



Examining the Interplay of Psychological Well-Being, Health, and Aging in Older LGBT Adults: A Systematic Review

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Abstract

Introduction Lesbian, gay, bisexual, and transgender (LGBT) individuals face mental health challenges and psychological issues due to societal pressures. Discrimination based on sexual orientation and gender identity continues to affect the well-being of older LGBT adults, despite progress in acceptance and equality. This systematic review examines the health and mental health challenges faced by older LGBT adults.

Methods We conducted a search of four electronic databases to retrieve primary studies published between 2000 and 2022. Fifteen articles were included in the systematic review.

Results Our findings reveal that older LGBT adults face victimization and are often forced to conceal their identity. Differential victimization based on sexual identity leads to severe outcomes, such as stress, post-traumatic stress disorder, and loneliness. Discrimination against older LGBT adults contributes to an unhealthy life, disability, depression, and physical health problems.

Conclusions Tailored interventions, including sensitizing the public and changing perceptions, should address the health challenges and psychological issues faced by older LGBT adults in their lifetime. Discrimination against older LGBT adults must be addressed to ensure they receive the appropriate care and support they require.

Policy Implications This systematic review highlights the need for targeted interventions and policies to support the mental health and well-being of older LGBT adults. Such policies should aim to sensitize society, challenge discrimination, and address the unique challenges faced by older LGBT adults.

Keywords LGBT · Mental health · Discrimination · Aging · Tailored interventions · Social inclusion and exclusion

Introduction

The aging population continues to grow worldwide, and with it comes the need to better understand the factors that contribute to healthy aging, particularly among diverse populations (Jensen et al., 2020; Nolan et al., 2022). The World Health Organization (WHO) defines older adults as individuals aged between 60 and 80 years old who are experiencing physical changes associated with aging. This definition focuses on a specific age range and highlights the natural physiological transformations that occur during this period.

On the other hand, another perspective on older adults emphasizes the broader experience of aging. This viewpoint defines older adults as individuals who are growing older and facing physical challenges that are not typically present in younger age groups. This definition is more inclusive and focuses on the general experience of aging, rather than

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a specific age range, recognizing that the aging process can vary significantly among individuals. Research indicates that OMSM often experience higher rates of depression and suicidal tendencies compared to the general population (Chan, 2023). This disparity in psychological well-being among OMSM can be attributed to factors such as discrimination and stigma related to their sexual orientation (Corpuz, 2023). Addressing discrimination and promoting social equality are crucial steps in improving the psychological well-being of OMSM (Chan et al., 2022).

Both definitions acknowledge the physical challenges associated with aging but approach the classification of older adults differently, either through a specific age range or a broader experiential perspective. Among these populations are older lesbian, gay, bisexual, and transgender (LGBT) adults, who face unique challenges and experiences that can influence their psychological well-being, health, and overall aging process (Yarns et al., 2016; Westwood et al., 2020). Despite recent advances in research on LGBT issues, there remains a need for a more comprehensive understanding of the complex interplay between psychological well-being and health outcomes in this population (Fredriksen et al., 2017). This systematic review aims to explore the impacts of psychological well-being on health and aging among older LGBT adults, shedding light on the specific factors that contribute to their resilience and vulnerability.

Existing research on the aging LGBT population has primarily focused on individual aspects of health, such as mental health, HIV prevention, and chronic diseases (Friedman et al., 2018; Nelson et al., 2023). However, there is a growing recognition that psychological well-being plays a crucial role in shaping health outcomes and aging experiences for older LGBT adults (Baiocco et al., 2022; McKay et al., 2023). Psychological well-being encompasses a range of factors, including self-acceptance, personal growth, purpose in life, positive relations with others, environmental mastery, and autonomy (Matud et al., 2019). By examining the intersection of these factors with the unique experiences of older LGBT individuals, this review seeks to provide a more holistic understanding of the aging process for this population.

By meticulously examining the existing research, we discerned and deliberated the pivotal findings concerning the influence of psychological well-being on health and aging among older LGBT adults. We investigated the connections between psychological well-being and diverse health outcomes, such as mental health, chronic illnesses, and HIV susceptibility, as well as the role of psychological well-being in determining the overall life quality for older LGBT individuals. Moreover, we scrutinized the particular factors that contribute to both resilience and vulnerability within this demographic, encompassing the ramifications of discrimination, trauma, and sexual orientation-related disparities.

Research Question

To address the nuanced challenges faced by a diversely aging global population, this systematic review aims to deeply investigate how psychological well-being influences the health and aging outcomes of older LGBT adults. Given the World Health Organization's and various gerontological perspectives' different definitions of "older adults," this study adopts an expansive approach, considering factors such as self-acceptance, personal growth, purpose in life, positive relations, environmental mastery, and autonomy. This exploration is critical, especially in the face of persistent societal challenges such as discrimination and inadequate healthcare that disproportionately affect older LGBT individuals. By examining the dynamic interactions between these elements of psychological well-being and the specific health vulnerabilities and resiliencies within this group, this review seeks to unearth vital insights that could drive effective policy changes and intervention strategies, ultimately enhancing the overall health and well-being of this often marginalized demographic.

Objectives

This systematic review aims to synthesize existing research on the interrelationships between psychological well-being, health, and aging in older LGBT adults. By comprehensively examining how factors such as self-acceptance, personal growth, purpose in life, positive relationships, environmental mastery, and autonomy impact their health outcomes and aging processes, this study seeks to illuminate the unique needs and challenges faced by this population. The insights gained from this analysis will inform researchers, healthcare providers, social service providers, and policymakers, guiding the development of more precise and effective interventions and policies. The ultimate goal is to enhance the health and well-being of older LGBT adults, ensuring that they receive the support and recognition they need as they navigate the complexities of aging in diverse societal contexts.

Methods

Review Questions

1. What are the unique mental health challenges faced by older LGBT adults as a result of discrimination, stigma, and social isolation?
2. How does differential victimization based on sexual identity impact the physical and psychological well-being of older LGBT adults?

3. What targeted interventions and policies can be implemented to address the health disparities and promote the mental health and well-being of older LGBT adults?

Study Design

This systematic review aimed to comprehensively examine the challenges and impacts of psychological well-being among older LGBT adults. Studies focusing on this population were identified, categorized, and critically evaluated to determine the challenges and psychological impacts faced by older LGBT individuals. The primary objective was to establish the current state of psychological well-being among older LGBT adults by reviewing and analyzing the collected information. Additionally, the review explored the health challenges faced by older LGBT adults.

Search Strategy

The study employed a rigorous search methodology that adhered to the preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines (Cho & Shin, 2022; Muthiah et al., 2024). The electronic databases of MEDLINE, PubMed, Google Scholar, and the Cochrane Library were systematically searched to identify relevant studies investigating the challenges and impacts of psychological well-being among older LGBT adults. To identify additional relevant studies, the reference lists of included studies were also searched. The advanced search feature in the different databases was utilized to conduct a comprehensive exploration of the literature using various keywords and search terms.

The study employed a combination of keywords to search through electronic databases, including sexual orientation/gender terms such as LGBT, lesbian, gay, bisexual, and transgender. Health-related terms such as psychological and well-being were also used, with a focus on mental health. Additionally, the search keywords focused on older LGBT adults and social challenges or support. The use of these keywords aimed to identify relevant studies and publications that explore the health and social challenges faced by older

LGBT adults. After the initial search, duplicate titles were removed, and irrelevant studies were excluded based on the abstract and full-text review. All authors cross-checked the final list of included studies to ensure relevance and quality.

Selection Criteria

We chose to start our literature search from the year 2000 to ensure that our review encompasses the significant shifts in societal, legal, and research landscapes regarding LGBT older adults. The early 2000s marked the beginning of notable legal advancements, increased visibility, and dedicated research efforts, which collectively provided a richer and more comprehensive understanding of the experiences and needs of LGBT older adults (Eskridge, 2002; Herdt & Vries, 2004; Fredriksen-Goldsen, 2010). These developments have been crucial in shaping current perspectives and policies, making this an appropriate starting point for our systematic review.

The sample period begins in the year 2000 to align with the burgeoning research and public awareness regarding LGBT issues, crucial for understanding shifts in psychological well-being, health, and aging in older LGBT adults. This starting point facilitates an analysis of evolving social attitudes and their impacts over the past two decades. The inclusion and exclusion criteria for our systematic review, detailed in Table 1, aim to explore the health challenges and psychological well-being of older LGBT adults. We have chosen the age threshold of 50 years based on developmental theories that categorize fifty as the beginning of late middle adulthood, thereby capturing the onset of unique health challenges that can intensify with age. However, we acknowledge that definitions of “older adulthood” vary, with some studies extending this to 60 or even 65 years. This discrepancy is crucial and merits further discussion in the context of our study’s objectives and the specific vulnerabilities faced by the LGBT population as they age.

Included studies must focus on health challenges specific to LGBT individuals aged 50 and above and be published in English from the year 2000 onwards. We selected the

Table 1 Inclusion and exclusion criteria are employed in searching for studies to include

	Inclusion	Exclusion
Population	Studies involving older LGBT adults aged 50 years and above	Studies that involved LGBT participants with less than 50 years of age. Studies focusing on non-LGBT people
Outcome	The primary research studies should encompass the health challenges and psychological well-being of older LGBT individuals	Other challenges universal challenges such as unemployment and famine
Study details	Studies should be published in English to avoid the necessity of translating scientific works from other languages that could contribute to a different meaning. Articles published between 2000 and 2022	Studies published in a language other than the English language. Newspapers, case reports, dissertations, and other systematic reviews since the focus was primary studies. Studies published before 2000

year 2000 as a starting point because it marks a significant era in the visibility and rights of LGBT individuals, influencing health outcomes and societal attitudes significantly. Research predating this period may not accurately reflect the current realities and advancements in understanding gender and sexual diversity, which have evolved considerably.

Exclusion criteria include studies involving participants younger than 50, non-LGBT individuals, or topics not directly related to the unique challenges faced by the LGBT community, such as universal socioeconomic issues (e.g., unemployment, famine). We also exclude non-English publications, newspapers, case reports, dissertations, and other systematic reviews to ensure a focus on primary, peer-reviewed studies that provide the most relevant and up-to-date data on our research topic.

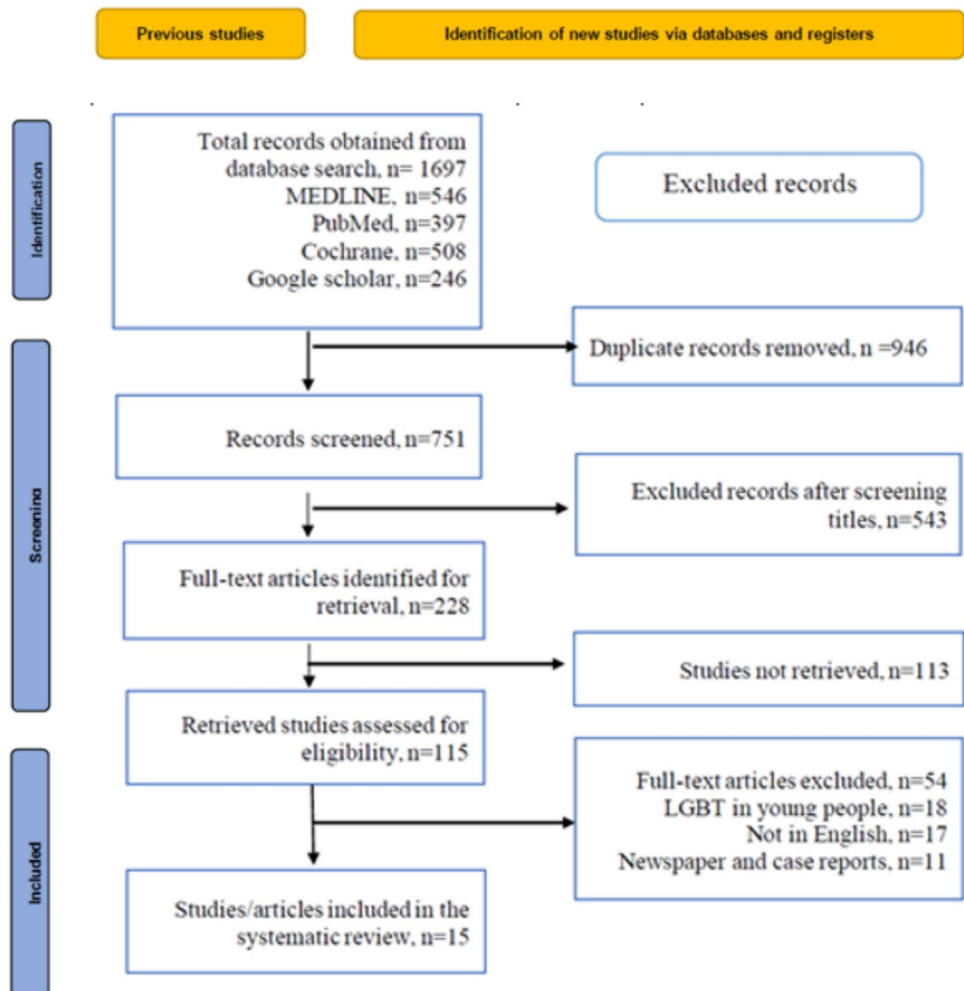
The search strategy in this systematic review followed the preferred reporting items for systematic reviews and meta-analysis (PRISMA) guidelines and employed a comprehensive approach to identify published studies on the psychological impacts faced by LGBT individuals. By searching the electronic databases using a combination of keywords and

modifying the search terms to suit each database, a total of 1613 studies were identified. Additionally, the references of relevant studies were also searched to find more studies, resulting in a total of 84 examined publications. The abstracts and titles of the different studies were assessed and analyzed for eligibility for inclusion, and the complete information of the studies and articles that met the eligibility inclusion criteria was gathered for evaluation and analysis in this study. Figure 1 illustrates the PRISMA flowchart (PROSPERO ID: 345195) that depicts the search strategy for included and excluded studies, including the explored databases. This search strategy resulted in the selection of 15 studies that met the eligibility inclusion criteria.

Data Extraction and Synthesis

Initially, the two primary authors independently screened the titles and abstracts of the identified records. This initial screening was instrumental in determining the relevance of the studies to our review criteria. Studies that did not meet

Fig. 1 The flowchart of the PRISMA process used in this study to identify, screen, and select studies for inclusion. The PRISMA flowchart provides a detailed overview of the search strategy for included and excluded studies



the inclusion criteria based on their titles and abstracts were excluded. The remaining studies underwent a second round of screening where the full texts were reviewed for eligibility. This included a careful assessment of the study's focus on psychological well-being in older LGBT adults, as well as the quality and relevance of the research.

During this phase, we encountered 113 studies that could not be retrieved for full-text review. The reasons for this included accessibility issues such as paywalls or articles being unavailable online, as well as practical impediments like broken links or withdrawn manuscripts. In some instances, identified records were conference abstracts without corresponding full-text publications. These challenges were systematically documented and factored into the selection process to maintain the integrity and rigor of our review.

All decisions made at each stage of the screening process were recorded in a PRISMA flow diagram, ensuring transparency and replicability of our methodology. Disagreements between the primary authors at any point of the screening were resolved through discussion, and if necessary, a third author was consulted to achieve consensus. Following this comprehensive screening process, the data from the final selection of studies was extracted and synthesized, as detailed in Table 2. The independent reviewer's role was pivotal in confirming the validity of the extracted data and the final study selection, enhancing the credibility of our systematic review.

The data extraction process was conducted in a systematic and rigorous manner, adhering to established guidelines and procedures for systematic reviews. The data was extracted and recorded in a consistent and standardized manner to facilitate analysis and synthesis. The first author (A.S.W.C.) conducted the data extraction, identification, categorization, and synthesis, which the other authors reviewed and confirmed or rejected in teams of two. Differences were resolved through discussion or with the third author (J.H.M.C.). The data extraction process was a critical component of the systematic review, and the careful collection and recording of data ensured the reliability and validity of the study findings.

Results

The Challenges Faced by Older LGBT Adults in Psychological Well-Being, Health, and Access to Healthcare

This systematic review included 15 studies out of 1697 records across four electronic databases (Table 2). The current review analyzed fifteen articles that investigated the psychological well-being of LGBT individuals aged 50 years and above. Eight of the articles employed cross-sectional

surveys, three utilized interview surveys, two were national surveys, and two used audio computerized self-interviews. This diverse collection of study designs provides a robust framework for understanding the varied aspects of psychological well-being across different populations within the older LGBT community. The studies were conducted in different parts of the world, including the United States, Australia, China, and Hong Kong. The results indicated that a significant proportion of older LGBT individuals experienced poor physical and mental health, depression, and discrimination. Fredriksen-Goldsen et al. (2014) found that 22.0% of the LGBT participants in their study had poor health and 29% experienced depression symptoms. The study also found that lesbian and bisexual women had more disabilities than gay and bisexual men. Similarly, Flatt et al. (2018) reported that 20.0% of LGBT individuals had hypertension, and about 36.0% felt a score in the depression range. In contrast, Hughes (2018) found that 81.0% of the participants were associated with good mental well-being.

Discrimination, Isolation, and Lack of Support Experienced by Older LGBT Adults

Studies also reported that LGBT individuals experienced discrimination, isolation, and lack of support. Coleman (2017) found that participants in focus groups felt ignored by HIV prevention initiatives and generally excluded from societal aspects. Czaja et al. (2016) reported that 25% of the participants experienced difficulties in accessing required services, and they lacked social or family support, financial security, caregivers, and healthcare discrimination. In addition, Lyons et al. (2021) found that 61.50% of women and 54.70% of men often faced discrimination, which was associated with lowering positive mental health by 4.97% in women and 5.13% in men.

Moreover, studies investigated the impact of HIV on LGBT individuals' health and well-being. Emlet et al. (2013) found that 9% of the participants were HIV positive, and 66.74% were identified with poor physical health. Frost et al. (2022) reported that older LGBT individuals reported lower relationship satisfaction associated with internalized, felt stigma.

The Impact of HIV on the Health and Well-Being of Older LGBT Adults

Furthermore, the reviewed studies showed that older LGBT individuals faced several challenges that impacted their psychological well-being. These included poor physical and mental health, depression, discrimination, and lack of support. Studies emphasized the need for interventions and support services to address the unique needs of older LGBT individuals.

Table 2 Summary of the studies included in the analysis of psychological well-being outcomes among older adults who identify as LGBT

Authors	Study design	Participants/population characteristics	Experiences of LGBT/study objectives	Outcomes of psychological well-being
Fredriksen-Goldsen et al. (2014)	Cross-sectional survey	Participants with an average of 67 years were 2439 in total, both bisexual women and lesbians accumulated to 829, and gay and bisexual men were 1520. All participants were 50 years and above	A logic regression was conducted to explore the impact of health indicators and protective measures among older LGBT on their mental and physical health	22.0% of the LGBT participants had poor health, about 45% had a disability, and those experienced depression symptoms were 29%. In addition, all experience depression and generally poor health, while lesbian and bisexual females had more disabilities than gay and bisexual men
Flatt et al. (2018)	Cross-sectional study	Two hundred and ten older LGBTs aged 50 years and older were recruited in the study from 2010 to 2011 in Chicago. Participants had a mean age of 59.6 years. A third of the participants stated they were Black (53), Latino (8), and others (5). 80.0% of them had graduated from college or higher education, and 61% had inadequate income	This survey investigated SCD (subjective cognitive decline) among LGBT adults. It was analyzed according to their memory quality, psychological issues, and health problems	20.0% of LGBTs were reported to have hypertension. An approximate 36.0% felt a score in the depression range. 24.0% had poor self-rated health, 63.0% lived alone, and 10.0% experienced discrimination
Fredriksen-Goldsen et al. (2013)	State behavioral risk factor surveillance system (BRFSS) survey	A cumulative of 96,992 participants responded to the survey. Applying weight estimation, women with 50 years and above were 58,319, 562 (1.03%) were lesbian, and 291 (0.54%) were bisexual. Men aged 50 years and above were 37,820, 463 (1.28%) were gay, and 215 (0.51%) were bisexual	Investigating LGBT health disparities by conducting a series of regression logic analyses employing the following measures; their care access, health screening, and health behavior	91.0% of bisexual women and lesbians had access to insurance, and 13.05% encountered financial barriers; 89.42% of gay and bisexual men had acquired insurance, and 8.43% experienced financial barriers. 18.33% of lesbian and bisexual women were smoking, and 7.88% experienced excessive abuse of alcohol. In comparison, 20.04% of gay and bisexual men engaged in smoking, and 17.13% in excessive drinking. 40.8% of bisexual women and lesbians were HIV positive after undergoing health screening, whereas 76.47% of gay and bisexual men were living with HIV

Table 2 (continued)

Authors	Study design	Participants/population characteristics	Experiences of LGBT/study objectives	Outcomes of psychological well-being
Coleman (2017)	Survey	Thirty men who have sex with men (MSM) of 50 years and above seropositive African-Americans were recruited using flyers in a university research study. Their mean age was 52 years which ranged from 50 to 75 years. All participants had a higher education than high school education. Twenty-five (83%) were single; all were HIV positive and contracted through unprotected sex. The participants were placed into two focus groups	Gaining perspective of the MSM living with HIV by employing focus groups-based guide for data collection. Open-ended questions were administered in the focus group guides to achieve responses about the prevention of HIV among the MSM (both seropositive and negative people)	The focus groups unanimously identified being segregated and ignored by HIV activists in HIV prevention initiatives. There was a feeling of MSM isolation, not being prioritized, having “no place to call home,” and being left out as participants were furious about being generally ignored in various societal aspects
Alba et al. (2022)	Survey	A cumulative of 895 participants completed the survey, and all were 60 years and above. There were 513 cisgender gay men with an age range of 60 to 85 years, and cisgender women who were lesbian were 243; 11.2% (85 of them) were diagnosed with post-traumatic stress disorder (PTSD). Transgender ladies were 35, there were four transgender men, and 16 participants who were transgender did not disclose whether they were females or males. Besides, 48 participants were bisexual, and 56 had other sexual orientations, which were neither gay, bisexual, nor lesbian. About three-quarters were citizens of Australia, and 50% were in a relationship. Additionally, 50% lived in urban and about half acquired a university degree	The survey was conducted on participants based on their sociodemographic characteristics, such as discrimination related to their sexual orientation, having been diagnosed with post-traumatic stress disorder (PTSD) and receiving its treatment, and their general quality of life	Thirty-nine (7.6%) males and 46 (18.9%) females revealed that they had been diagnosed with PTSD. In addition, 11.2% (85) of participants had been diagnosed with PTSD, and 33 (38.8%) received treatment. Lower quality of life was associated with participants identified as having been diagnosed with PTSD

Table 2 (continued)

Authors	Study design	Participants/population characteristics	Experiences of LGBT/study objectives	Outcomes of psychological well-being
Czaja et al. (2016)	Survey	A total of 124 lesbian and gay participants from South Florida were recruited for this survey. All participants were 50 to 89 years old. 92 (74%) were gay, and 32(26%) identified as lesbian. Apparently, 72% were Caucasian citizens and 18% were Hispanics	Through focus groups, questionnaires were distributed to participants to determine the concerns of LGBT, barriers to caregiving, well-being, needed support, and programs for the lesbian and gay seniors in the community	74% of the participants' questionnaires indicated that LGBT had acquired experience in caregiving. 25% indicated that they encounter difficulties in accessing required services (there was discrimination). In addition, participants stated that they lacked social or family support, financial security, caregivers, and healthcare discrimination
Chan (2021)	Survey	A total of 941 participants from Hong Kong were recruited for this online survey study. Females accounted for 54.20% (510), whereas males were 431 (45.80%). The majority of them had attained bachelor's degrees which accounted for 72.4% (681), and 49.10% (462) were employees. About 50.0% of them were single, and approximately half were in a relationship. 62.80% (591) identified as gay or lesbian, pansexual or bisexual at around 31.80% (299), and 5.40% (51) were those who never disclosed who they were	The objective was to determine the effect of heterosexist experiences by measuring items present on the perceived online racism scale. Offline heterosexist measurement employs harassment, discrimination, and rejection scales. Also, short-form health surveys measure mental and physical health among the sexual minority	Poor physical health was associated with older adult sexual minorities compared to young adults. However, older adults exemplified significantly higher mental health than young adults. In addition, based on the regression analysis, other sexual orientations indicated lower mental health than those identified as gay and lesbian individuals
D'Augelli et al. (2001)	Survey	A total of 416 participants comprising gay, lesbian, and bisexual adults were recruited in the study. 71.0% (297) were males, and 29.0% (119) were females. All participants were 60 years and above	To determine mental health aspects among older LGB by examining their present mental health, changes in their mental health, suicidal imagination in their lifetime, and suicidal imagination related to their sexual identity	The majority of them were physically well. Three had feeble health, about 3.0% said they had poor health, 52.0% were in good health, and 24.0% said their health was excellent. Approximately 11.0% of their health issues interfere with their routine. 37.0% were rated with excellent mental health, 47.0% with good, 14.0% with fair, 2.0% (5) with poor mental health, and less than 1.0% (3) their mental health was poor

Table 2 (continued)

Authors	Study design	Participants/population characteristics	Experiences of LGBT/study objectives	Outcomes of psychological well-being
Hughes, (2018)	Survey	A total of 312 participants responded to the study. Their mean age ranged from 59 to 72 years. 75.40% (227) ranged between 50 and 64 years, and 24.60% (74) were 65 years and above	To determine the health and well-being of LGBT and intersex individuals by employing a short-form 12 (SF-12) survey measuring the health-associated quality of life and using the Kessler 10 (K10) for psychological distress	Females had lower physical health than males. 81.0% (252) were associated with good mental well-being. Additionally, MCS indicated a score of 49.40 ± 10.80 and PCS of 47.4 ± 10.20 . The K10 score of the whole sample was 15.80 ± 5.40 . 84.80% indicated lower psychological distress, while 15.20% had higher distress
Fields et al. (2013)	Audio computerized self-interview	A total of 214 Black American men living with HIV participated in this study. Their average age was 52 years, with the majority (above 80.0%) having attained higher education. 91.0% identified themselves as bisexual and gay. There were about 16.0% transmitters	To examine whether discrimination-trauma was associated with UAI (unprotected anal intercourse) when gays engaged in sexual activities with MSM	50.0% of the participants had suffered depression, and 35.0% were drug abusers. 60.0% experienced some interpersonal trauma. The majority had higher preservation of sexual risk, and 47.0% reported UAI with male partners
Emler et al. (2013)	Survey	A total of 2560 older LGBT individuals completed the survey, 9% (233) were HIV positive. 97% (226) of them were men and were all bisexual men and gay—participants aged 50 years and above	To explore the quality of health life of LGBT living with HIV by using the SF-36 health survey	Two hundred and twenty-six (9%) bisexual men and gay had contracted HIV, and 6.01% faced victimization in their lifetime. 64.91% had mental issues, and 66.74% were identified with poor physical health
Dong et al. (2022)	Cross-sectional study (survey)	Five hundred and sixty-seven (567) gay and bisexual men participated in this study. Fifty-nine of them were diagnosed and were HIV positive. The majority were Chinese citizens	Applying multivariate logistic regression to find the impact of an increase in HIV infections and risk associated with older LGBT by exploring: MSP (multiple sexual behavior of partners), IS (Involuntary subordination), UAI, and alcohol and drug use before engaging in sex	IS had a higher score of 80.520 ± 18.060 , 54.50% engaged in UAI, 54.30% engaged in MSP, and 3.10% used drugs before sex. The majority of LGBTs reported that the main risk factors of infection among LGBTs were UAI, IS, MSP, and drug abuse before sex

Table 2 (continued)

Authors	Study design	Participants/population characteristics	Experiences of LGBT/study objectives	Outcomes of psychological well-being
Frost et al. (2022)	Survey	A total of 549 participants were recruited for this article. Above 40.0% were older LGBT, 17.60% were Black, 22.10% were identified as Latin and the rest as Whites, 62.30% were female, and 37.70% were males. 43.1% identified themselves as lesbian or gay, and 58.70% had attained higher education. Besides, participants reported being in a relationship, on average, lasting 6 years	The study explored the deleterious effects of minority stress and the impact on the quality of their relationship. The relationship satisfaction was examined by use of a relationship quality indicator and a 6-item measure to find victimization frequency, lifetime victimization, and internalized and felt stigma associated with elder LGBT	Older LGBT reported lower relationship satisfaction associated with internalized, felt stigma
Gonzales and Henning-Smith (2015)	Interview survey	A total of 1328 LGBTs participated in this survey. 698 were men, 630 were female, and were 50 years and older	An interview survey was conducted to determine the impact of disparities in older LGBT. Multi-processes of regression were employed to determine mental and physical health among the older LGBT	A higher number was reported to suffer psychological stress and had poor health. These comprised 14.80% of men and 13.70% of women, and they needed help with ADLs (activities of daily living) and IADLs (instrumental activities of daily living)
Lyons et al. (2021)	A national survey (online)	The survey was completed by a total of 895 Australian older LGBTs aged 60 years and above. Some participants were identified; 35 women being transgender, 4 men being transgender, and 16 never indicated their sexual orientation. A large proportion comprised participants aged 60 to 64 and about a fifth over 70 years. About a third of the men live in urban (36.70%), and women were distributed evenly across all the residential areas. The majority of them (59.90%) and 46.70% of men had attained higher education	The survey examined psychological distress, mental health, general health, and sexual identity discrimination among LGBT people	61.50% of women and 54.70% of men often faced discrimination. Thus, women primarily reported lifetime discrimination more than their male counterparts. The discrimination was associated with lowering positive mental health by 4.97% in women and 5.13% in men, higher psychological stress by 6.30% in women and 6.45% in men, and lower self-rated health (1.07%) among gay men and lesbians

Challenges That Impact the Psychological Well-Being of Older LGBT Adults and the Need for Interventions and Support Services to Address Their Unique Needs

The selected studies demonstrate that older LGBT adults encounter multiple challenges that affect their psychological well-being, health, and access to healthcare. Among these challenges are depression, poor self-rated health, disabilities, and discrimination in healthcare settings. Accessing healthcare services can be difficult, with financial barriers and discrimination preventing some individuals from accessing necessary services. Health disparities such as smoking and alcohol abuse were also prevalent among this population. The studies also reveal that older LGBT adults face unique challenges associated with their sexual orientation and gender identity, including higher rates of HIV infection, victimization, and discrimination.

In addition, social isolation and a lack of support were prevalent among older LGBT adults, with many feeling ignored by HIV activists and healthcare professionals. This population also faced discrimination in various societal aspects. The findings emphasize the need for healthcare providers to address the specific challenges

that older LGBT adults face and provide appropriate care and support. The results also underscore the importance of reducing discrimination and improving access to healthcare services for this population. More research is needed to identify effective interventions to improve the psychological well-being and health of older LGBT adults.

Quality Assessment

In evaluating the quality of the individual studies, we employed the effective public health practice project (EPHPP) quality assessment tool, which involves a comprehensive examination of various aspects. The tool utilizes a rating system across multiple domains, providing a nuanced understanding of the strengths and weaknesses of each study (Table 3).

In a comprehensive review of studies examining diverse facets of LGBTQ+ health and well-being, several recurring themes emerge in the evaluation of methodological rigor. Significantly, numerous studies demonstrate notable strength in their study design, characterized by robust methodologies and a solid foundation. Emler et al. (2013), Flatt et al. (2018), and Fredriksen-Goldsen et al. (2013) consistently exhibit robust study designs that effectively minimize potential biases.

Table 3 Effective public health practice project (EPHPP) quality assessment ratings for individual studies

Authors	Selection bias	Study design	Confounding factors	Data collection methods	Withdrawals and dropouts	Data analysis	Results and interpretation
Fredriksen-Goldsen et al. (2014)	Low	Strong	Moderate	Moderate	Low	Strong	Moderate
Flatt et al. (2018)	Moderate	Strong	Moderate	Moderate	Low	Moderate	Moderate
Fredriksen-Goldsen et al. (2013)	Low	Strong	Moderate	Moderate	Low	Strong	Moderate
Coleman (2017)	Moderate	Moderate	Weak	Moderate	Low	Moderate	Moderate
Alba et al. (2022)	Moderate	Moderate	Weak	Moderate	Low	Moderate	Moderate
Czaja et al. (2016)	Moderate	Moderate	Weak	Moderate	Low	Moderate	Moderate
Chan (2021)	Low	Strong	Moderate	Moderate	Low	Strong	Moderate
D'Augelli et al. (2001)	Low	Strong	Moderate	Moderate	Low	Strong	Moderate
Hughes (2018)	Low	Strong	Moderate	Moderate	Low	Strong	Moderate
Fields et al. (2013)	Low	Strong	Moderate	Moderate	Low	Strong	Moderate
Emler et al. (2013)	Low	Strong	Moderate	Moderate	Low	Strong	Moderate
Dong et al. (2022)	Low	Strong	Moderate	Moderate	Low	Strong	Moderate
Frost et al. (2022)	Low	Strong	Moderate	Moderate	Low	Strong	Moderate
Gonzales and Henning-Smith (2015)	Moderate	Moderate	Weak	Moderate	Low	Moderate	Moderate
Lyons et al. (2021)	Moderate	Moderate	Weak	Moderate	Low	Moderate	Moderate

Selection bias examines whether the study's sample accurately reflects the target population and if the selection process is devoid of bias. Study design evaluates the suitability of the research design in addressing the study objectives and minimizing potential biases. Confounding factors assess whether the study acknowledges and adjusts for confounding variables that could impact the relationship between the variables under investigation. Data collection methods gauge the reliability and validity of the methods employed for data collection in the study. Withdrawals and dropouts consider the completeness of data, addressing how withdrawals or dropouts were appropriately handled in the study. Data analysis reviews the appropriateness of the statistical methods employed for data analysis, ensuring they are suitable for drawing accurate conclusions. Results and interpretation assess the clarity, validity, and relevance of the study results, examining whether they substantiate the conclusions drawn from the research

Regarding selection bias, the majority of studies, including those by Fredriksen-Goldsen et al. (2014), Chan (2021), and Hughes (2018), exhibit low susceptibility to bias, indicating a meticulous consideration of participant selection. However, a subset of studies, notably Coleman (2017), Alba et al. (2022), and Gonzales and Henning-Smith (2015), reveals a moderate level of selection bias, warranting cautious interpretation.

Confounding factors are addressed with varying degrees of control across the studies, maintaining a consistent trend of moderate control. Works such as Fredriksen-Goldsen et al. (2014), D'Augelli et al. (2001), and Hughes (2018) showcase a balanced approach to confounding, minimizing potential distortions in their findings.

Data collection methods are generally executed with a moderate level of rigor in most studies, exemplified by Flatt et al. (2018), Frost et al. (2022), and Lyons et al. (2021). While consistently robust, some studies, like Coleman (2017), Alba et al. (2022), and Gonzales and Henning-Smith (2015), indicate a comparatively weaker control over potential biases introduced during this phase.

The management of withdrawals and dropouts aligns across the studies, with most demonstrating a low level of participant attrition. This commitment to data completeness is evident in studies by Fredriksen-Goldsen et al. (2014), Emler et al. (2013), and Frost et al. (2022). Data analysis and results interpretation emerge as particular strengths across the board. Studies such as Chan (2021), D'Augelli et al. (2001), and Fields et al. (2013), consistently display robust analytical approaches and interpretations, enhancing the credibility of their findings. Synthesizing these assessments underscores the overall methodological robustness of LGBTQ+ health studies. The emphasis on strong study designs, meticulous participant selection, and rigorous data analysis positions these studies as valuable contributions to the understanding of LGBTQ+ health and well-being. Researchers should be mindful of variations in the control of confounding factors, data collection methods, and withdrawals when applying these findings in broader contexts. These findings highlight the methodological strengths and weaknesses of each study, providing insights into the overall quality of the research. Researchers should consider these assessments when interpreting and generalizing the results of the respective studies.

Discussion

The challenges faced by older LGBT adults in psychological well-being, health, and access to healthcare are significant and multifaceted. The current systematic review of 15 studies across four electronic databases demonstrated

that a significant proportion of older LGBT individuals experience poor physical and mental health, depression, and discrimination. These challenges impact the overall psychological well-being of this population and highlight the need for interventions and support services to address their unique needs.

The studies included in this review also reported that older LGBT individuals experienced discrimination, isolation, and a lack of support. This was particularly evident in healthcare settings, where financial barriers and discrimination prevented some individuals from accessing necessary services. Health disparities, such as smoking and alcohol abuse, were also prevalent among this population. Additionally, older LGBT adults face unique challenges associated with their sexual orientation and gender identity, including higher rates of HIV infection, victimization, and discrimination.

Social isolation and a lack of support were also prevalent among older LGBT adults, with many feeling ignored by HIV activists and healthcare professionals (Conway et al., 2021). This population also faced discrimination in various societal aspects. The results emphasize the need for healthcare providers to address the specific challenges that older LGBT adults face and provide appropriate care and support. Improving access to healthcare services and reducing discrimination are crucial in improving the overall psychological well-being and health of this population (Oexle et al., 2017). The reviewed studies highlight the need for continued research to identify effective interventions that can improve the psychological well-being and health of older LGBT adults. The challenges they face are complex and require a multi-pronged approach, including the provision of appropriate healthcare services, reducing discrimination, and providing social support (Stepanikova et al., 2017; Drydakis et al., 2022). The findings from this systematic review underscore the importance of addressing the unique needs of older LGBT adults to ensure they receive the care and support they need to maintain their overall health and well-being.

In conducting this systematic review, we have included studies from various cultural and political contexts, specifically Australia, China, Hong Kong, and the United States. This diverse sample frame is not merely for representation but is crucial to understanding the nuanced effects of different sociopolitical climates on the psychological well-being, health, and aging of older LGBT adults.

These regions were selected to provide a broad spectrum of socio-political landscapes and levels of acceptance toward LGBT communities. For instance, the inclusion of studies from the United States and Australia offers insights into the experiences of older LGBT adults in countries with relatively progressive policies toward LGBT rights. On the

other hand, studies from China and Hong Kong contribute perspectives from settings where LGBT rights and social acceptance might lag, thereby affecting the psychological and physical health outcomes differently compared to their Western counterparts.

By examining these varied contexts, our review highlights the complex interplay between regional cultural norms and the mental health outcomes of older LGBT adults. For example, the data from the US and Australian studies often show a higher prevalence of supportive structures and healthcare access, which correlate with better health outcomes compared to findings from China and Hong Kong. Such differences underscore the potential impact of cultural acceptance and legal recognition on the well-being of older adults in the LGBT community.

Aging within the LGBTQ+ community presents unique challenges and opportunities, with a growing population of LGBTQ+ seniors requiring specialized care and support. By 2030, it is estimated that there will be a significant increase in the number of LGBTQ+ individuals over 65 in the United States, highlighting the importance of addressing their specific needs (Singh, 2022). LGBTQ+ older adults often face isolation, discrimination, and economic disparities, with factors such as strained family connections and poverty affecting their well-being (Salerno et al., 2020). Research indicates that many LGBTQ+ older adults in long-term care facilities do not feel comfortable being open about their sexual orientation or gender identity, leading to increased risks of mental health issues and abuse (Poteat et al., 2011).

Efforts are being made to advocate for LGBTQ+ seniors, such as the passing of legislation like California's SB 219, which aims to protect LGBTQ+ older adults in long-term care from mistreatment (Macapagal et al., 2016). The establishment of LGBTQ+-specific retirement communities also signifies progress in providing safer spaces for LGBTQ+ older adults (Cech & Waidzun, 2021). Activism plays a crucial role in advocating for systemic changes, including pushing for comprehensive nondiscrimination protections in employment and housing to benefit LGBTQ+ older adults and the broader community (Poteat et al., 2012).

While systemic reforms are essential, personal connections and community support are equally vital in improving the quality of life for LGBTQ+ older adults. Engaging with LGBTQ+ older adults, ensuring they feel included and valued, and checking on their well-being are simple yet impactful actions that can enhance their overall well-being (Newcomb et al., 2019). As we move forward, a combination of systemic changes, personal initiatives, and continued advocacy efforts will be crucial in addressing the unique challenges faced by older LGBTQ+ individuals.

Limitations

This review is limited by its focus on English-language articles published between January 1, 2000, and June 30, 2022, which excluded relevant studies that were not published in English. The inclusion of only survey studies may also limit the generalizability of the findings, as participants may have been biased or provided unreliable information. Additionally, the review may be subject to publication bias, as non-significant results may not have been included in the selected articles. These unpublished findings may contain important information that could have influenced our understanding of older LGBT individuals' psychological well-being. Furthermore, the decision to define older LGBT individuals as those aged 50 and above due to the limited availability of material for those aged 65 and above may have impacted the generalizability of the findings. Finally, the varying sample sizes across studies may also limit the ability to draw definitive conclusions about the impact of psychological well-being on older LGBT adults. The methodological consideration revolves around potential variations in laws, policies, and national health contexts that may influence the well-being of LGBT older adults differently in countries such as China compared to the United States, Australia, or Hong Kong. Although the inclusion of global data is crucial for reflecting a comprehensive picture of LGBT experiences, the study may encounter limitations in directly comparing these diverse contexts. This review primarily focused on studies specifically addressing the challenges faced by older LGBT adults in psychological well-being, health, and healthcare access. While recognizing the significance of the concept of "successful aging," we acknowledge that this aspect was not explicitly explored in our review. In future research and discussions, we will consider incorporating insights related to successful aging in the context of older LGBT adults, recognizing its relevance to a comprehensive understanding of their well-being.

Conclusion

Understanding and promoting psychological well-being among older LGBT adults is vital in order to effectively address their unique health challenges and aging experiences. Factors such as discrimination, trauma, and sexual orientation-related disparities are critical to consider when designing interventions for this population. While preventing the spread of HIV remains important, a broader focus on fostering psychological well-being can help reduce distress and enhance overall health. As the population of aging LGBT adults

continues to grow, it is crucial for gerontologists, healthcare providers, social service providers, and policymakers to collaborate and develop comprehensive support systems tailored to their needs. By prioritizing interdisciplinary collaboration, we can ensure that aging LGBT adults receive the care and support they need to thrive in later life.

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Declarations

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