

A Systematic Review of Mental Health Outcomes, Challenges, and Resilience Among Sexual and Gender Minority Individuals Who Are Currently and Formerly Incarcerated

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DOI: <https://dx.doi.org/10.51244/IJRSI.2025.1215PH000188>

Received: 12 October 2024; Accepted: 20 October 2024; Published: 14 November 2025

ABSTRACT

Background: Although the elevated attention has been drawn to sexual and gender minority (SGM) people and their mental health, those who are currently and formerly incarcerated remain largely overlooked. To understand both their psychological well-being during and after incarceration and their re-entry challenges is critical for health equity and inclusion.

Methods: A systematic review was conducted following the PRISMA guidelines to identify peer-reviewed articles published between 2000 and 2025 from Scopus and Pubmed, with additional relevant records retrieved from EBSCO. Studies conducted outside the United States were excluded to ensure consistency in legal and correctional contexts. Eligible studies were analyzed to offer key themes by using thematic analysis approach.

Results: Of the 42 studies identified in this research, 15 articles were included in the final review. Ten out of fifteen studies examined mental health issues, such as depressive symptom, anxiety and psychological distress. Six studies highlighted that the need for policy reform and inclusive training for healthcare professionals and staff is necessary. Disrupted social support and intersectional discrimination were observed among incarcerated SGM individuals. Four themes were synthesized: (1) Intersected stigma (2) Institutional harm and mental health consequences (3) Post-release challenges (4) Coping and reintegration strategies.

Conclusions: The findings suggest that community, peer and social support network resources are critical for fostering resilience and optimizing mental health outcomes for this SGM group during community re-entry. Policy reform, inclusive training for correctional healthcare professionals, and enhanced community-based re-entry program are essential to alleviate institutional harm and promote mental health improvement for this vulnerable population.

Keywords: Sexual and gender minority; incarceration; mental health; discrimination; challenge; resilience

INTRODUCTION

Globally, the United States has the highest incarceration rate, a phenomenon that public health scholars have described as an “epidemic of incarceration” (Dumout et al., 2013; Baćak et al., 2018). Although the general incarceration rate in the United States has decreased slightly in recent years (Ghandnoosh, 2020; Bureau of Justice Statistics, 2023), sexual and gender minority (SGM) people (those who self-identify as lesbian, gay, or bisexual or other non-heterosexual sexual orientation) were disproportionately incarcerated: 9.3% of men in men

in prison, 6.2% of men in jail, 42.1% of women in prison, and 35.7% of women in jail were sexual minorities (Meyer et al., 2017; Vogler, 2025). Most strikingly, the incarceration rate of self-identified homosexual and bisexual persons was 1882 per 100000 (Meyer et al., 2017), more than 3 times that of the heterosexual and cisgender US adult population. Additionally, 12% sexual minorities report being victimized by another inmate, and 5% report being victimized by staff, compared with 1% and 2% of straight inmates, respectively (Wilson et al., 2017).

Unsurprisingly, SGM individuals are more likely to experience solitary confinement and other sanctions while incarcerated, and more likely to report current psychological distress in comparison to the general incarcerated heterosexual inmates (Beck, 2015; James et al., 2016; Meyer et al., 2017). Together, there is a mounting body of research indicates incarceration as a powerful social determinant of health (Wildeman & Wang, 2017). Notably, incarceration may reinforces the existing mental health disparities among SGM individuals. For example, prior research has shown that the mental illnesses are prevalent in prison populations and are more frequent than in people of a similar age living in the community (Emilian et al., 2025). Additionally, previous research has also indicated that SGM people who are incarcerated who have untreated mental health disorders are at elevated risks of self-harm and suicide attempts (Carter et al., 2022), PTSD (Scanlon et al., 2024), and mortality and recidivism (Chang et al., 2016), compared to straight inmates. For example, suicide is the second leading cause of death among U.S. youth, and inadequate mental health screening and treatment in detention facilities further exacerbates suicide risk (O'Rourke et al., 2023).

However, the long-term mental health impacts of incarceration extend beyond prison walls. Apart from their sexual orientation, due to the incarcerated background, they will face several barriers to reintegration, including family disconnection, housing discrimination and employment bias, which further isolate them from healthcare systems and may ultimately cause recidivism. This highlights the urgency of recognizing incarceration as a significant health determinant within the SGM individuals and underscores the need to explore effective strategies to improve quality of post-release life through essential health-related processes. While extensive research has examined the effects of incarceration on SGM populations, less attention has been paid to its influence on SGM individuals' mental health and quality of post-release life. Furthermore, there is a lack of systematic research on incarceration within the complex digital media environment and how it affects the community re-entry process for these individuals. Therefore, this study aims to address these research gaps by systematically reviewing existing literature on the mental health outcomes, challenges, and resilience of SGM individuals who are currently and formerly incarcerated.

Conceptualization of Incarceration

Incarceration, as a severe phenomenon in the United States, is a powerful social determinant of health (Dumont et al., 2012). Moreover, sufficient literature has established incarceration as a critical element of health for SGM individuals (Wilson et al., 2017; Meyer et al., 2017; Baćak et al., 2018; English et al., 2020). In correctional facilities, rates of infectious diseases, especially HIV, hepatitis, and tuberculosis, and non-communicable disease, such as cardiovascular problems, are much grater than in the general population (Dumont et al., 2012). Regarding psychological health, a wealth of evidence shows that people who have experienced incarceration have disproportionately high levels of psychological difficulties, even after controlling for psychological health at time of imprisonment (Wildeman & Wang, 2017). Moreover, during the post-release life, the incarcerated experience exerts profound and multifaceted impacts on mental health among SGM people, significantly influencing their successful reintegration into society and resulting in what can be termed “secondary punishment”. Thus, scholars identified the need for “studies of interventions that meet the distinct re-entry needs of SGM inmates, at high risk for trauma before and after incarceration (Freudenberg & Heller, 2016). Critically, the most important period during re-entry is immediately following release from confinement, when the risk of mortality is extremely high (Binswanger et al., 2007). Undoubtedly, incarceration can be an extremely stressful

challenge for SGM people whose social supports were disconnected during re-entry period.

The Rationale of the Study

Extensive research has been conducted in SGM groups and their mental health outcomes. However, limited attention has been given to how incarcerated experience affects the psychological well-being of SGM individuals and how they cope with these challenges. According to the empirical findings, black, gay, bisexual, and other sexual minority men (SMM) are among the SGM groups facing the highest rates of incarceration in the U.S. (English et al., 2017; Baćak et al., 2018). Incarceration has both direct effects, and indirect effects through discrimination, on psychological and HIV-related outcomes among Black SMM. For example, public health data indicate that HIV seroconversion is more likely among individuals who have been incarcerated, with the highest risk among Black men (Goff et al., 2012). Indeed, recent incarceration and longer incarceration history has been linked to post-release HIV risk among SMM (Scheidell et al., 2021), a risk which may be even higher among Black SMM than their White SMM peers as a result of racial inequities in policing and arrests (Lim et al., 2021). In general, despite the limited available data on incarceration at the intersection of racial and sexual minority status, recent estimates from Meyer and his colleagues (2017) indicate that the percentage of Black SMM incarcerated is at least 15 times greater than the percentage of these men in the general U.S. population (Foundation for AIDS Research, 2015). Notably, this is likely an underestimate, as these figures do not include men who conceal their identity as SMM due to the potential and unsafe environment in prison (Herek, 2009; Meyer et al., 2017) where anti-SMM violence is commonplace (Baćak et al., 2018). In addition, the prevalence of heterosexism, as a core component of the institutional oppression faced by SGM people, has been extensively documented in research. All people are presumed to be heterosexual, and heterosexual behavior and different-sex relationship are considered normal, natural, and unproblematic (Herek, 2009). This assumption makes gay, lesbian, and bisexual people invisible in most social situations.

Thus, it is imperative to investigate and comprehend the incarceration impact on mental health and disease among SGM people. Given the existing gap in the incarceration regarding SGM people, this study aims to offer a comprehensive examination drawn from diverse community contexts. The intended outcome is to furnish insights that facilitate enhanced understanding and support from family and social circles for SGM individuals with historical incarceration experience. Furthermore, the coping strategies will be provided to guide these types of people to re-entry society reducing recidivism. With that, the two research questions were proposed: (1) to synthesize evidence on how the experience of incarceration impacts the mental health of SGM individuals in the United States; (2) to explore the individual coping mechanisms employed by SGM individuals with a history of incarceration and to examine the role of external support systems (e.g., healthcare, community services) in their post-release reintegration.

METHODS

This study employed a systematic review methodology to identify, evaluate, and synthesize the existing evidence on mental health challenges and coping strategies among sexual and gender minority individuals who are currently or formerly incarcerated in the United States. To ensure transparency and comprehensiveness, this review process adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Framework (Moher et al., 2009). This framework has shown several benefits. Firstly, the framework allows for a clear definition of research questions (Page et al., 2021). Secondly, it offers accurate screening metrics that specify the criteria for inclusion and exclusion (Page & Moher, 2017). Thirdly, it also provides clear and reliable conclusions to convey vast amounts of information and work to minimize the introduction of bias (Sohrabi et al., 2021). Fourthly, it can examine large scientific literature databases within a specific time frame (Sierra-Correa & Kintz, 2015). Figure 1 shows the completed retrieval process. Four basic steps were applied in this systematic

reviewing process: identification, screening, eligibility, and inclusion.

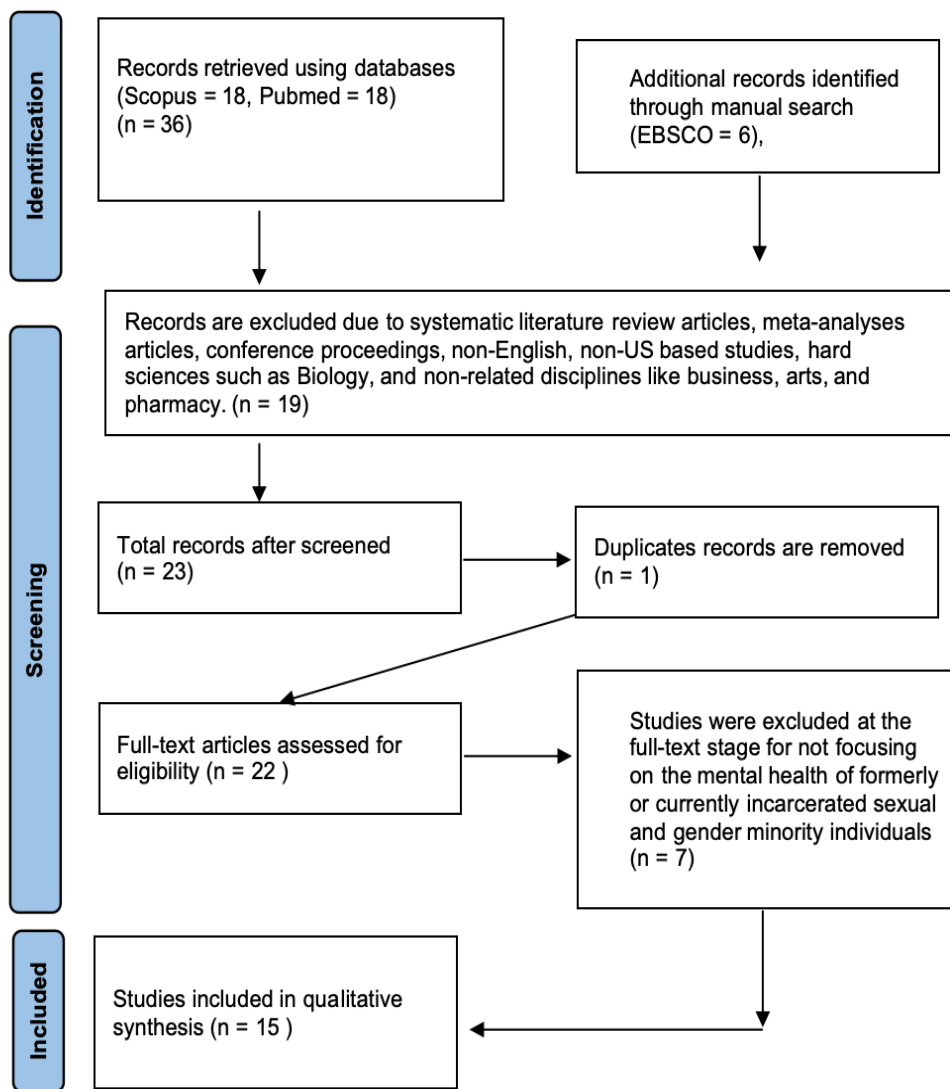


Figure 1. PRISMA Flow Diagram Outlining the Process of Study Selection

Search Strategy

Firstly, researcher conducted a thorough literature search using two electronic databases (Scopus and Pubmed). The search strategy used Boolean logic and combined relevant search terms such as “incarceration” and “post-release” and search strings to identify relevant articles for this study (Table 1). Although Scopus requires a subscription, it covers numerous journals and subject areas. On the other hand, as a free, searchable bibliographic database, Pubmed was established and supported by National Library of Medicine. It covers a vast collection in public health area. Moreover, an extra manual searches were employed using EBSCO database. This approach is important to ensure that journal articles are not missed during the primary search (Chapman, 2012). The searches spanned from 2000 to 2025. Furthermore, to maximize the scope of the literature search, the strategy incorporated numerous synonymous keywords, including but not limited to “incarceration”, “prison”, “detention”, “juvenile”, and “correctional system”.

Table 1 Search strings to identify relevant articles in this study

Databases	Search strings
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Scopus	TITLE-ABS-KEY (lgbt OR "sexual minority" OR "gender minority" OR transgender) AND TITLE-ABS-KEY (incarceration OR prison OR jail) AND TITLE-ABS-KEY ("mental health" OR depression OR anxiety) AND TITLE-ABS-KEY ("post-release" OR re-entry OR "social support")
Pubmed	((("Sexual and Gender Minorities"[Mesh] OR transgender persons[Mesh] OR LGBT*[tiab] OR transgender[tiab]) AND ("Mental Health"[Mesh] OR "Depression"[Mesh] OR "Anxiety"[Mesh] OR mental health[tiab] OR depression[tiab] OR anxiety[tiab]) AND (Prisoners[Mesh] OR Prisons[Mesh] OR incarceration[tiab] OR prison[tiab] OR jail[tiab] OR parole[tiab]))AND "United States"[Mesh]

Screening and Eligibility

In this stage, all papers meeting the following criteria were eligible for inclusion. Firstly, the timeline was set from 2000 to 2025. Secondly, only full journal articles were selected. Thirdly, only English was chosen to avoid the language barrier and reduce the misunderstanding caused by translation. Fourthly, the scope of the search mainly covers social sciences, psychology, arts and humanities, and communication science since researcher aims to understand SGM individuals' mental health with experience of incarceration and their post-release quality of life from a communication perspective, rather than a purely medical one. Excluding articles during the systematic review screening is also a crucial step guided by PRISMA principles. Following these guidelines ensure rigor, transparency, and the integrity of this review. As a result, Table 2 displays inclusion and exclusion criteria. Finally, 15 studies were included for coding and analyses after screening and eligibility.

Table 2 Inclusion and exclusion criteria

Criterion	Included	Excluded
Timeline	2000-2025	<2000
Literature type	Journals (research articles)	Books, theses, pre-prints, book chapters, book series
Language	English	Non-English
Subject area	Social sciences, Psychology, Arts & Humanities, and Communication.	Other than Social Sciences, Psychology, Arts & Humanities, and Communication

Data Extraction and Quality Assurance

The researcher carefully extracted the data that answers the research questions (Shaffril et al., 2021). Following the guidance of Whittemore & Knafl (2005), this process involve three key stages to ensure rigor. Firstly, key findings and contextual data related to mental health challenges and coping strategies were meticulously extracted from the full text of each included article. Secondly, the extracted data were categorized and reorganized into preliminary themes. Third, to ensure the accuracy and consistency of extraction, the extracted data for a randomly selected 20% of the studies were cross-checked, verifying the accuracy and reducing the risk of bias or oversight. Notably, this study followed an integrative review approach, incorporating qualitative and quantitative research methods (Okoli, 2015). Furthermore, mounting studies shown that a mixed research design is increasingly recognized as crucial for gaining a comprehensive understanding of complex issues from diverse perspectives (Whittemore & Knafl, 2005; Dixon-Woods et al., 2005; Hopia et al., 2016). As for quality

appraisal, all eligible articles must be appraised to ensure quality. The researcher qualitatively assessed the articles by three categories: low, moderate, and high. Only those articles that have fulfilled the inclusion criteria are considered moderate and high in the category Petticrew and Roberts (2008). Articles that failed to meet these criteria were excluded. After reviewing the articles, all 15 articles qualified to rank between moderate and high in categories. Thus, these articles are ready to be reviewed (see Appendix 1).

Data Analysis Approach

In this study, thematic analysis was utilized. Researcher analyzed the data using the qualitative synthesis approach, guided by the research questions. After data extraction, the raw data was coded and converted into meaningful data by identifying codes, categories, subthemes, and themes. Similar patterns or disparities and recurring themes in a table that were related to incarcerated experience and coping strategies among SGM groups.

RESULTS

This search across the two professionally electronic databases and one manually additional database identified an initial set of 42 studies, all published between 2000 and 2025. After eliminating duplicate entries, a refined total of 41 studies remained for a more thorough analysis. Consequently, 22 articles underwent a comprehensive full-text review. Among these, 7 studies were excluded. A total of 15 studies fulfilled the inclusion criteria and were therefore included in the final analysis. This review aims to answer two research questions: (1) How does incarceration affect the mental health of SGM individuals? (2) What individual coping strategies do SGM people with a history of incarceration utilize, and what support is available to them from external systems (e.g., healthcare, community organizations) during post-release reintegration?

Theme Overview Paragraph

Through thematic synthesis, four themes were identified from the reviewed studies. The first theme, intersected stigma: dual mental burden of SGM identity and incarcerated record, highlights the compounded effects of SGM stigma and criminal record, which jointly extends psychological distress and social marginalization. However, the second theme, institutional harm and mental health consequences during incarceration, reveals the structural and interpersonal violence that SGM inmates face, including lack of policy, solitary segregation, and sexual victimization, leading to severe mental health issues. However, the third theme emphasizes on post-release challenges: stigma, recidivism, and reintegration, explores how dual stigmatization extends beyond incarceration, causing unemployment, homelessness, community rejection, and increased risk of substance use and recidivism. Finally, the fourth theme, coping and reintegration strategies: from survival to belonging, focuses on adaptive and institutional coping mechanisms such as selective disclosure, peer support, inclusive training, and community-based employment and healthcare programs, which foster resilience and social reintegration.

Intersected Stigma: Dual Mental Burden of SGM Identity and Incarcerated Record

The synthesized evidence consistently indicates that SGM individuals with incarceration histories face a uniquely compounded form of stigma due to their marginalized sexual identity and orientation and criminal record. These two types of stigmas are not separated, but they are a synergistic source of psychological distress that profoundly impacts mental health outcomes. On the one hand, in many cases, carceral environment often places SGM people in chronically stressful scenarios in which they must actively conceal their sexual identity to ensure safety. For example, several participants from a qualitative expressed anxiety about performing basic daily activities such as showering, due to fear of being identified and subsequently harassment by other inmates

and officers (Harvey et al., 2021). On the other hand, criminal background, as an added stigma, has also caused numerous troubles during their re-entry period. For example, feelings of isolation and hopelessness were commonly manifested through self-blame, shame, and social exclusion, which were exacerbated by intersected stigma. For example, homelessness and unemployment were prevalent among this group, as their frequently experienced discrimination from both employers and landlords due to their sexual identity and criminal records.

Institutional Harm and Mental Health Consequences during Incarceration

Across multiple studies, incarcerated SGM individuals are at high risk for experiencing verbal, physical, and sexual assault at the hands of other imprisoned people and/or jail and prison staff (Brown et al., 2015). Moreover, incarcerated gay and lesbian persons were more frequently exposed to sexual victimization and solitary segregation than were inmates who identified as straight (Baćak et al., 2018). Furthermore, SGM youth in juvenile correctional facilities show poorer mental health indicators, as well as higher rates of suicidal ideation, suicide attempt and self-harm behavior compared with non-SGM counterparts (Clark et al., 2022). Moreover, victimization plays a crucial role in influencing SGM individuals' general health outcomes. The correlation between multiple victimization experiences (e.g., bullying, sexual and physical abuse as a child and as an adult) and incarceration risk was linked by Hughto et al. (2022), suggesting that physical and sexual assault is associated with the increased odds of incarceration in one's life time. Moreover, incarceration has been found to negatively impact overall health among older SGM people of color, with lifetime incarceration significantly and positively associated with past 12-month polysubstance use and living with HIV. Additionally, a notable example of institutionalized harm and stigma is the sex-segregated housing policy, which allocate residential spaces based on transgender individuals' genitalia rather than their gender identity (Hughto et al., 2022). For example, transgender women are typically incarcerated in men's prisons, and their feminine appearance or expression is often mocked and abused by other inmates, correctional healthcare providers and officers (Hughto et al., 2018). Furthermore, among SGM inmates, the increased likelihood of consensual sex with other imprisoned persons places them at disproportionate risk for punitive sanctions, which in turn significantly exacerbate their psychological distress (Meyer et al., 2017). Such repeated exposure to an environment with discrimination and violence leads to elevated levels of anxiety, depression, and trauma symptoms, highlighting the dual burden of non-heterosexual identity and carceral oppression. Furthermore, institutional harms not only emerge during incarceration but often have deep roots in earlier life experiences. Meyer et al. (2017) found that imprisoned lesbian and gay people had substantially higher odds of sexual victimized in childhood than their heterosexual peers. These findings suggest that victimization and trauma are part of a broader continuum of structural vulnerability that begins to form long before incarceration.

Post-release Challenges: Stigma, Recidivism, and Reintegration

The effect of intersected stigma persist well beyond incarceration, continuing to influence the psychological and social well-being of SGM people (Harvey et al., 2021). Also, these individuals frequently encounter social exclusion and prejudice from other community members, which critically prevents their reintegration. Selected research demonstrates that incarceration history is positively associated with severely numerous post-release challenges, including increasing rates of drug use, unemployment and homelessness, particularly among young transgender women. Undoubtedly, many return to substance use during re-entry phase as a method of escape for discrimination, poverty, and social isolation. Moreover, due to the consistent substance use, it associated with severely unhealthy behaviors, such as, condomless sex and marijuana use. A semi-structured interview revealed that some individuals were also rejected by the broader LGBT community because of their incarceration history (Harvey et al., 2021). For example, a lack of support from both family and sexual minority community further undermines their healthy reentry into society. However, the added stigma of having a criminal record, further marginalizes these individuals and restricts access to employment, housing, and social support networks. Interestingly, although illicit drug use tends to increase following release, binge drinking has not been found to

be significantly associated with incarceration history, suggesting that substance use behaviors may vary by type and underlying motivation. Beyond healthy behavior, recidivism rates remain disproportionately high among formerly incarcerated SGM individuals, which is often closely linked to unmet health needs and community rejection. For example, exposure to community violence and criminal justice involvement have been proved to be positively associated with psychological distress (Hotton et al., 2019). Consequently, the intersection of criminal and sexual related stigma creates a cycle of psychological distress, socioeconomic instability, and recidivism, thereby amplifying the impact of dual stigmatization on re-entry adjustment.

Coping and Reintegration Strategies during Detention and Re-entry

In this review paper, the research has identified two themes in answering research question 2: (1) Strategies for survival and resistance. (2) Bridge to belonging.

Strategies for Survival and Resistance: Coping Mechanisms in the Face of Adversity

Based on the reviewed researches, several mechanisms were provided to deal with adversity. From the individual perspective, many SGM inmates disclose their sexual orientation and identity selectively, based on their assessment of safety and potential risks and benefits in this high-pressure environment of incarceration (Harvey et al., 2021). For example, Black MSM are less likely to identify as gay or to disclose their sexual identity to other White MSM (Bačák et al., 2018), due to compound discrimination from their race, sexual orientation and criminal background. Although this selective disclosure serves as a protective coping mechanism that helps them avoid temporarily potential risks from sexual harassment, violence and abuse from both inmates and staff, it may simultaneously reduce opportunities for emotional and social support, after that reinforcing a long-term cycle of minority stress. Therefore, supportive interventions to alleviate exposure to minority stressors (e.g., verbal and physical harassment, internalized stigma, social isolation and fear of disclosure) are necessary.

During detention, there are numerous institutional regulations should be strengthened to protect the well-being of incarcerated SGM individuals. Among these, sensitivity trainings for healthcare providers and staff within correctional system and community settings plays a crucial role (Jaffer et al., 2016). These people who receive training on diversity, equity and inclusion, particularly including SGM identities and the experiences of formerly incarcerated individuals, are more likely to offer respectful and appropriate healthcare. The inclusive practices help alleviate workplace discrimination and hostile attitudes (e.g., staff homophobia) against SGM individuals, and also contribute to building a trusting relationship between patients and healthcare providers (Harvey et al., 2021). Interventions aimed at improving healthcare providers' knowledge of the unique needs of transgender individuals within correctional settings have been shown to be efficacious (Jaffer et al., 2016; Hughto et al., 2017), suggesting that similar interventions targeting all correctional staff could be beneficial for addressing the diverse needs of SGM inmates. In addition, relevant policy establish a regulatory environment to against sexual victimization and harassment. For example, the implementation of Prison Rape Elimination Act (PREA) in the United States has encouraged correctional institutions to adopt more sensitive and gender affirming policies. These government, educational, and community-led programs have been proved to reach the most vulnerable trans young adults, enhancing their structural needs and mental health outcomes (King et al., 2023). Compared to rational rules and regulations, SGM peer support should not be ignored, as it serves as a bridge between formerly incarcerated SGM individuals and society. For example, a study suggest that a peer health navigator program plays an important role in supporting Young Black Gay Men (YBGM), a vulnerable group with one of the highest rates of HIV and incarceration (Donald et al., 2022).

Bridges to Belonging: Community Reconnection as a Pathway to Resilience

According to the reviewed studies, several forms of support and structural intervention have demonstrated potential to enhance resilience and promote future reintegration among SGM individuals who are currently or

formerly incarcerated. Peer health navigation programs were highlighted by Gerke et al. (2022), which provide a personalized assistance to SGM individuals. Normally, social support from peers with same lived experiences helps participants to receive HIV care, mental health counseling, and social services, after that, medical mistrust and treatment adherence would be improved. Equally important is the role of employment assistance programs during re-entry period, which are led by government or community organizations, and were proposed by Jaffer et al. (2016) as a key strategy to prevent engagement in street economies, such as sex work for economic survival (Hughto et al., 2022). By helping formerly incarcerated SGM individuals secure stable, long-term employment, such programs not only provide financial stability but also enhance a sense of self-worth and belonging within community. Furthermore, support from LGBT-specific organizations should not be ignored, as it plays a key role in their community re-entry (Harvey et al., 2021). Because, these organizations often serve as safe spaces for emotional healing and identity affirmation, helping individuals re-build trust in relationship with healthcare providers, after incarceration. Despite the particularly stressful re-entry process for SGM individuals, many have demonstrated remarkable resilience in coping with those pitfalls.

DISCUSSION

After reviewing 15 journals articles, it was found that 10 articles followed a quantitative approach while the one article used a qualitative approach, one adopted mixed-method design, one was a conceptual review, and one was a data-based review. Notably, the selected studies were not suitable for conducting a meta-analysis due to the substantial heterogeneity in research designs, measurement instruments, and reported outcomes. Regarding the origin of the papers, all papers were produced in the United States. Out of the 15 reviewed articles, 10 primarily focused mental health issues, while the remaining 5 additionally examined health inequalities in carceral settings, policy reform, and inclusive training for healthcare professionals and staff. Across these studies, many themes emerged such as psychological consequence of incarceration, structural discrimination within carceral systems, and the need for inclusive health policies. More than two-thirds (10 out of 15) of reviewed studies adopted quantitative approaches, offering data-based support for understanding the correlations between incarceration, stigma, discrimination and mental health outcomes. However, although there was only one purely qualitative research employed in-depth interviews with 20 gay and bisexual men, the findings provided deeper valuable insights into their experiences of stigma and isolation. Two review papers indicated that disproportionate incarceration of SGM individuals and methodological limitations remain unresolved. Additionally, several studies found that community reconnection program plays a pivotal role in the societal reintegration of SGM people with incarceration experiences. Support from SGM peers, for example, is significantly crucial for helping reconnection between formerly incarcerated SGM people and society. Also, a study suggest that a peer health navigator program plays an important role in supporting Young Black Gay Men (YBGM), a vulnerable group with one of the highest rates of HIV and incarceration (Donald et al., 2022).

Practical Implications

This research highlights the mental health outcomes, challenges and resilience among SGM individuals during and after incarceration, offering healthcare professionals valuable insights to better support these SGM people who are formerly or currently incarcerated. It underscores the unique medical and psychological needs of this population. The necessity of inclusive, trauma-informed, and identity-affirming approaches in correctional and community healthcare systems. Moreover, sensitivity training for staff and healthcare professionals is essential to reduce institutional stigma and improve medical service delivery to SGM inmates. Post-release period should not be overlooked or treated as separate from incarceration, but rather as a continuous process, during which psychological distress and structural barriers often remain unresolved. Existing targeted interventions play a vital role in promoting reintegration and reducing recidivism, such as peer health navigation programs, employment assistance and community-based counselling. Policymakers and practitioners in hygiene industry

must collaborate to establish nationally intersectional and sustainable support systems.

LIMITATIONS AND RECOMMENDATIONS

Several limitations of this study should be noted. Firstly, this analysis was restricted to studies published in English and conducted in the United States, which may limit the generalizability of findings to SGM individuals in other culture or legal contexts. Second, the majority included studies were cross-sectional quantitative research relied self-reported data, which may cause potential biases and inaccuracy between incarceration experiences and mental health outcomes. Third, due to the unclear self-disclosure, the representation of transgender and other non-heterosexual individuals was relatively limited. Fourth, this review did not include grey literature, government report and unpublished reports, which may have excluded potentially relevant information. Fifth, only three electronic databases were searched, which may have introduced potential selection biases. Moreover, the number of selected paper was limited ($n = 15$), as a result, some relevant contexts may have been overlooked. Finally, the various definitions of SGM identity provided challenges in synthesizing consistent findings.

In future research, scholars should use more longitudinal mixed-method designs to capture the dynamic process of psychological change and resilience among SGM people during and after incarceration. Scholars are also encouraged to investigate the interdisciplinary of race, gender and sexual orientation within carceral environment. Meanwhile, future studies are encouraged to employ more diverse and inclusive measures of sexual identity and attraction to better capture the experiences and participation of SGM individuals. Moreover, special attention should be paid to underrepresented groups such as transgender women of color and other non-heterosexual individuals. Furthermore, future reviews should broaden the search strategy to include specialized healthcare and psychology databases such as PsycINFO, CINAHL and Web of Science. Additionally, future studies also need to evaluate the effectiveness of intervention programs. Policymakers and practitioners should also collaborate to develop more inclusive medical service in correctional systems and post-release communities.

CONCLUSION

Incarceration is a detriment to SGM individuals' mental health. It often exacerbates pre-existing psychological vulnerabilities as well as exposes them to additional stressors such as isolation, violence and discrimination. The cumulative effects of these experiences can lead to long-term mental health challenges that persist even after release. Furthermore, institutional victimization and lack of gender-affirming support during incarceration also continue to affect their well-being after release. However, resilience is evident through peer networks and community-based initiatives. Moreover, this study calls on the U.S. justice system to implement relevant measures to improve the situation of SGM people in detention centers. Furthermore, health promotion and mental recovery requires more inclusive, trauma-informed and sustained interventions that bridge incarceration and post-release support.

Author Contributions

Shichao Qiu solely contributed to the conception, literature search, analysis, and writing of this review.

FUNDING

This research received no external funding.

Data Availability Statement

All data used to prepare this paper are available from the cited sources.

Conflicts of Interest

Author has no conflicts of interest to declare.

Informed Consent Statement

No applicable.

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APPENDIX 1

No	Year	Authors	Title	Methods	Key Findings	Theme
1	2015	Brown et al.	Health correlates of criminal justice involvement in 4,793 transgender veterans	Quantitative research	<p>1. Higher incarceration risk among transgender veterans</p> <p>2. Transgender justice-involved (JI) veterans experienced higher prevalence of depression, PTSD, obesity, serious mental illness, and suicidal ideation.</p>	<p>1. Health disparities among transgender justice-involved populations</p> <p>2. Need for specialized care</p> <p>3. Intersection of gender identity, incarceration, and mental health</p>
2	2016	Jaffer et al.	Improving transgender healthcare in the New York City correctional system	Mixed-method	<p>1. After LGBT-focused staff training across 12 jails clinics, patient complaints decreased by over 50%.</p> <p>2. Following the implementation of a revised transgender healthcare policy, complaints dropped to zero within six months.</p>	<p>1. Healthcare inequality</p> <p>2. Impact of training and policy reform</p>
3	2016	Meyer et al.	Incarceration Rates and Traits of Sexual Minorities in the United States: National Inmate Survey, 2011–2012	Quantitative cross-sectional analysis by using National Inmate Survey (2011-2012)	<p>1. SGM people experience higher rates of sexual victimization both before and during incarceration.</p> <p>2. SGM inmates are more likely to experience solitary confinement and psychological distress</p> <p>3. Incarceration rate of SGM individuals is over three times higher than that of general population.</p>	<p>1. Structural violence and victimization.</p> <p>2. Mental health vulnerability and institutional harm</p> <p>4. Inclusive policy interventions</p>

4	2018	Bačák et al.	Incarceration as a health determinant for sexual orientation and gender minority persons	Conceptual review based on existing public health data	1. Higher incarceration rates among SGM populations 2. Incarceration leads to severe health risks 3. Health outcomes within the SGM population exhibit heterogeneity.	1. Disproportionate incarceration of SGM individuals. 2. Health risks and inequalities in carceral settings. 3. Healthcare access during and after incarceration. 4. Methodological and measurement challenges.
5	2018	Hughto et al.	A multisite, longitudinal study of risk factors for incarceration and impact on mental health and substance use among young transgender women in the USA	Quantitative longitudinal research	1. Recent incarceration experience amplify substance use. 2. Incarceration rate is high in young transgender women. 3. Both structural and individual risk factors predict incarceration and poor health.	1. Structural and individual risk factors 2. Need for multilevel interventions
6	2019	Hotton et al.	Exposure to community violence and substance use among Black men who have sex with men: examining the role of psychological distress and criminal justice involvement	Quantitative research	1. Over 90% of young Black MSM reported lifetime exposure to community violence, and 41% had experienced criminal justice involvement. 2. Exposure to community violence was positively with both psychological distress and problematic substance use.	1. Impact of structural violence 2. Interconnection between mental health and criminal justice
7	2020	English et al.	Intersectional social control: The roles of	Quantitative research by using Understandi	1. Both incarceration and police discrimination were independently	1. Structural and institutional oppression. 2. Mental health and

			incarceration and police discrimination in psychological and HIV-related outcomes for Black sexual minority men	ng New Infections through Targeted Epidemiology study (UNITE)	associated with higher levels of psychological distress and greater HIV-related risk behaviors. 2. Intersectional discrimination (race, sexuality and criminal justice)	psychological distress 3. Behaviors related to HIV and other infectious diseases.
8	2020	Scheidell et al.	Incarceration, social support networks, and health among black sexual minority men and transgender women: evidence from the HPTN 061 Study.	Quantitative research by using secondary data analysis of HPTN 061 Study.	1. Recent incarceration significantly reduced both medical and financial social support networks 2. Smaller support networks were linked to greater depressive symptoms and increased sexual risk behaviors. 3. Participants with larger social networks showed better health engagement. 4. The study revealed incarceration as a structural barrier to maintaining supportive relationships and accessing care among Black SGM and transgender women.	1. Disrupted social support 2. Mental health burden 3. Structural inequality and marginalization
9	2021	Harvey et al.	Minority stress, psychosocial health, and survival among gay and bisexual men before, during, and after incarceration	Qualitative study by using semi-structured, in-depth interviews with 20 formerly incarcerated gay and bisexual men in New	1. Gay and bisexual men are incarcerated at nearly twice the rate of the general male population. 2. Minority stress plays a central role in increasing incarceration risk and shaping psychosocial challenges during and after	1. Post-release stigma and challenges to social reintegration. 2. Policy and public health implications for supporting gay and bisexual men. 3. Minority stressors as catalysts for incarceration and psychosocial harm.

				York City	<p>incarceration.</p> <p>3. Identity management both protected against and exposed them to further stress and stigma.</p> <p>4. The study calls for public health interventions addressing minority stress at all incarceration stages.</p>	
10	2022	Clark et al.	Mental Health Among Sexual and Gender Minority Youth Incarcerated in Juvenile Corrections	Quantitative cross-sectional study by using Minnesota Student Survey data	<p>1. Higher proportion of incarcerated youth identified as SGM individuals compared to public school youth.</p> <p>2. Incarcerated SGM youth reported significantly higher rates of suicidal ideation, suicidal attempt, and self-harm.</p> <p>3. Depressive symptoms were elevated among SGM youth regardless of incarceration status.</p>	<p>1. Mental health disparities.</p> <p>2. Intersectional vulnerability and compound disadvantage.</p> <p>3. Importance of institutional support for SGM youths in correctional systems</p>
11	2022	Harvey et al	Availability of Accessible Representative Health Data to Examine Sexual and Gender Minority Disparities in Incarceration and Its Health Implications in the United States,	Data-based review and secondary analysis (Interview, secondary data analysis and systematic review)	<p>1. Life time incarceration rates among SGM populations were significantly higher than heterosexual populations</p> <p>2. To highlight key data gaps in public health research on incarceration and health disparities among marginalized minority</p>	<p>1. Disproportionate incarceration of SGM individuals.</p> <p>2. Data limitation in studying SGM individuals.</p> <p>3. Lack of nationally representative data.</p>

			2010–2020		groups. 3. To indicate lack of standardized, representative data on incarceration among gender minorities	
12	2022	Gerke et al.	Help is available: supporting mental wellness through peer health navigation with young Black men who have sex with men with HIV	Longitudinal mixed-methods, non-experimental study (Quantitative survey and qualitative interviews)	1. There is no statistically significant improvement in mental health symptoms with higher intervention engagement, though those with more depressive symptoms attended fewer sessions. 2. Qualitative data showed positive perceived effects, participants valued peer support and emotional connection. 3. Over 25% of participants had clinically significant depression, anxiety, and nearly half reported moderate or higher PTSD symptoms.	1. Peer-based mental health support 2. Barriers to care engagement 3. Psychosocial resilience and trust 4. Training needs for peer health navigators
13	2022	King et al.	Structural needs, substance use and mental health among transgender and nonbinary young adults in the San Francisco Bay area: findings from the Phoenix	Longitudinal quantitative study	1. Incarceration history is one of structural needs. 2. Greater structural needs were associated daily marijuana use and suicidal ideation. 3. Unmet structural needs were associated with depressive symptoms.	1. Structural vulnerability 2. Mental health and substance use 3. Need for multisector support

			Study			
14	2022	Hughto et al.	Victimization within and beyond the prison walls: a latent profile analysis of transgender and gender diverse adults	Quantitative study (Online survey)	<p>1. High victimization significantly increased the likelihood of lifetime incarceration.</p> <p>2. Transgender women are more likely to have been incarcerated.</p> <p>3. HIV-positive and visibly gender non-conforming individuals experienced higher victimization levels in prison.</p>	<p>1. Structural inequality</p> <p>2. Cycle of victimization</p> <p>3. Need for inclusive intervention</p>
15	2024	Feelemyer et al.	Impact of decarceration plus alcohol, substance use, and mental health screening on life expectancies of Black sexual minority men and Black transgender women (BSMM/BTW) living with HIV in the United States: A simulation study based on HPTN 061	Quantitative study by using secondary data analysis	<p>1. Baseline life expectancy (LE) for BSMM/BTW with HIV was 61.3 years, notably lower than the general positive population.</p> <p>2. Reducing incarceration by 25%-100% could increase LE by 0.29-1.08 years.</p> <p>3. To combine comprehensive screening and treatment will extend LE by 1.52 years.</p>	<p>1. Structural inequality and incarceration</p> <p>2. Mental health and substance use burden</p>