*. National Center for Health Statistics (U.S.).

Appendix C

The Five Levels of the Social-Ecological Model



Adapted from McLeroy, K. R., Steckler, A. and Bibeau, D. (Eds.) (1988). The Social Ecology of Health Promotion Interventions. *Health Education Quarterly*, 15(4):351-377.

Appendix D

Database Specific Search Strategies

PubMed – NCBI:

The following Medical Subject Headings (MeSH) terms were used in the search: ‘Chronic Disease’, ‘Sexual and Gender Minorities’, ‘United States’, ‘Healthcare Disparities’, ‘Healthcare Quality, Access, and Evaluation’, and ‘Health Services Accessibility’.

Search 1:

("Chronic Disease"[Mesh] OR “chronic disease*” OR asthma OR obesity OR hypertension OR high blood pressure OR diabetes OR cancer) AND ("Sexual and Gender Minorities"[Mesh] OR LGBT* OR gay OR lesbian OR bisexual OR transgender OR “sexual minorit*”) AND ("Healthcare Disparities"[Mesh] OR "Health Care Quality, Access, and Evaluation"[Mesh] OR Barrier* OR “barrier* to care”) AND ("Health Services Accessibility"[Mesh] OR “healthcare access” OR “healthcare utilization”)

Search 2:

("Chronic Disease"[Mesh] OR “chronic disease*” OR asthma OR obesity OR hypertension OR high blood pressure OR diabetes OR cancer) AND ("Sexual and Gender Minorities"[Mesh] OR LGBT* OR gay OR lesbian OR bisexual OR transgender OR “sexual minorit*”) AND ("United States"[Mesh] OR America) AND ("Healthcare Disparities"[Mesh] OR "Health Care Quality, Access, and Evaluation"[Mesh] OR Barrier* OR “barrier* to care”) AND ("Health Services Accessibility"[Mesh] OR “healthcare access” OR “healthcare utilization”)

Search 3:

("Chronic Disease"[Mesh] OR “chronic disease*”) AND ("Sexual and Gender Minorities"[Mesh] OR LGBT* OR gay OR lesbian OR bisexual OR transgender OR “sexual minorit*”) AND ("United States"[Mesh] OR America) AND ("Healthcare Disparities"[Mesh]

OR "Health Care Quality, Access, and Evaluation"[Mesh] OR Barrier* OR “barrier* to care”) AND ("Health Services Accessibility"[Mesh] OR “healthcare access” OR “healthcare utilization”)

Excerpta Medica Database:

The following Embase Subject Headings were used in the search: ‘chronic disease’, ‘LGBTQIA+ people’, ‘sexual and gender minority’ ‘United States’, ‘health care disparity’, ‘health care access’, and ‘health care utilization’

Search 1:

('chronic disease'/exp OR “chronic disease*”) AND ('LGBTQIA+ people'/exp OR 'sexual and gender minority'/exp OR LGBT* OR gay OR lesbian OR bisexual OR transgender OR “sexual minorit*”) AND ('United States'/exp OR America) AND ('health care disparity'/exp OR Barrier* OR “barrier* to care”) AND ('health care access'/exp OR 'health care utilization'/exp OR “healthcare access” OR “healthcare utilization”)

Search 2:

('chronic disease'/exp OR 'chronic disease*') AND ('lgbtqia+ people'/exp OR 'sexual and gender minority'/exp OR lgbt* OR gay OR lesbian OR bisexual OR transgender OR 'sexual minorit*') AND ('united states'/exp OR america) AND ('health care access'/exp OR 'health care utilization'/exp OR 'healthcare access' OR 'healthcare utilization')

Search 3:

('chronic disease'/exp OR 'chronic disease*') AND ('lgbtqia+ people'/exp OR 'sexual and gender minority'/exp OR lgbt* OR gay OR lesbian OR bisexual OR transgender OR 'sexual minorit*')

AND ('united states'/exp OR america)

The Cumulative Index of Nursing and Allied Health Literature:

The following CINAHL Headings were used in the search: ‘Chronic Disease’, ‘LGBTQ+ Persons’, ‘United States’, and ‘Health Services Accessibility’.

Search 1:

(MH "Chronic Disease+" OR “chronic disease*”) AND (MH "LGBTQ+ Persons+" OR LGBT* OR gay OR lesbian OR bisexual OR transgender OR “sexual minorit*”) AND (MH "United States+" OR America) AND (MH "Health Services Accessibility+" OR Barrier* OR “barrier* to care”)

Search 2:

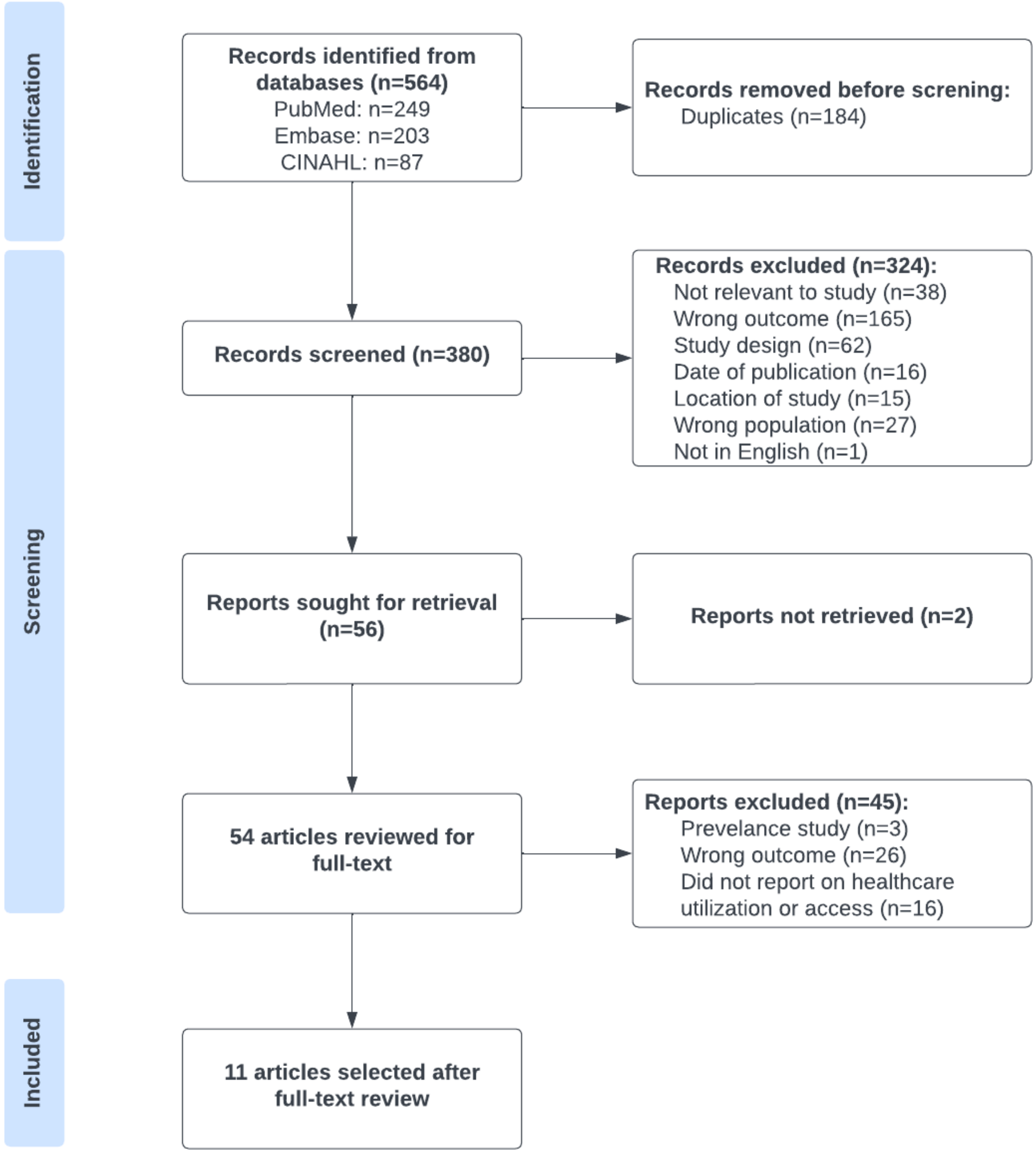
(MH "Chronic Disease+" OR “chronic disease*” OR "chronic condition*") AND (MH "LGBTQ+ Persons+" OR LGBT* OR gay OR lesbian OR bisexual OR transgender OR “sexual minorit*”) AND (MH "United States+" OR America) AND (MH "Health Services Accessibility+" OR Barrier* OR “barrier* to care”)

Table 1D

	Keywords	PubMed	Embase	CINAHL
Chronic disease	“chronic disease*”, asthma, obesity, hypertension, high blood pressure, diabetes	"Chronic Disease"[Mesh]	'chronic disease'/exp	(MH "Chronic Disease+")
Queer	LGBT*, gay, lesbian, bisexual, transgender, “sexual minorit*”	"Sexual and Gender Minorities"[Mesh]	'LGBTQIA+ people'/exp OR 'sexual and gender minority'/exp	(MH "LGBTQ+ Persons+")
Adult	Adult*, “older adult*”	"Adult"[Mesh]	'adult'/exp	(MH "Adult+")
United States	US, America	"United States"[Mesh]	'United States'/exp	(MH "United States+")
Barriers	Barrier*, “barrier* to care”	"Healthcare Disparities"[Mesh], "Health Care Quality, Access, and Evaluation"[Mesh]	'health care disparity'/exp	(MH "Health Services Accessibility+")
Health access and utilization	“healthcare access”, “healthcare utilization”	"Health Services Accessibility"[Mesh]	'health care access'/exp, 'health care utilization'/exp	

Appendix E

Screening Protocol



Appendix F

Summary of Findings

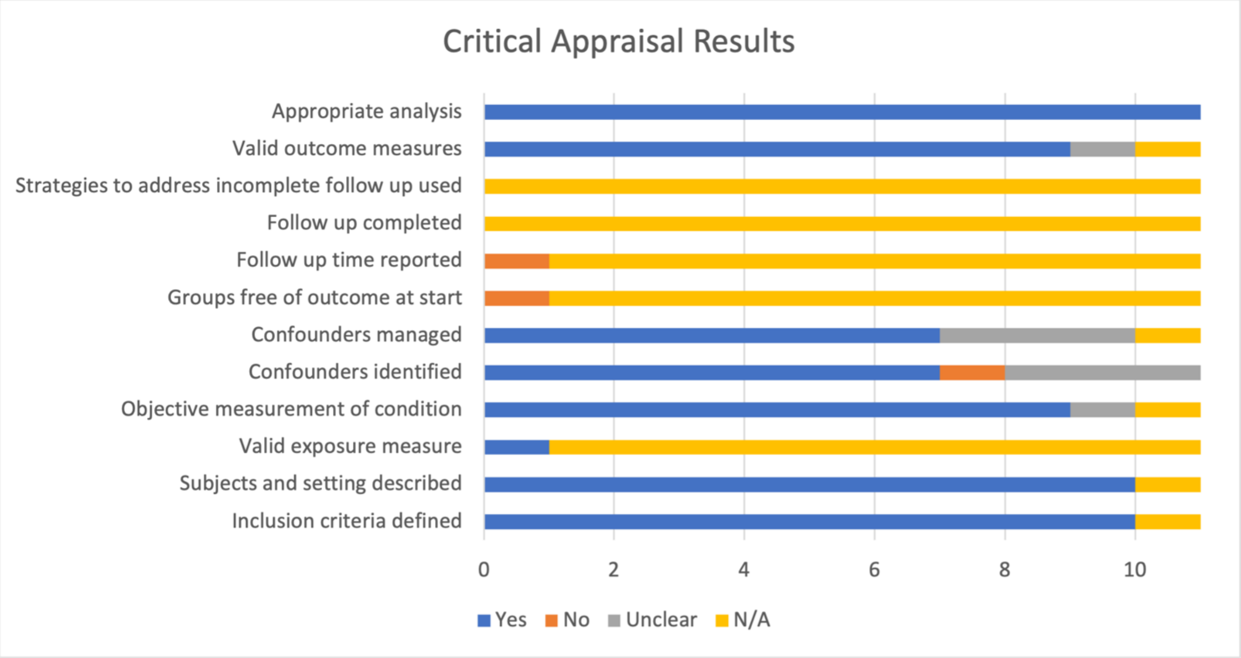
Title	Author(s)	Date	Study Design	Levels of Influence	Funding Source	Outcomes Measured
Sexual Identity Differences in Access to and Satisfaction With Health Care: Findings From Nationally Representative Data	Jessica N. Fish∗, Rodman E. Turpin, Natasha D. Williams, and Bradley O. Boekeloo	1/13/2021	Cross-sectional	IND, REL, ORG, COM, PP	CDC, National Institute of Child Health and Human Development	Sexual identity, sex, chronic health conditions, health care access, health care satisfaction
Chronic Health Conditions and Key Health Indicators Among Lesbian, Gay, and Bisexual Older US Adults, 2013–2014	Karen I. Fredriksen-Goldsen, PhD, Hyun-Jun Kim, PhD, Chengshi Shui, PhD, and Amanda E.B. Bryan, PhD	1/1/2017	Cross-sectional	IND	National Institute on Aging	health behaviors, health care access, preventative health care utilization, chronic condition status
Disparities in chronic physical health conditions in sexual and gender minority people using the United States Behavioral Risk Factor Surveillance System	Manasvi Pinnamaneni, Lauren Paynea, Jordan Jackson, Chin-I Cheng, M. Ariel Cascio	1/1/2022	Cross-sectional	IND, REL, ORG, PP	-	chronic health conditions, access to healthcare, substance use
Health and healthcare disparities among U.S. women and men at the intersection of sexual orientation and race/ethnicity: a nationally representative cross-sectional study	Mai-Han Trinh, Madina Agénor, S. Bryn Austin, and Chandra L. Jackson	1/1/2017	Cross-sectional	IND, ORG, COM, PP	Intramural Program at the NIH, National Institute of Environmental Health Sciences	BMI, presence of chronic disease, healthcare access and utilization
Health Disparities Among Lesbian, Gay, Bisexual, Transgender, and Nonbinary Adults 50 Years Old and Older in the United States	Jennifer R. Pharr, PhD	1/1/2021	Cross-sectional	IND, ORG, COM, PP	-	health care access, chronic disease status

Health, Economic, and Social Disparities among Lesbian, Gay, Bisexual, and Sexually Diverse Adults: Results from a Population-Based Study	Karen I. Fredriksen-Goldsen, Meghan Romanelli, Hailey H. Jung and Hyun-Jun Kim	11/28/2022	Cross-sectional	IND, ORG, PP	National Institute on Aging of the National Institutes of Health	access to care, engagement in preventative care, chronic conditions, health outcomes
The association of sexual orientation with prostate, breast, and cervical cancer screening and diagnosis	Michael J. Herriges, Ruben Pinkhasov, Keren Lehavot, Oleg Shapiro, Joseph M. Jacob, Thomas Sanford, Nick Liu, Gennady Bratslavsky, Hanan Goldberg	9/9/2022	Cross-sectional	IND	-	health insurance status, health service utilization, cancer screening rates, self-reported cancer prevalence
Privately Insured Transgender People Are At Elevated Risk For Chronic Conditions Compared With Cisgender Counterparts	Landon Hughes, Theresa Shireman, Jaclyn Hughto	9/1/2021	Cohort	IND	-	total morbidity score, presence of chronic disease
Comparison of Health and Health Risk Factors Between Lesbian, Gay, and Bisexual Adults and Heterosexual Adults in the United States	Gilbert Gonzales, PhD, MHA, Julia Przedworski, BS, Carrie Henning-Smith, PhD, MPH, MSW	6/7/2016	Cross-sectional	IND, ORG, PP	-	self-rated health status, reporting of 1 or more of 10 chronic conditions, socioeconomic variables
Health Care Needs and Care Utilization Among Lesbian, Gay, Bisexual, and Transgender Populations in New Jersey	Rubab I. Qureshi, Peijia Zha, Suzanne Kim, Patricia Hindin, Zoon Naqvi, Cheryl Holly, William Dubbs & Wendy Ritch	5/23/2017	Cross-sectional	IND, REL, ORG, COM, PP	-	barriers to care, healthcare utilization
A Population Study of Health Status Among Sexual Minority Older Adults in Select U.S. Geographic Regions	Hongying Dai & Ilan Meyer	1/4/2019	Cross-section	IND, ORG, PP	-	SES status, health insurance status, chronic disease

Abbreviations: IND – intrapersonal or individual, REL – interpersonal or relationship, ORG – organizational or institutional, COM – community, PP – public policy

Appendix G

Results of Quality Assessment in Aggregate



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Application of Public Health Competencies

Public Health Competencies

This literature review will focus on the foundational competency MPHF6: 'Discuss the means by which structural bias, social inequities, and racism undermine health and create challenges to achieving health equity at organizational, community, and societal levels,' and the concentration competencies of HPROMPH2, 'analyze and address contexts and key factors relevant to the implementation of evidence-informed health promotion strategies' and HPROMPH3, 'develop rigorous projects to improve public health outcomes, community wellbeing, and reduce health disparities'

Application

These competencies will be met through the synthesis and compilation of present research focused on the barriers to health care and access that contribute to a disparity in the prevalence of chronic disease in the LGBTQ+ population. The aim of this literature review is to advance understanding of the factors that contribute to chronic disease disparities in the LGBTQ+ population. This work is expected to illuminate LGBTQ+ health inequities and ultimately contribute to the reduction and elimination of the present disparity.

One area of focus in this synthesis is the intersectionality of the queer identity and social, economic, or racial backgrounds and how this intersectionality contributes to the chronic disease burden. Application of the Social Ecological Model in the categorization of factors contributing to this disparity is an essential component of this review and will highlight challenges to achieving health equity. The use of this model will also allow for a synthesis of the contexts that contribute to the implementation of health promotion strategies and interventions at different levels of health influence.