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Systematic Review

Underexplored Key Population: The Impact of Substance Abuse on the Health and Well-Being of Male Sex Workers—A Systematic Review

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Abstract: Research has primarily focused on female sex workers, leaving a large gap in our understanding of the factors affecting the welfare of male sex workers (MSWs). The purpose of this study was to review the body of research on how substance addiction affects MSWs' health and welfare. Using Google Scholar, PubMed, Science Direct, Cochrane Library, Medline, and CINAHL, a systematic search was carried out. Included was all the research on the effects of drug misuse on the health and happiness of sex workers. The methodology for conducting systematic reviews developed by the Joanna Briggs Institute was applied in this review. The research encompassed English-language papers authored between 2000 and 2024 to guarantee a thorough analysis of current patterns and breakthroughs in the domain, mirroring the current obstacles and progressions in tackling substance addiction among male sex workers. Exclusion criteria were developed to guarantee the relevance and rigor of the included research, whereas inclusion criteria were set based on demographics, exposure, and results. Nineteen studies that met the inclusion criteria were found during the review. This study revealed three main themes: factors contributing to substance abuse among male sex workers; the correlation between substance abuse and mental health among sex workers; and the correlation between substance abuse and the incidence of STIs, including HIV. This study highlights the urgent need for comprehensive, inclusive approaches to address the specific needs of MSWs, ultimately aiming to improve their quality of life and reduce health disparities.

Keywords: male sex workers; substance abuse; health impact; well-being; mental health; stigma

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1. Introduction

Male sex workers' (MSWs') health and wellness is crucially important yet often overlooked in comparison to other populations, such as female sex workers (FSWs) and the general public [1]. While both male and female sex workers face challenges in their line of work, the experiences of MSWs remain underexplored despite their unique vulnerabilities [2]. One significant issue that negatively affects the health and well-being of MSWs is substance abuse, which frequently coexists with other factors, such as mental health challenges and exposure to violence [2]. Consequently, substance abuse among MSWs has far-reaching consequences, contributing to poor physical and mental health outcomes and increasing the risk of sexually transmitted infections (STIs) and HIV [1]. Substance use refers to the consumption of drugs or alcohol without necessarily leading to harmful effects, while substance abuse involves the excessive or harmful use of these substances, often resulting in negative health, social, or legal consequences [2]. However, the scarcity of research specifically focused on MSWs exacerbates this issue. Most studies group MSWs within broader research on gay men, other men who have sex with men (MSM), or FSWs, which limits a nuanced understanding of their behaviors, living environments, and healthcare needs [2]. In contrast, female sex workers have been the subject of more research and interventions, giving them a slight advantage in access to healthcare resources and social

support [1]. Regardless of their sexual orientation, MSWs typically provide services to other males and infrequently refer to themselves as such, preferring to be called by local or worldwide monikers, such as rent boys or escorts [2]. While the global HIV pandemic is declining, recent data indicate a persistent or even rising HIV burden among certain male sex workers [3]. Interestingly, this lack of visibility in research and social awareness further complicates their access to appropriate health services. Furthermore, Kuyper et al. discovered that men who worked in the sex trade had a markedly higher likelihood of being heavy cocaine injectors, smoking crack, borrowing syringes, reporting inconsistent condom use, and being HIV positive compared with those not involved with the sex trade but who are still IV cocaine users [4]. Similarly, MSWs who traveled from Houston to other cities and worked as sex workers in other locations reported using drugs, both injectable and noninjected, more frequently than a group of MSWs who did not travel, according to Williams et al. [5]. The research on stigma and coping among MSWs is a subset of a broader corpus that examines mental health among those who face concealable stigma, such as being a member of a sexual minority, a sex worker, HIV-positive, or possessing other potentially discrediting or concealable traits. Therefore, MSWs may be more susceptible to mental health issues than those who have covert stigmas [6]. The persistent stress and social marginalization that people who use stigma-management techniques frequently suffer may be connected to these poor mental health outcomes [7].

There is a significant gap in research focusing exclusively on male sex workers (MSWs), particularly when compared to the extensive studies available on female sex workers. The lack of research dedicated to MSWs limits the understanding of their unique experiences and challenges. Additionally, the scarcity of longitudinal data complicates efforts to establish causal relationships between substance use and its long-term effects on health and well-being. Furthermore, the absence of qualitative studies exploring the lived experiences and personal narratives of MSWs prevents a deeper insight into their psychosocial dynamics. Therefore, the purpose of this study was to review and investigate the effects of substance misuse on the health and welfare of male sex workers.

2. Material and Methods

2.1. Study Design

The evidence on the effects of substance misuse on the health and well-being of male sex workers was compiled through a systematic review. The Joanna Briggs Institute's (JBI) guidelines [8] were followed in conducting this review. In compliance with the pertinent standards and regulations in Ethics Approval [9], the PRISMA systematic review report checklist was utilized to present this study's findings. The following research question, therefore, served as the guide for this study:

- How does substance abuse affect the health and overall well-being of male sex workers (MSWs)?

2.2. Study Selection

Using a structured search strategy, Google Scholar, PubMed, Science Direct, Cochrane Library, Medline, and CINAHL were searched in April 2024. The full search strategy was the following: (1) **Google Scholar**: "substance abuse/substance use" AND "male sex workers" AND ("health outcomes" OR "mental health" OR "STIs" OR "risk behaviours"); (2) **PubMed**: ("substance abuse/substance use" [MeSH Terms] OR "substance use/substance use" [All Fields]) AND ("male sex workers" [All Fields] OR "male commercial sex workers" [All Fields]); (3) **Science Direct**: "substance abuse/substance use" AND "male sex workers" AND ("health outcomes" OR "mental health" OR "addiction"); (4) **Cochrane Library**: "substance abuse" AND "male sex workers"; (5) **Medline**: ("substance abuse" [MeSH Terms] OR "substance use" [All Fields]) AND ("male sex workers" [All Fields] OR "male commercial sex workers" [All Fields]); (6) **CINAHL**: ("substance abuse" OR "substance use") AND ("male sex workers" OR "male commercial sex workers"). In this study, the terms "substance use" and "substance abuse" were used interchangeably

throughout the search process across all databases used to capture a comprehensive range of studies. While "substance abuse" may have a diagnostic component, the term "substance use" was also included to ensure that studies addressing the broader spectrum of substance-related behaviors were identified. This approach was taken to avoid limiting the search to only those studies focused on diagnosable abuse and to ensure that we captured all the relevant literature related to substance use, including non-diagnostic use and dependency.

2.3. Criteria Inclusion

The searches resulted in the retrieval of a total of 704 studies. Five articles were not retrieved due to the online access restriction. The title and abstract of the remaining studies were screened for relevance to the present study's objectives. Therefore, only 19 articles met the inclusion criteria. The selection process for the studies is shown in Figure 1 [9]. The authors utilized the Population, Exposure, and Outcome (PEO) mnemonic for eligibility inclusion criteria rather than the PICO [10]. This decision was made because our focus was on exploring the health and well-being outcomes associated with substance abuse among male sex workers without the presence of a direct intervention or comparison group. The PEO framework allowed for a more appropriate approach for capturing the complexity of the population and the exposure of interest (substance abuse), aligning with the nature of the research question. Table 1 below shows the inclusion and exclusion criteria.

Table 1. Summary of eligibility criteria.

Criterion	Inclusion Criteria	Exclusion Criteria
(P) Population/Participants	➢ Male sex workers (MSWs) of all ages and backgrounds; ➢ Studies focusing specifically on MSWs engaged in sex work.	➢ Female sex workers or transgenders, unless the study also includes a significant focus on MSWs; ➢ Studies not focusing on MSWs.
(E) Exposure	➢ Studies that examine substance abuse among MSWs, including but not limited to drug use and alcohol consumption; ➢ Research exploring patterns, frequency, reasons for substance use, and types of substance used.	➢ Studies that do not address substance abuse or where substance abuse is not a primary focus; ➢ Non-substance-related exposures unless directly relevant to substance abuse among MSWs.
(O) Outcome	➢ Studies investigating health outcomes related to substance abuse among MSWs.	➢ Studies not reporting on health outcomes related to substance abuse; ➢ Outcomes not directly related to substance abuse among MSWs.

2.4. Quality Appraisal

The authors also made use of JBI's critical assessment. Two independent reviewers (Mokhwelepa and Sumbane) evaluated each study for methodological quality before it was reviewed by a third reviewer (G.B.). Every criterion received a score (YES = 2, NO = 1, UNCLEAR = 0), and each article received a total score of 20. JBI's criteria consist of 10 questionnaires [8]. Following that, percentages were calculated using the scores. Any differences of opinion among the reviewers were settled via conversation. Table 2 below displays a critical appraisal of the work. All the studies were of high quality, with the highest rate being 100%.

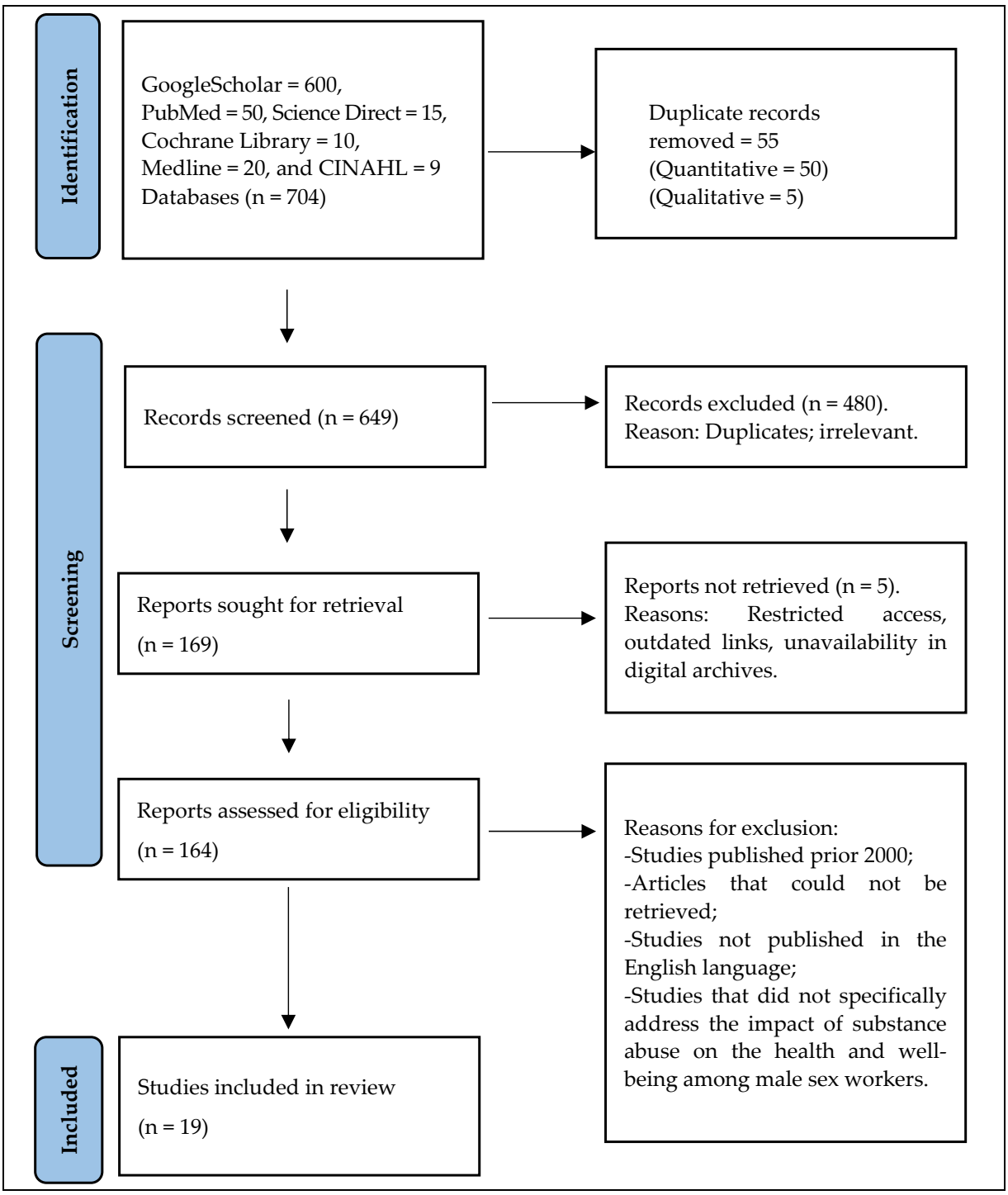

Figure 1. A flow chart diagram representing the search strategy [9].

Table 2. Critical appraisal [8].

Citation	**Criterion**											
	1. Is there congruity between the stated philosophical perspective and the research methodology?	2. Is there congruity between the research methodology and the research question or objectives?	3. Is there congruity between the research methodology and the methods used to collect data?	4. Is there congruity between the research methodology and the presentation and analysis of data?	5. Is there congruity between the research methodology and the interpretation of results?	6. Is there a statement locating the researcher culturally or theoretically?	7. Is the influence of the researcher on the research, and vice versa, addressed? **Low code**	7. Is the influence of the researcher on the research, and vice versa, addressed? **Reverse code**	8. Are participants and their voices adequately represented?	9. Is the research ethical according to current criteria, or for recent studies, is there evidence of ethical approval by an appropriate body?	10. Do the conclusions drawn in the research report flow from the analysis or interpretation of the data?	Results
Curtis et al. [11].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Cusick et al. [12].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Niccolai et al. [13].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Yu et al. [14].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Minichiello et al. [15].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Miller et al. [16].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Druckler et al. [17].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Iverse et al. [18].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Koken and Bimbi [19].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Mimiaga et al. [20].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Benoit et al. [21].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Mimiaga et al. [22].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
McCabe et al. [23].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Smith et al. [24].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Minichiello et al. [25].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Yu et al. [26].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Timpson et al. [27].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Bellester-Arnal et al. [28].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)
Cortez et al. [29].	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	20 (100%)

2.5. Data Extraction and Analysis

This process began with the extraction of relevant qualitative data from the included studies, focusing on text related to our research questions. We then systematically coded the data, assigning labels to segments that pertained to specific concepts or ideas. These initial codes were aggregated into broader categories, from which we identified overarching themes that captured significant patterns and insights across the studies. The themes were refined by reviewing and revisiting the coded data to ensure they accurately represented the findings and were comprehensive and distinct. Finally, we synthesized the themes to provide a coherent summary of the findings, highlighting how they relate to our research objectives and offering a meaningful synthesis of the qualitative evidence. We utilized a thematic qualitative analysis to develop the themes. As seen in Table 3, two researchers (Mokhwelepa and Sumbane) extracted data from a few papers using a typical Microsoft Excel spreadsheet. The ensuing information was acquired: authors and the year of publication, the research design, the location and country, the age range, the population, the participants' gender, and the results.

Table 3. Summary of included studies.

Authors	Study Design	Setting/Country	Age Range	Population (n)	Gender Participants	Outcomes
Curtis et al. [11]	Qualitative Meta-Synthesis	-	At least above 18	66	MSWs	Discrimination, stigma, unprotected sex, and alcohol use.
Cusick et al. [12].	Qualitative study	England	18–24	125	MSWs and FSWs	High consumption of drug use.
Niccolai et al. [13].	Qualitative study	Russia	At least above 18	20	MSWs	Suboptimal condom uses and alcohol consumption
Yu et al. [14].	Cross-sectional	Asia	16–35	710	MSWs	High level of drug use
Minichiello et al. [15].	Cross-sectional	Australia	Above 18	185	MSWs	Majority consumed alcohol, tobacco, marijuana, and ecstasy.
Miller et al. [16].	Cross-sectional	Guatemala	Above 18	1077	MSWs, transgender sex workers (TSW), cis-gender men.	Male sex workers were twice as likely to use illicit drugs or experience physical violence and six times as likely to experience forced sex.
Drückler et al. [17].	Cross-sectional	Netherlands	Above 18	164	MSWs, TSW	High positive cases of STIs and illicit drugs.
Iversen et al. [18].	A systematic Review	-	Above 18	86	MSWs, FSWs, TSW	Increased rates of STI and HIV, alcohol and substance use.
Koken, and Bimbi [19].	Book Chapter	-	-	-	MSW	Mental health challenges among MSWs.
Mimiaga et al. [20].	Cross-sectional	Northeastern U.S.	18 or older	100	MSWs	Internet escorts and street-based MSWs are likely to experience psychosocial problems and engage in HIV sexual risk with male clients.
Benoit et al. [21].	Cross-sectional	USA, Australia, Canada	18 or older	600	MSWs	Data show positive associations between sex work, perceived stigma, and socially less acceptable drug use (for example, heroin and cocaine).
Mimiaga et al. [22].	Qualitative	United States.	18 or older	32	MSWs	Inconsistent condom use, high rates of unprotected sex
McCabe et al. [23].	Quantitative	Dublin	18 or older	12	MSWs	Dependence on heroin
Smith et al. [24].	Quantitative	U.S.	18 or older	30	MSWs	Drug use and mental health problems were relatively frequent.
Minichiello et al. [25].	Cross-sectional	Australia	18 or older	2087	MSWs	High consumption of marijuana, alcohol, and other drugs

Table 3. *Cont.*

Authors	Study Design	Setting/Country	Age Range	Population (n)	Gender Participants	Outcomes
Yu et al. [26].	Quantitative	Vietnam	16–35	710	MSWs	Substantial overlap between substance use and sexual risk
Timpson et al. [27].	Qualitative	Harris	18 or older	179	MSWs	Many tested HIV positive
Ballester-Arnal et al. [28].	Cross-sectional	Spain	18–35	100	MSWs	Drug consumers indicated a higher HIV risk perceived and lower perceived influence of substance use on condom use negotiation.
Cortez et al. [29].	Quantitative	Brazil	18 or older	86	MSWs	Male sex workers with inconsistent condom use showed greater involvement with criminal activities, higher reward dependence level and more frequent self-report of being HIV-positive.

2.6. Characteristics of Included Studies

The primary focus of this investigation was male sex workers. Nineteen studies in all, all published between 2000 and 2024, were chosen. Between 2000 and 2015, additional studies were completed, and it was discovered that the United States and Australia have undertaken the most studies regarding the effects of substance use on the well-being of male sex workers. As a result, Table 4 shows the features of the studies that were included.

Table 4. Summary characteristics of included studies.

Year of Publication (n = 19)	Frequency	Percentage (%)
2000–2015	12	63%
2016–2020	4	21%
2021–2024	3	16%
Country (n = 19)	**Frequency**	**Percentage (%)**
England	1	5.26%
Russia	1	5.26%
Asia	1	5.26%
Australia	3	15.79%
Guatemala	1	5.26%
Netherlands	1	5.26%
U.S.	3	15.79%
USA.	1	5.26%
Canada	1	5.26%
Dublin	1	5.26%
Vietnam	1	5.26%
Harris	1	5.26%
Spain	1	5.26%
Brazil	1	5.26%
Study designs used (n = 19)	**Frequency**	**Percentage**
Cross-sectional	8	42.11%
Quantitative	5	26.32%
Qualitative	4	21.05%
Systematic Review	2	10.53%

3. Results

Only nineteen studies were included in this study. This reflects the limited but emerging body of research on this vulnerable group [1]. It highlights the need for more extensive exploration in future studies. Additionally, the findings demonstrate how substance abuse significantly contributes to adverse health outcomes, including mental health issues and increased risk of STIs and HIV, which disproportionately affect MSWs [21]. Three main themes emerged from the studies: (1) factors contributing to substance abuse among male

sex workers; (2) mental health consequences of substance abuse among male sex workers; and (3) the correlation between substance abuse and the incidence of STIs, including HIV.

3.1. Theme 1: Factors Contributing to Substance Abuse among Male Sex Workers

Male sex workers' (MSWs') substance misuse is influenced by a number of elements, which are indicative of a complex interaction between social, economic, and psychological forces [11–14]. For instance, six out of 12 (50%) of MSWs in the study were found to be alcohol-dependent [13]. In comparison, research indicates that alcohol dependence among female sex workers is generally lower, at around 30%, and in the general population, it is even lower, at approximately 10% [14]. The high degree of discrimination and stigma experienced by MSWs is one important reason [15]. Because of their feelings of loneliness, guilt, and low self-worth brought on by this social marginalization, some people turn to drugs and/or alcohol as a coping mechanism. Substance use is sometimes used as a way for them to escape the strains of their existence due to the harsh reality of their job environment, which may include violence and exploitation [16]. Moreover, the accessibility of drugs within their social networks, which are frequently entwined with their workplaces, can encourage and normalize drug use [17]. For instance, MSWs may feel under pressure to use drugs in environments where their peers use them frequently in order to fit in or meet the demands of their way of life.

According to a related study, there may be negative effects from using illegal drugs while working in the sex industry, such as increased susceptibility to STIs and HIV, violence, stigma and prejudice, criminalization, and exploitation [18]. For instance, drug usage, both legal and illegal, has been linked to violence against sex workers. Specifically, there is a dearth of information regarding transgender and male sex workers.

3.2. Theme 2: Correlation between Substance Abuse and Mental Health among Sex Workers

Substance abuse and mental health among sex workers, particularly male sex workers (MSWs), are related in a way that underscores the complex difficulties that this demographic faces. While similar trends are found among female sex workers, studies show that FSWs experience higher levels of mental health disorders compared with male sex workers and the general population, further exacerbated by societal stigma and a lack of targeted interventions [14]. A common coping strategy for underlying mental health issues like anxiety, depression, and illnesses linked to trauma is substance abuse [19]. Numerous sex workers deal with serious life difficulties, such as unstable economies, social stigma, and violent or abusive pasts. Research has shown, for example, that MSWs frequently report greater rates of anxiety and sadness, both of which can be made worse by substance use [20]. Substance addiction may momentarily reduce emotional pain, but it eventually worsens mental health outcomes, producing a vicious cycle that is difficult to break [20].

In addition, the stigma associated with substance abuse and sex work exacerbates social isolation, which in turn exacerbates mental health problems [21]. Many MSWs are reluctant to seek the appropriate support and treatment because they fear prejudice in healthcare environments. Avoidance like this can make it more difficult to address mental health and drug use disorders effectively. Studies have indicated that mental health workers who use drugs or alcohol frequently do not seek mental health care because they are afraid of being stigmatized or prosecuted [20]. In one study, for instance, substance users reported much lower rates of seeking mental health care than non-users among sex workers in urban regions. Their general well-being and capacity to engage in safer sexual practices are also impacted by this lack of access, which exacerbates their mental health issues.

It is not surprising that substance misuse seems to be more common among MSWs, given the high prevalence of mental health concerns documented across samples of MSWs. Alcohol and drug abuse may make it easier for male sex workers to interact with clients [23,30]. On the other hand, particularly among street-based sex workers, sex may occasionally be traded for drugs in order to get funds for drug purchases [23]. However, it can be challenging to determine a clear causal link between male sex work and

substance misuse due to the limitations of the majority of research involving MSWs. The kinds of substances used and the patterns of usage vary throughout the samples, even though substance use among MSWs seems to be quite widespread in public places like the street. For instance, a substantial prevalence of alcohol issues was found in one study comparing street-based to internet-based MSWs in an urban center in the northeastern U.S., with 50% of men screening as potentially alcohol-dependent [22]. Moreover, half of the males in a sample of twelve MSWs operating on Dublin's streets tested positive for alcohol dependence, according to the data [23].

However, it is challenging to pinpoint the exact source of mental health outcomes when using cross-sectional samples. It seems that MSWs are more susceptible to mental health issues overall. There were substantial rates of psychological distress reported in one sample of thirty male escorts who worked at a rural escort agency in the northeastern United States; 14 of the 30 men scored in the clinical range. Mental health problems are even more common among MSWs who live on the streets [24]. Over one-third of a sample of thirty-two MSWs in an urban center in northern Pennsylvania had received a diagnosis of depression at some point, and the MSWs who worked on the streets were the most likely to have received inpatient psychiatric treatment in the past [22]. Two-thirds of a small sample (n = 12) of street-based MSWs in Dublin, Ireland, had severe to moderate depression, and half had suicidal thoughts [23].

3.3. Theme 3: Correlation between Substance Abuse and the Incidence of STI, Including HIV

It is well known that certain behaviors, such as drug and alcohol use and sexual activity, often co-occur. This is notably higher than rates found in female sex workers or the general population, where HIV prevalence is lower. For example, HIV prevalence among female sex workers is approximately 36% compared with a significantly higher prevalence among MSWs, which ranges from 50 to 60% in certain studies [25]. Researchers contend that the use of these substances is often associated with hazardous sexual behavior and, thus, a risk factor for acquiring sexually transmitted infections (STIs) since it may impair judgment and decision-making [25,26]. There is a clear correlation between substance misuse and a higher incidence of HIV and STIs among male sex workers (MSWs). Drug and alcohol abuse frequently weakens inhibitions and affects judgment, which can result in risky sexual practices, including using condoms inconsistently or having numerous partners at once [27]. For example, research has shown that MSWs who use drugs, especially stimulants like cocaine or methamphetamine, are more likely to have unprotected intercourse. Their susceptibility to STIs, including HIV, is increased by this practice [28]. Studies have shown that MSW has a higher rate of HIV prevalence, and substance use is a risk factor. The findings of this systematic review have highlighted the strong correlation between drug usage, particularly intravenous drug use, and needle sharing, which heightens the risk of HIV infection. Because MSWs may prioritize drug use over safe sexual practices, the dynamics of substance abuse create an atmosphere where the risk of obtaining STIs increases [29].

Furthermore, the psychosocial aspects of substance dependence greatly intensify the difficulties MSWs encounter in obtaining preventive services and healthcare. The combined stigma of drug abuse and sex work can cause severe social isolation, which in turn deters people from getting the necessary medical attention [15]. For instance, drug abusers may completely avoid hospital environments out of fear of being judged or prosecuted in communities where MSWs are subjected to prejudice and marginalization. Because of this avoidance, untreated STIs may worsen and lead to more serious health issues, such as the emergence of HIV.

4. Discussion

This systematic review aimed to review the available literature on the intricate relationship between substance abuse and various health outcomes among male sex workers (MSWs). One significant finding is the correlation between substance abuse and the in-

creased incidence of sexually transmitted infections (STIs) and HIV [20]. Compared with the general population, MSWs exhibit a notably higher prevalence of STI and HIV due to heightened risk behaviors associated with substance abuse. For instance, the prevalence of HIV among MSWs is significantly higher than that in the general population, where rates are substantially lower [29]. The data suggest that substance use often leads to impaired judgment and riskier sexual behaviors, such as inconsistent condom use and multiple sexual partners [29,31]. Studies indicate that MSWs who engage in drug use, particularly stimulants, are at a heightened risk of engaging in unprotected sex, subsequently increasing their vulnerability to STIs and HIV. This is in stark contrast to female sex workers, who, while also at high risk, generally show lower rates of drug-related sexual risk behaviors [32]. For instance, studies indicate that MSWs who engage in drug use, particularly stimulants, are at a heightened risk of engaging in unprotected sex, subsequently increasing their vulnerability to STIs and HIV. This concerning trend underscores the urgent need for targeted public health interventions that address the dual issues of substance use and sexual health among this population.

Furthermore, the review reveals a strong link between substance abuse and the mental health challenges faced by MSWs. Many individuals in this demographic utilize substances as a means of coping with the psychological toll of their experiences, including trauma, depression, and anxiety [29]. The mental health issues among MSWs are often more severe compared with those in the general population and female sex workers. For instance, studies have shown that the rates of depression and anxiety among MSWs are significantly higher than those reported for female sex workers and the general public [31]. It is important to note that trauma, particularly related to experiences of sex work and substance abuse, may be a significant explanatory factor behind this correlation [33]. Trauma often precedes substance use, with individuals using substances to self-medicate and manage the psychological impact of their traumatic experiences [34]. This suggests that while substance abuse and mental health issues are correlated, trauma might be a central factor linking these two issues. The correlation between substance use and mental health issues should be understood within the context of this trauma. As noted, correlation does not imply causation, and while the review highlights significant associations, further research is needed to explore the causal pathways and underlying mechanisms [35]. Trauma and its role in both substance abuse and mental health challenges must be more thoroughly investigated to design effective interventions [36]. The stigma associated with both sex work and substance use often leads to social isolation, which can exacerbate mental health issues [37]. This isolation and the compounded stigma place MSWs at a higher risk of untreated mental health conditions compared with other populations facing similar issues [38].

While this review primarily synthesizes the existing literature, it is worth noting that exploring specific factors contributing to substance abuse among MSWs and evaluating harm reduction strategies are important areas for future research. For instance, harm reduction strategies such as safe consumption spaces and accessible mental health services have shown promise in improving outcomes for substance users in general [39,40]. However, these approaches are speculative in the context of MSWs until further research confirms their effectiveness within this population. Future investigations should focus on identifying the unique factors contributing to substance abuse among MSWs and evaluating targeted harm-reduction interventions [41]. This approach will help tailor public health strategies to better address the specific needs of MSWs and improve their overall health outcomes.

The practical implications of this study are substantial. By highlighting specific factors contributing to substance abuse among male sex workers (MSWs), this review underscores the need for targeted interventions that address both substance use and associated mental health challenges [42]. Evidence-based interventions such as harm reduction strategies, including supervised consumption spaces and access to mental health services, have proven to be effective in similar populations and could significantly benefit MSWs [43]. For example, supervised consumption facilities have been shown to reduce overdose deaths and increase access to health services among individuals with substance use disorders.

Moreover, there is a critical need for policies that reduce stigma and promote inclusivity. Public awareness campaigns aimed at decreasing the stigma surrounding both sex work and substance use can encourage MSWs to seek support without fear of discrimination [44]. Additionally, implementing comprehensive sexual health education tailored to MSWs could address their unique risk factors and improve health outcomes. Future research should explore the effectiveness of these interventions specifically for MSWs and identify any gaps in current practices. Policymakers should also consider developing policies that support the integration of mental health services with substance abuse treatment and address the legal and social barriers faced by MSWs.

5. Study Limitation

This study's limitations include several key factors that may impact the findings. First, the limited scope of existing research often focuses on specific geographic regions or populations, which restricts the generalizability of the results to male sex workers (MSWs) in other contexts. Additionally, variability in the definitions of terms such as "substance abuse" and "male sex worker" can lead to inconsistencies across studies, complicating comparisons and the synthesis of data. Many studies also rely on self-reported data, which are subject to bias due to stigma and the fear of judgment, potentially resulting in underreported substance use and health issues. Furthermore, a reliance on cross-sectional designs means that causal relationships between substance use and health outcomes cannot be established, limiting our understanding of their interdependencies. The absence of longitudinal studies leaves the long-term effects of substance use on MSWs poorly understood. Only studies published in the English language were reviewed.

Moreover, another limitation of this study is the potential confounding effect of male-on-male sexual contact among male sex workers (MSWs). Given that men who have sex with men (MSM) are at a higher risk for sexually transmitted infections (STIs) and HIV due to the nature of their sexual practices, this factor may contribute to the elevated infection rates observed in MSWs. This higher baseline risk in MSM populations complicates the interpretation of the relationship between substance abuse and STI/HIV incidence, as it is difficult to isolate the effects of substance abuse from the inherent risks associated with male-on-male sexual contact.

6. Conclusions

In conclusion, this systematic review underscores the critical interplay between substance abuse, mental health, and sexual health among male sex workers (MSWs). The findings reveal a significant association between substance use and an increased risk of sexually transmitted infections (STIs) and HIV. Additionally, this review highlights the mental health challenges faced by MSWs, which are often exacerbated by stigma and social isolation. These insights emphasize the urgent need for comprehensive interventions tailored to address the unique challenges faced by this population.

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