Received: 21 July 2021 | Revised: 30 November 2021 | Accepted: 23 December 2021

DOI: 10.1111/hsc.13716

Health and Social Care in the community WILEY

REVIEW ARTICLE

Violence and victimisation in the lives of persons experiencing homelessness who use methamphetamine: A scoping review

Rozelen Carrillo Beck MSc OT, OT Reg(Ont)[1] | Jessica Szlapinski MSc OT, OT Reg(Ont)[1] | Nicole Pacheco MSc OT, OT Reg(Ont)[1] | Shahriar Sabri Laghaei MSc OT, OT Reg(Ont)[1] | Roxanne Isard MLIS[2] | Abe Oudshoorn PhD, RN[3] | Carrie Anne Marshall PhD, OT Reg(Ont)[1]

[1]Social Justice in Mental Health Research Lab, Faculty of Health Sciences, School of Occupational Therapy, London, Ontario, Canada

[2]Weldon Library, Western University, London, Ontario, Canada

[3]School of Nursing, Western University, London, Ontario, Canada

Correspondence
Carrie Anne Marshall, Elborn College, Western University, 1201 Western Rd., London, ON N6H 1H1, Canada.
Email: carrie.marshall@uwo.ca

Funding information
This study was funded through an internal Social Sciences and Humanities Research Council of Canada Seed Grant provided by Western University (Grant # R5840A09).

Abstract

Methamphetamine (MA) use among individuals who experience homelessness has tripled in recent years. This is a problematic trend given the harmful impacts of this substance on health and social well-being. While there is a large body of literature on the relationship between substance use and trauma, little is known about the scope of existing empirical literature exploring this topic related to MA use. Anecdotally, MA is frequently associated with violence and victimisation, which may be related to stigma associated with using MA. However, little is known about the scope of empirical literature exploring violence and victimisation in the lives of individuals who experience homelessness and use MA. We conducted a scoping review to fill this gap in existing literature using Arksey and O'Malley's methodological framework. Our search was conducted between January 2021 and March 2021 and was deployed in seven databases: Medline, Embase, CINAHL, PsycINFO, Sociological Abstracts, Nursing and Allied Health and AMED. Two independent raters screened 700 titles and abstracts after the removal of duplicates. A total of 54 articles were subjected to a full-text review and 20 articles met the inclusion criteria. We generated two themes: *methamphetamine and victimisation* and *challenging behaviours*. Six (30%) of the included articles explored MA use in relation to violence, while 18 (90%) explored experiences of victimisation among persons experiencing homelessness. Our findings highlight that individual who experience homelessness and use MA are particularly vulnerable to experiences of trauma. Though existing literature does acknowledge the challenging behaviour associated with MA use, only three existing studies demonstrated a relationship between MA use and physical violence. Research exploring the impacts of MA use on victimisation among persons who experience homelessness, and the development of interventions for managing challenging behaviours associated with MA use are needed.

KEYWORDS
challenging behaviour, drug use, homelessness, mental health, trauma, violence

1 | INTRODUCTION

Homelessness continues to grow worldwide in response to the rising cost of housing and increased income inequality (International Monetary Fund, 2018; OECD, 2015). The number of individuals who experience homelessness ranges from at least 235,000 in Canada (Gaetz et al., 2016) to more than 580,466 in the United States (National Alliance on Ending Homelessness, 2021). In Europe, a range of methods are used to enumerate homelessness (Pleace et al., 2013), making comparisons challenging, yet it is generally acknowledged that homelessness has increased in almost all European countries over the past decade (FEANTSA & Fondation Abbe-Pierre, 2019). The health inequities experienced by individuals who are deprived of housing are well recognised in existing literature, and include high rates of physical and cognitive conditions, mental illness and substance use disorders (Canadian Population Health Initiative, 2009; Fazel et al., 2014; Hwang, 2001; Public Health Agency of Canada, 2006). Existing studies emphasise that persons who experience homelessness and live with mental illness and substance use disorders have complex needs, which when left unmet, have the potential to perpetuate the cycle of homelessness, decrease housing stability and prolong social and mental health suffering (Fazel et al., 2014; Frankish et al., 2005; Johnson & Chamberlain, 2008; Somers et al., 2015). Individuals who experience homelessness and use substances are a diverse group, and there is a need to uncover their specific experiences and needs in order to support the development of solutions and tailor services appropriately.

What is known about this topic?

- Persons who experience homelessness are exposed to victimisation and trauma to a disproportionate degree.
- Methamphetamine use has significantly increased among persons experiencing homelessness in recent years in high-income countries.
- Methamphetamine use has been historically associated with crime, violence and hostility.

What this paper adds?

- Physical and sexual victimisation are highly prevalent among persons who experience homelessness and use methamphetamine.
- Histories of sexual and physical abuse in childhood have been specifically associated with methamphetamine use among individuals who experience homelessness in existing empirical literature.
- Methamphetamine use has been associated with challenging behaviour that may be perceived as violent, yet existing studies have inadequately addressed this association.

1.1 | Methamphetamine and homelessness

Methamphetamine (MA) is a highly addictive stimulant that imposes serious impacts on physical, cognitive and psychosocial well-being (Uhlmann et al., 2014). In recent years, both public and academic attention has focussed on the growing problem of opioid use and overdoses among persons who experience homelessness (Yamamoto et al., 2019). This is for good reason given that individuals who experience homelessness are more likely to be dependent on opioids and are more likely to experience a fatal overdose than those who are housed (Yamamoto et al., 2019). Research related to MA use among individuals who experience homelessness, however, is comparatively lacking even though MA use is increasing. The 2020 World Drug report found that MA was on the rise in North America, Asia, New Zealand and Australia (United Nations Office on Drugs & Crime, 2020). In Europe, although MA market is smaller in scale compared with other stimulants such as cocaine and MDMA, MA production has been increasing, particularly in Czechia, Slovakia and Germany (European Monitoring Centre for Drugs and Drug Addiction, 2019). MA use among persons who experience homelessness has more than tripled in recent years, likely due to a lesser cost and more intense high when compared with other stimulants (Das-Douglas et al., 2008). The sharp rise in the number of persons who are unhoused and use MA is a serious public health problem because researchers, community providers and families of individuals who use MA suggest that its use may contribute to ongoing homelessness, and be associated with behaviours that impact negatively on health and social well-being (Casey, 2019). Additionally, the risk of serious health consequences including contracting sexually transmitted diseases, decreased cognitive functioning, psychosis, depression and physical decline increases for persons who use MA (Cretzmeyer et al., 2003; Martin et al., 2006). The use of MA combined with the known health disparities observed among individuals who experience homelessness place this population in a particularly vulnerable situation, and one that is likely to be deepened by the COVID-19 pandemic (Canadian Centre on Substance Use and Addiction, 2020).

Researchers have identified a relationship between MA use and violence and victimisation; however, this association is poorly understood (Brecht & Herbeck, 2013; Cretzmeyer et al., 2003). Existing studies have drawn associations between MA use and problematic behaviours including involvement with the criminal justice system, and the emergence of hostility (Nyamathi et al., 2014; Omura et al., 2014). Some of this research demonstrates that committing violence has been associated with MA use (Cretzmeyer et al., 2003; Darke et al., 2010). This linkage, however, has been reported with a lack of context surrounding this association and may contribute to stigma and the subsequent lack of targeted services for persons experiencing homelessness who use MA. In contrast, research has also identified that MA use has been linked to victimisation (Cretzmeyer et al., 2003; Darke et al., 2010; Larney et al., 2009; Riley et al., 2015). The rate of victimisation of persons who experience homelessness is five times higher than individuals who have never been deprived

of housing (Statistics Canada, 2015). Existing research also demonstrates an association between victimisation and longer length of homelessness (Lam & Rosenheck, 1998).

1.2 | The current study

Ultimately, while MA use is growing among people who experience homelessness and may mean harms for individuals themselves or for the community more generally, this concern has not received the dedicated academic attention that is given to opioid use and the opioid-related overdose epidemic. At the same time, anecdotally, service providers in the homelessness and housing sector are seeing MA use as a unique challenge. The range of studies exploring the relationship between the use of MA and violence and victimisation among persons who experience homelessness is unknown, and there is a need to identify the scope of existing literature on this topic. For the purpose of this review, we define victimisation as being harmed and/or injured through experiencing sexual, psychological and/or physical abuse and violence as physical force used to harm another individual. The proposed study is designed to address the following research question: What is the scope of existing empirical literature exploring violence and victimisation in the lives of persons who experience homelessness and use MA?

2 | METHODS

We used the six-stage method for conducting scoping reviews as outlined by Arksey and O'Malley (2005) to guide this study. We developed a search strategy in collaboration with an academic research librarian, a co-investigator on this study (R.I.), which was deployed on 22 January 2021 and completed March 2021. Following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Guidelines (Moher et al., 2010), we searched seven databases: Medline (OVID), Embase (OVID), CINAHL (EbscoHost), PsycINFO (OVID), Sociological Abstracts (ProQuest), Nursing and Allied Health (ProQuest) and AMED (OVID). We translated the search strategies using each database platform's command language, controlled vocabulary and appropriate search fields. Search terms related to the concepts MA use (e.g. Jib, crystal, methamphetamine) and homelessness (e.g. homeless*, houseless, unhoused) were combined with a Boolean 'AND'. In addition, we hand searched the reference lists of all included studies to identify any studies not captured using our search strategy. A sample of our Medline search is provided in Appendix S1.

We uploaded all citations into Covidence™ (Veritas Health Innovation, 2016), a cloud-based software programme used to organise abstracts and assist with collaborative review and analysis. Four members of our research team acted as two independent raters (R.C.B., J.S., N.P., S.S.L.) and assessed the eligibility of each article for inclusion by carrying out a title and abstract screen, followed by a review of full-text articles. At each phase, reviewers compared articles against a set of inclusion and exclusion criteria that had been agreed upon by all authors. Articles were considered for inclusion if they were: (a) focussed on violence and victimisation (material, physical and sexual) in the past or present; (b) related to the use of MA use among persons experiencing homelessness and/or a history of homelessness; (c) all ages; (d) studies that were conducted in middle to high income countries using World Bank criteria (World Bank Group, n.d.); (e) published from all years; and (f) all languages. We excluded the following: (a) non-empirical studies; (b) articles not subjected to peer review; (c) dissertations and theses; (d) conference abstracts; (e) studies focussed on sex work that did not explicitly include material, sexual or physical violence or victimisation; (f) studies focussed on criminal justice involvement unrelated to MA use; and (g) studies focussing on individuals who experience homelessness due to war or conflict. Any conflicts regarding study inclusion were resolved through a discussion between authors. If a consensus could not be achieved, the senior author acted as a third rater to resolve any conflicts (C.A.M.).

2.1 | Data extraction

Four members of our team acted as independent raters and extracted descriptive information from included studies (R.C.B., J.S., N.P., S.S.L.). Extracted data included: study design; study discipline; country and geographical context; year of publication, sample demographics (size, age, gender, race/ethnicity, Indigenous status, sexual orientation); pattern of homelessness; and clinical characteristics. Disagreements that emerged during this process were resolved through discussion and consensus by all raters (R.C.B., J.S., N.P., S.S.L.).

2.2 | Narrative synthesis

All included articles were uploaded to Dedoose©, a cloud-based qualitative data management programme (Sociocultural Research Consultants & LLC, 2018) to assist with conducting an inductive content analysis of included studies using strategies identified by Graneheim and Lundman (2004). Four members of our team (R.C.B., J.S., N.P., S.S.L.) acted as two independent raters for each article, by inductively coding relevant statements pertaining to violence and/or victimisation in the context of homelessness and MA use. These statements were subsequently organised into themes and refined through discussion and consensus by all raters and the senior author (R.C.B., J.S., N.P., S.S.L., C.A.M.).

3 | FINDINGS

Our search yielded 1,355 citations. A total of 700 remained after duplicates were removed. We eliminated 646 articles during the title and abstract screen. A total of 54 studies were selected and were utilised to full-text review. From this, 20 studies met criteria for inclusion in our final review. A PRISMA flow diagram detailing this process and reasons for exclusion are provided in Figure 1.

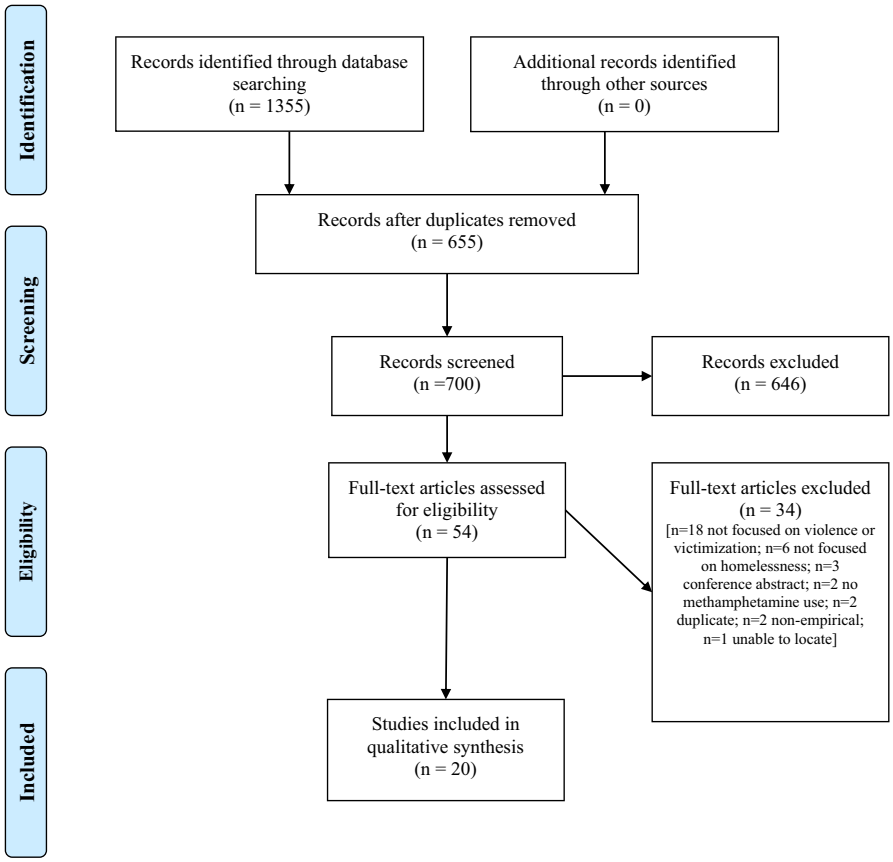

FIGURE 1 PRISMA flow diagram. PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses

3.1 | Study characteristics

A total of 20 empirical studies were included in this review. Of the studies included, $n = 16$ were quantitative (80%), $n = 3$ were qualitative (15%) and $n = 1$ used mixed methods (5%). Nearly half of the included studies were published in the USA ($n = 9$; 45%), followed by Canada ($n = 8$; 40%), Australia ($n = 2$; 11.7%), and Iran ($n = 1$; 5%). The majority of included studies were published in interdisciplinary journals ($n = 18$; 90%), followed by medicine ($n = 1$; 5%) and social work ($n = 1$; 5%). In total, included studies represented 7,456 participants, with studies including samples ranging from 12 to 1,019. A majority of the 20 included articles ($n = 14$; 70%) sampled from an adult population, with the remaining studies focussing on youth ($n = 6$; 30%). None of the included studies captured the experiences of children aged <16 years. Only four (20%) studies reported on the sexual orientation of participants. A total of 16 (80%) studies took place in an urban context, two in a rural context (12.5%), and a final two (12.5%) in a mixed urban/rural setting. A detailed description of all included studies is presented in Table 1.

3.2 | Narrative synthesis

We generated two overarching themes in our analysis, which characterises the scope of this body of empirical literature: (a) *Methamphetamine and victimisation* and (b) *Challenging behaviours*.

3.2.1 | Methamphetamine and victimisation

A total of 18 (90%) articles included in this review explored MA use and actual or potential victimisation among persons experiencing homelessness. We generated two subthemes that represent experiences of victimisation as reported in included studies: (a) experiences of trauma and (b) using MA to avoid victimisation. Each of these is described below. See Table 2 for a list of all studies included in this theme.

Experiences of trauma

A total of 18 (90%) articles included in this review identified that trauma was a common experience for individuals who were unhoused and used MA. Experiencing trauma was found to emerge from five distinct experiences: (a) *physical victimisation*; (b) *sexual victimisation*; (c) *histories of childhood abuse*; (d) *intimate partner violence*; and (e) *unspecified trauma*.

Physical victimisation. Authors of included studies indicated that physical victimisation was a primary source of trauma for individuals experiencing homelessness in the context of MA use ($n = 11$; 55%). These studies described the ways in which using MA created vulnerability for being the victim(s) of physical violence, in addition to physical harm as a by-product of MA use. See Table 2, which identifies the studies included in this sub-theme.

Authors of included studies identified that individuals who were deprived of housing experienced physical violence associated with their use of MA (Fast et al., 2014; Larney et al., 2009; Martin et al., 2006; Petering, Rhoades, Winetrobe, et al., 2017; Riley et al., 2015). Daily regular use of MA was associated with an increase in violent victimisation (Fast et al., 2014; Larney et al., 2009; Riley et al., 2015). One study explored the culture of 'Juggalos', fans of a musical group called 'Insane Clown Posse' (Petering, Rhoades, Winetrobe, et al., 2017). The authors identified that Juggalos were more likely to experience homelessness and use MA, and that these two factors placed them at increased risk of experiencing physical abuse (Petering, Rhoades, Winetrobe, et al., 2017). Martin et al. (2006) explored whether the use of MA among unhoused youth was associated with physical violence and fighting. Though 78.4% of unhoused youth who used MA in the past week and only 60.5% of unhoused youth not using MA in the past week reported experiences of physical violence and physical altercations in the previous week, the difference between these groups approached, but did not meet statistical significance (p =0.055; Martin et al., 2006). Two studies identified an association between MA use among women and being the victim of physical assault at the hands of non-intimate partners (Lorvick et al., 2014; Sadeghi et al., 2021). In one of these studies, women who were unhoused and living in Iran reported that pregnancy was associated with an increased risk of experiencing physical victimisation by strangers in public places (Sadeghi et al., 2021). Another study identified that individuals who were using MA were at risk of being victimised by law enforcement officers (Friedman et al., 2021). Specifically, Friedman et al. (2021) identified that individuals who were injecting MA were at risk of being physically assaulted by police following the discovery of syringes during personal searches. This was described by a participant in this study as follows:

> A cop does not want to find a syringe on you … he reaches into my pocket, and what does he find? Right, the syringe. So he thinks he's getting stuck, so what's he want to do? He wants to hit on me for a little bit. You know? I think I've been beat up by the cops more than I've been beat up by anybody else out here. (Friedman et al., 2021, p. 5)

While these aforementioned studies associated the use of MA among individuals experiencing homelessness with physical victimisation, others did not (Martin et al., 2009; Uhlmann et al., 2014). When comparing the use of a range of substances, for example, one study found there was no difference in experiences with violent victimisation between individuals who used stimulants including MA and those who used cannabis (Saddichha et al., 2015).

Sexual victimisation. A total of 10 (50%) of the included studies identified that MA use was associated with the experience of sexual trauma (see Table 2). Two of these studies highlighted that women who were unhoused and using MA were more likely to be a victim of sexual violence and unwanted sex (Lorvick et al., 2014; Lutnick et al., 2015). One study described the sexual abuse of women who were unhoused and using MA by police (Friedman et al., 2021). Another described how women living in Iran who were experiencing homelessness and using MA experienced sexual violence in public spaces, an experience that was identified to be especially common during pregnancy (Sadeghi et al., 2021). Semple et al. (2011) described how persons experiencing homelessness who traded sex for MA were forced or coerced into sex before the age of 18, an experience that continued into adulthood. Two studies focussing on homeless youth populations observed a connection between MA use and sexual victimisation (Bungay et al., 2006; Petering, Rhoades, Winetrobe, et al., 2017). In their study of 'Juggalos' using MA, Petering, Rhoades, Winetrobe, et al. (2017) reported a higher rate of sexual violence compared with youth who were also unhoused but not using MA or involved in the Juggalo culture. When comparing individuals with histories of incarceration with those who had never been incarcerated, researchers in one study identified that persons who had experienced homelessness and were using MA who had been incarcerated had significantly higher rates of adult sexual abuse (Saddichha et al., 2014). Recent sexual violence in one study has been associated with increased risk of future MA use (Riley et al., 2015). In one of the included studies, one participant described how their use of MA was associated with the experience of sexual assault: 'I was up for … 0.9 days. And that was one of the nights where I was taken advantage of by one of my dealers. Yuck.' (Bungay et al., 2006, p. 244). Though all of these studies identified an association between MA use and experiencing sexual victimisation, one study identified no significant difference in sexual abuse rates between individuals working in the sex trade who had experienced homelessness and used primarily cannabis or MA (Saddichha et al., 2015).

Histories of childhood abuse. Six (30%) studies explored histories of childhood victimisation amongst person who experience homelessness and use MA (see Table 2). Saddichha et al. (2014) studied persons experiencing homelessness with a history of incarceration and identified that both MA use and experiences of childhood abuse were potential risk factors for future incarceration. In their study of 'Juggalos', Petering, Rhoades, Winetrobe, et al. (2017) similarly found that Juggalos reported increased levels of childhood sexual abuse and displayed higher rates of MA use when compared with other youth who were unhoused. Three studies indicated that women using MA who had experienced homelessness reported an increased prevalence of childhood physical and sexual abuse (Lorvick et al., 2014; Lutnick et al., 2015; Semple et al., 2011). In contrast, Saddichha et al. (2015) compared individuals with experiences of homelessness who used stimulants (including MA) and cannabis, and found no differences in childhood trauma between individuals who used stimulants and cannabis. When focussing on differences between specific stimulants used by participants in this study, childhood physical abuse was more closely associated with greater crack cocaine use when compared with MA (Saddichha et al., 2015).

TABLE 1 Description of included studies ($n = 20$)

Authors (year) Country	Aim of study	Study design and methodology	Discipline
Bungay et al. (2006) Canada	To investigate the social context of street-involved youths' crystal MA use	Qualitative: general qualitative	Interdisciplinary
Fast et al. (2014) Canada	To understand street-involved youths' MA use in the urban drug scene	Qualitative: ethnographic	Interdisciplinary
Friedman et al. (2021) USA	To explore the relationship between abusive and violent policing among those who inject drugs and existing structural vulnerabilities	Mixed methods: exploratory sequential	Interdisciplinary
Jones et al. (2020) Canada	To investigate the link between substance use and the risk of psychosis and mortality among individuals living in precarious housing or homelessness	Quantitative: longitudinal prospective	Medicine
Larney et al. (2009) Australia	To explore the relationship of violent victimisation among persons who experience homelessness	Quantitative: cross-sectional	Interdisciplinary
Lorvick et al. (2014) USA	To explore the association between non-partner violence and women who use MA	Quantitative: cross-sectional	Interdisciplinary
Lutnick et al. (2015) USA	To explore the relationship between sex trade involvement, experiences of childhood and adult rape and sexual abuse symptomology among women who use drugs	Quantitative: cross-sectional	Interdisciplinary

Sample demographics	Pattern of homelessness	Clinical characteristics
Participants: 12 *Age*: 16–25 *Gender*: 5 male; 7 female *Race/ethnicity*: unspecified *Indigenous status*: unspecified *Sexual orientation*: unspecified *Urban/rural*: unspecified	All participants identified as unhoused and/or precariously housed youth	*Diagnosed with a mental health condition*: unspecified *MA use*: All participants used MA
Participants: 92 *Age*: 23 (median) *Gender*: 38 male; 29 female; 25 unspecified *Race/ethnicity*: 68% Caucasian; 25% aboriginal ancestry, 7% African Canadian *Indigenous status*: 25% Aboriginal ancestry *Sexual orientation*: unspecified *Urban/rural*: urban	97% of participants reported being homeless during the study	*Diagnosed with a mental health condition*: $n = 44$ *MA use*: $n = 55$
Participants: 548 *Age*: 44.45 (mean) *Gender*: 62.75% male; 37.25% female *Race/ethnicity*: 59% person of colour; 37% Hispanic *Indigenous status*: unspecified *Sexual orientation*: unspecified *Urban/rural*: rural	31.9% of participants identified as homeless	*Diagnosed with a mental health condition*: unspecified *MA use*: $n = 392$
Participants: 437 *Age*: 40.6 (mean) *Gender*: 340 male; 97 female *Race/ethnicity*: 59% White, 25.9% Indigenous, 14.4% other *Indigenous status*: 25.9% Indigenous *Sexual orientation*: unspecified *Urban/rural*: urban	97.3% participants were living in precarious housing, and 2.7% identified as homeless	*Diagnosed with a mental health condition*: $n = 266$ *MA use*: past substance dependence diagnosis-MA: $n = 159$
Participants: 105 *Age*: 41.5 (mean) *Gender*: 85 male; 20 female *Race/ethnicity*: 17% Aboriginal or Torres Strait Islander *Indigenous status*: 17% Aboriginal or Torres Strait Islander *Sexual orientation*: unspecified *Urban/rural*: urban	All participants were homeless	*Diagnosed with a mental health condition*: psychotic disorder or schizophrenia $n = 38$; PTSD: $n = 39$ *MA use*: psychostimulant use: $n = 22$
Participants: 322 *Age*: 18–29:21%; 30–39:23%; 40–49:24%; 50 or older: 24% *Gender*: 22 female *Race/ethnicity*: 46% African American; 33% White; 5% Native American; 4% Latina; 2% Asian or Pacific Islander; 9% Mixed; 1% other/refused *Indigenous status*: 5% Native American *Sexual orientation*: unspecified *Urban/rural*: urban	57% identified themselves as homeless	*Diagnosed with a mental health condition*: psychotic disorder or schizophrenia $n = 38$; PTSD: $n = 39$ *MA use*: injected MA use: 47%; non-injected MA use: 85%
Participants: 322 *Age*: 18–29:21%; 30–39:23%; 40–49:33%; 50 or older: 23% *Gender*: 322 female *Race/ethnicity*: 46% African American; 33% White; 5% Native American; 4% Latina; 12% other/refused *Indigenous status*: 5% Native American *Sexual orientation*: unspecified *Urban/rural*: urban	57% identified themselves as homeless	*Diagnosed with a mental health condition*: unspecified *MA use*: All participants used MA

TABLE 1 (Continued)

Authors (year) Country	Aim of study	Study design and methodology	Discipline
Martin et al. (2006) Canada	To investigate the prevalence and characteristics of MA use among marginalised youth	Quantitative: cross-sectional	Interdisciplinary
Martin et al. (2009) Canada	To examine the association between violence and MA and alcohol use	Quantitative: cohort	Interdisciplinary
Nyamathi et al. (2014a) USA	To explore the use of MA and heroin among homeless male ex-jail and prison offenders	Quantitative: cross-sectional	Interdisciplinary
Nyamathi et al. (2014b) Canada	To investigate correlates of hostility among homeless men on parole	Quantitative: cross-sectional	Interdisciplinary
Oei et al. (2010) Australia	To explore short-term outcomes of exposure to amphetamines among mothers and newborn infants	Quantitative: cross-sectional	Interdisciplinary
Petering, Rhoades, Rice, et al. (2017) USA	To examine the association between intimate partner violence and substance use among homeless youth	Quantitative: cross-sectional	Interdisciplinary
Petering, Rhoades, Winetrobe, et al. (2017) USA	To examine and understand characteristics of homelessness among youth who identify as Juggalos	Quantitative: longitudinal	Interdisciplinary

Sample demographics	Pattern of homelessness	Clinical characteristics
Participants: 180 *Age*: 20.6 (mean) *Gender*: 108 male; 57 female; 11 transgender *Race/ethnicity*: 2.7% Black; 61.66% Caucasian; 17% aboriginal; 17.22 other *Indigenous status*: 17% Aboriginal *Sexual orientation*: 97 heterosexual; 26 bisexual; 33 homosexual; 9 questioning or unsure; 13 other *Urban/rural*: urban	All participants identified themselves as street-involved youth	*Diagnosed with a mental health condition*: unspecified *MA use*: $n = 102$
Participants: 478 *Age*: 22 (median) *Gender*: 346 male; 132 female *Race/ethnicity*: 25.10% aboriginal; 74.89% non-aboriginal *Indigenous status*: 25.10% aboriginal *Sexual orientation*: 411 heterosexual; 67 other *Urban/rural*: urban	All participants identified themselves as street-involved youth	*Diagnosed with a mental health condition*: unspecified *MA use*: $n = 76$
Participants: 540 *Age*: 40.0 (mean) *Gender*: 540 male *Race/ethnicity*: 46.5% African American; 31.9% Latino; 16.5% White; 5.4% other *Indigenous status*: unspecified *Sexual orientation*: unspecified *Urban/rural*: urban	All participants identified themselves as homeless on their prison or jail exit form	*Diagnosed with a mental health condition*: unspecified *MA use*: $n = 274$
Participants: 472 *Age*: 40.2 (mean) *Gender*: 472 male *Race/ethnicity*: 46.6% African American; 16.7% White; 1.7% Asian/ Pacific Islander; 20.1% Latino; 0.6% American Indian; 4.2% other *Indigenous status*: 0.6% American Indian *Sexual orientation*: unspecified *Urban/rural*: urban	All participants identified themselves as homeless	*Diagnosed with a mental health condition*: serious anxiety $n = 164$; serious depression: $n = 141$; suicidal thoughts $n = 58$ *MA use*: $n = 274$
Participants: 869 *Age*: 26 (median)- maternal age at delivery *Gender*: 869 female *Race/ethnicity*: 5.67% Aboriginal *Indigenous status*: 5.67% aboriginal *Sexual orientation*: unspecified *Urban/rural*: mixed urban/rural	7.24% of the total sample were homeless	*Diagnosed with a mental health condition*: $n = 395$ *MA use*: amphetamine use: $n = 200$
Participants: 238 *Age*: 21.32 (mean) *Gender*: 152 male; 86 female *Race/ethnicity*: 41.06% White; 23.17% Black; 11.18% Latino; 24.59% other *Indigenous status*: unspecified *LGBTQ2+ status*: 136 LGBQ *Urban/rural*: urban	All participants identified as homeless youth	*Diagnosed with a mental health condition*: unspecified *MA use*: $n = 127$
Participants: 238 *Age*: 21.36 (mean) *Gender*: 152 male; 86 female *Race/ethnicity*: 27.21% Black; 31.09% White; 15.55% Latino; 26.05% other *Indigenous status*: 26.05% other (American Indian, Alaska Native, Asian, Native Hawaiian or other Pacific Islander) *Sexual orientation*: unspecified *Urban/rural*: urban	50.42% identified themselves as homeless	*Diagnosed with a mental health condition*: unspecified *MA use*: $n = 54$

TABLE 1 (Continued)

Authors (year) Country	Aim of study	Study design and methodology	Discipline
Riley et al. (2015) USA	To explore risk factors of stimulant use among women who experience homelessness	Quantitative: cohort	Interdisciplinary
Saddichha et al. (2014) Canada	To examine the vulnerabilities of persons who are incarcerated and experience homelessness	Quantitative: cross-sectional	Interdisciplinary
Saddichha et al. (2015) Canada	To explore the difference between cannabis use, and stimulants use in relation to trauma and incarceration among homeless persons	Quantitative: cross-sectional	Interdisciplinary
Sadeghi et al. (2021) Iran	To examine the experiences of homeless women in shelters, drop-in centres, and outreach services while pregnant	Qualitative: general qualitative	Social work
Semple et al. (2011) USA	To identify sociodemographic, behavioural, and psychological correlates of persons who trade sex for MA and are HIV negative	Quantitative: cross-sectional	Interdisciplinary
Uhlmann et al. (2014) Canada	To examine the health and social outcomes of MA use among street-involved youth	Quantitative: cohort	Interdisciplinary

Abbreviations: GAD, generalized anxiety disorder; MA, methamphetamine; LGBTQ2+, Lesbian, Gay, Bi-sexual, Trans, Queer, Two-spirit, and other; PTSD, post-traumatic stress disorder.

Intimate partner violence. Four (20%) studies included in this review highlighted an association between MA use and being a victim of intimate partner violence (see Table 2). Of these, three studies focussed specifically on women experiencing homelessness. In one study, women who had experienced homelessness and who used MA were found to experience a high prevalence of intimate partner physical and sexual violence (Lorvick et al., 2014). Researchers in another study compared women with experiences of homelessness who were using MA with those who were not, and concluded that women who used MA experienced higher rates of intimate partner violence (Oei et al., 2010). A participant in one of the included studies described how MA use was related to intimate partner violence: 'My partner encouraged me to use more drugs because when I used it, he could do anything with me. I was his slave …' (Sadeghi et al., 2021, p. 35). In another study, which focussed on a youth population, researchers found that being a victim of intimate partner violence

Sample demographics	Pattern of homelessness	Clinical characteristics
Participants: 260 *Age*: 47 (median) *Gender*: 260 female *Race/ethnicity*: 43.5% African American; 30.4% White: 4.6% Latina; 2.7% Asian/Pacific Islander; 18.8% other *Indigenous status*: unspecified *Sexual orientation*: unspecified *Urban/rural*: urban	46.2% identified themselves as homeless	*Diagnosed with a mental health condition*: major depression: *n* = 169; manic episodes: *n* = 59; schizophrenia: *n* = 47 *MA use*: *n* = 54
Participants: 500 *Age*: 37.7 (mean) *Gender*: 302 male; 198 female *Race/ethnicity*: 53.5% Caucasian; 39.8% first nation; 2.6% Black; 4% other *Indigenous status*: 39.8% first nation *Sexual orientation*: unspecified *Urban/rural*: mixed urban/rural	All participants identified themselves as homeless	*Diagnosed with a mental health condition*: depressive disorder: *n* = 135; psychotic disorders: *n* = 85; bipolar disorder *n* = 124 *MA use*: *n* = 61
Participants: 409 *Age*: 37.2 (mean) *Gender*: 254 male; 154 female *Race/ethnicity*: 60.14% Caucasian; 39.85% Aboriginal *Indigenous status*: 39.85% aboriginal *Sexual orientation*: unspecified *Urban/rural*: urban	All participants experiencing homelessness	*Diagnosed with a mental health condition*: psychotic disorders: *n* = 113; bipolar disorders: *n* = 102; depressive disorders: *n* = 142; PTSD *n* = 87; panic disorder: *n* = 80; agoraphobia: *n* = 163; GAD: *n* = 82 *MA use*: stimulant users: *n* = 220
Participants: 13 *Age*: 21–30:53.84%; 31–40:15.38%; 41–50:30.76% *Gender*: 13 female *Race/ethnicity*: unspecified *Indigenous status*: unspecified *Sexual orientation*: unspecified *Urban/rural*: urban	All participants experienced or were currently experiencing homelessness	*Diagnosed with a mental health condition*: unspecified *MA use*: *n* = 12
Participants: 342 *Age*: 37.4 (mean) *Gender*: 166 male; 176 female *Race/ethnicity*: 33.3% Caucasian; 31.06%; African American; 18.7% Latino; 16.4% other *Indigenous status*: unspecified *Sexual orientation*: 342 Heterosexual *Urban/rural*: urban	12.3% identified themselves as homeless	*Diagnosed with a mental health condition*: *n* = 22.4 *MA use*: Inject MA: *n* = 74; binge use of MA: *n* = 173
Participants: 1,019 *Age*: 22 (median) *Gender*: 699 male; 320 female *Race/ethnicity*: 67.3% Caucasian *Indigenous status*: unspecified *Sexual orientation*: unspecified *Urban/rural*: urban	All participants identified to be street-involved youth	*Diagnosed with a mental health condition*: unspecified *MA use*: *n* = 704

was related to MA use (Petering, Rhoades, Rice, et al., 2017). The connection between MA use and intimate partner violence was so strong in this study that youth using MA were three times more likely to report bidirectional intimate partner violence (Petering, Rhoades, Rice, et al., 2017).

Unspecified trauma. In three (15%) studies included in this review, MA use was related to an increased likelihood of experiencing events resulting in trauma (see Table 2). Jones et al. (2020) reported that MA use was associated with the onset of psychosis which was, in turn, associated with an increased vulnerability to experiencing traumatic events. Researchers in two other studies indicated that participants who used MA experienced higher rates of trauma and post-traumatic stress disorder (PTSD) symptomology (Larney et al., 2009; Petering, Rhoades, Winetrobe, et al., 2017).

TABLE 2 Studies exploring methamphetamine and victimization

Themes	Subthemes	n[a]	Included studies
Experiences of trauma	Physical victimization	11 (55%)	Fast et al. (2014), Friedman et al. (2021), Larney et al. (2009), Lorvick et al. (2014), Martin et al. (2006), Martin et al. (2009), Petering, Rhoades, Winetrobe, et al. (2017), Riley et al. (2015), Saddichha et al. (2015), Sadeghi et al. (2021), Uhlmann et al. (2014)
	Sexual victimization	10 (50%)	Bungay et al. (2006), Friedman et al. (2021), Lorvick et al. (2014), Lutnick et al. (2015), Petering, Rhoades, Winetrobe, et al. (2017), Riley et al. (2015), Saddichha et al. (2014, 2015), Sadeghi et al. (2021), Semple et al. (2011)
	Histories of childhood abuse	6 (30%)	Lorvick et al. (2014), Lutnick et al. (2015), Petering, Rhoades, Winetrobe, et al. (2017), Saddichha et al. (2014, 2015), Semple et al. (2011)
	Domestic violence	4 (20%)	Lorvick et al. (2014), Oei et al. (2010), Petering, Rhoades, Rice, et al. (2017), Sadeghi et al. (2021)
	Unspecified trauma	3 (15%)	Jones et al. (2020), Larney et al. (2009), Petering, Rhoades, Winetrobe, et al. (2017)
Using methamphetamine to avoid victimization	N/A	1 (5%)	Bungay et al. (2006)

[a]Number of studies included in each theme. Note that some studies were included in more than one category in cases where authors explored or evaluated more than one theme.

TABLE 3 Studies exploring challenging behaviour

Themes	n[a]	Included studies
Crime and physical altercations	4 (20%)	Fast et al. (2014), Martin et al. (2006), Martin et al. (2009), Nyamathi et al. (2014a)
Behaviours that have the potential to escalate	3 (15%)	Bungay et al. (2006), Nyamathi et al. (2014a), Nyamathi et al. (2014b)

[a]Number of studies included in each theme. Note that some studies were included in more than one category in cases where authors explored or evaluated more than one theme.

Using MA to avoid victimisation

One (5%) study included in this review identified that individuals experiencing homelessness used MA as a strategy to protect themselves from the experience of trauma (Bungay et al., 2006). Participants described the use of MA as a critical strategy for staying awake to protect themselves and their belongings in social environments in which they were situated, described by participants as: '…the people, it's just a sketchy, sketchy scene and everybody steals' (Bungay et al., 2006, p. 244). Interestingly, while participants in this study indicated that they used MA to keep themselves and their belongings safe, they also expressed that they were frequently victimised while they were high despite using to avoid this victimisation (Bungay et al., 2006).

3.2.2 | Challenging behaviours

Six (30%) studies included in this review explored MA use in relation to challenging behaviours, among persons experiencing homelessness (see Table 3). We generated two subthemes that highlight the ways in which the authors of included studies described them: (a) crime and physical altercations; and (b) behaviours that have the potential to escalate. We defined behaviours that have the potential to escalate as any behaviours that did not physically injure another individual; however, may have the potential to result in harm to others. See Table 3 for a list of all studies included in this theme.

Crime and physical altercations

Four (20%) of the included studies explored the relationship between MA use, crime and physical altercations (Fast et al., 2014; Martin et al., 2006, 2009; Nyamathi et al., 2014a). In two of these studies, MA use was linked to the perpetration of a violent crime (Fast et al., 2014; Nyamathi et al., 2014a). This was described by a participant in one of these studies as: '…you looooooooove getting into trouble when you're on meth though. Stealing. Stealing cars, robbing people, violently. [laughter] You don't care – your blood's boiling!' (Fast et al., 2014, p. 45). Similarly, in another study, MA use was found to be associated with fighting among street-involved youth (Martin et al., 2006). However, Martin et al. (2009) found no association between being a perpetrator of violence and MA use.

Behaviours that have the potential to escalate

Three (15%) of the included studies investigated associations between challenging behaviour and the use of MA (Bungay et al., 2006; Nyamathi et al., 2014a, 2014b). Behaviours described as having the

'potential' to escalate in the context of MA use in existing studies included hostility (Nyamathi et al., 2014b), aggression (Nyamathi et al., 2014a), 'freaking out' (Bungay et al., 2006) and agitation (Bungay et al., 2006). Bungay et al. (2006) identified that 'youth talked about feeling like their personalities had changed since they started using jib. The youth described being more irritable and cranky.' (p. 243).

4 | DISCUSSION

This review explored the scope of existing literature on violence and victimisation in the lives of persons who use MA and experience homelessness. A total of 20 studies were included in this review. Contrary to the commonly held notion that use of MA leads to the perpetration of violence, our findings provide evidence that much of the literature on this topic identifies that individuals who experience homelessness and use MA are particularly *vulnerable* to victimisation. Additionally, the majority of the studies present correlations between physical violence and MA use rather than providing clear evidence that MA use increases perpetration of violence. The findings of this review suggest that: (a) persons who experience homelessness and use MA are particularly vulnerable to victimisation; (b) associations between MA use and the perpetration of violence continues to be poorly understood; and (c) MA use among persons experiencing homelessness is correlated with challenging behaviours including agitation, hostility and aggression that may be perceived as, but not necessarily result in violence.

The first finding of our review – that existing literature has demonstrated an association between MA use and the experience of victimisation is an important finding that highlights the complex relationship between MA use and trauma among persons who experience homelessness. This complex association found in the reviewed articles suggests that MA use can result in victimisation and that experiencing past trauma can lead to current MA use. In three of these studies, the effects of MA resulted in a vulnerable state in which participants were exploited and victimised (Bungay et al., 2006; Friedman et al., 2021; Sadeghi et al., 2021). Understanding this relationship is important given that persons who experience homelessness are at a greater risk for experiencing victimisation overall (Statistics Canada), and the findings of this review suggest that MA use may increase that risk. Meinbresse et al. (2014), for instance, investigated violence and victimisation among people who experience homelessness in five cities across the United States and found that half of their sample of 500 participants were victims of violence and that being unhoused for greater than 2 years increased the risk of being victimised. Considering these high rates, it is critical to understand how MA use is a risk factor for victimisation. One of the studies included in our review identified that persons who experience homelessness used MA to stay awake to protect themselves and their possessions (Bungay et al., 2006). While other studies did not report this finding, the strategy of using MA to stay awake to avoid victimisation is mentioned in at least one government report focussing on finding ways to more effectively support individuals who experience homelessness and use MA in Canada (Casey, 2019). The notion that individuals are embedded within such unsafe situations that they would be driven to use MA to stay awake to remain safe is a human rights issue, and one that is highly problematic given the findings of included studies identifying that this very strategy may actually increase risk for victimisation rather than helping to avoid it.

The findings of this review demonstrate that having a history of childhood trauma is associated with MA use (Lorvick et al., 2014; Lutnick et al., 2015; Petering, Rhoades, Winetrobe, et al., 2017; Semple et al., 2011). This is congruent with broader literature on the relationship between trauma and substance use more generally. Participants using MA in included studies lived with the effects of trauma, with higher rates of trauma-related symptoms and PTSD (Larney et al., 2009; Petering, Rhoades, Winetrobe, et al., 2017). One study included in this review, for example, identified that recent sexual violence resulted in an increased risk of future MA use (Riley et al., 2015). The fact that individuals who experience homelessness and have histories of trauma are more likely to use MA suggests that its use may serve as an important coping strategy to manage daily stress and the ongoing effects of trauma that may not confined to individuals who experience homelessness. In a study of persons involved in sex work, for example, childhood abuse and workplace trauma were associated with injection use of MA (Argento et al., 2017). The studies included in this review suggest that the relationship between MA use and victimisation is complex and may be bi-directional.

In contrast to common perceptions about the use of MA leading to violent behaviour, the findings of our review identified only three studies demonstrating a correlation between MA use and the perpetration of violence among persons experiencing homelessness (Fast et al., 2014; Martin et al., 2006; Nyamathi et al., 2014a). The existence of only three studies with these findings suggests that either existing literature has failed to demonstrate an empirical relationship between MA use and the perpetration of violence, or that this area of research is underdeveloped. In literature on MA use more generally, the use of this substance has been associated with higher rates of violence and the perpetration of intimate partner violence (Foulds et al., 2020). Additionally, it has been assumed by the general public that MA use evokes violent behaviours as portrayed in popular media (Tyner & Fremouw, 2008). This association can create social stigma for persons experiencing homelessness who use MA, with little attention paid to contextual factors and the potential for experiences of victimisation, which has been demonstrated to be more clearly linked to MA use over the perpetration of violence. For example, one's environment, family history, exposure to violence and substance use have been reported to be predictors of violence irrespective of the use of MA (Chermack & Giancola, 1997; Farrington, 1998). The findings of this review more strongly suggest that the use of MA among persons who experience homelessness is more closely associated with victimisation and experiences of trauma and the emergence of challenging behaviour. This is not to

suggest that MA use may lead to perpetrating violent acts, but rather that research evidence of a causal, directional relationship is scant.

Studies included in our review identified an association between the use of MA among persons experiencing homelessness and the emergence of challenging behaviours including agitation, hostility, aggression and 'freaking out' (Bungay et al., 2006; Martin et al., 2009; Nyamathi et al., 2014a, 2014b). This finding is particularly useful for understanding how the emergence of these behaviours may be equated with, but not necessarily result in violence. The presence of challenging behaviours alone may influence how persons experiencing homelessness who are using MA are perceived by both service providers and the public and may reinforce and draw unnecessary attention to the potential for violence. When reviewing the literature on MA use and violence more generally, studies identify that persons who use MA are more likely to perpetrate violence (Basking-Sommers & Sommers, 2006; Darke et al., 2010; Tyner & Fremouw, 2008). Many of these studies, however, involve self-reported data on violence rather than observational data, a fact that limits one's ability to make causal linkages between MA use and violence. Though a range of studies have identified an association between MA use and violence in a range of populations, methodological issues have long plagued this body of literature resulting in a lack of consensus on whether or not individuals using MA are in fact more likely to perpetrate violence (Tyner & Fremouw, 2008). Further, the findings of the majority of these studies fail to account for the specific contexts in which persons who experience homelessness are situated.

The stigma of MA use among persons who experience homelessness is incredibly harmful as it can deepen the already existing oppression of this population and limit the degree to which a person is likely to access support for their substance use (Young & Fandrey, 2018). According to the Canadian Centre on Substance Use and Addiction (2020), stigma about MA use stems from fear, a lack of understanding about substance use, moral judgements and can perpetuate a sense of mistrust between the healthcare system and those who need support (p. 2). Fear from service providers when working with persons who experience homelessness and use MA can negatively affect the quality of service provided to individuals who already face inequities in healthcare provision (Siersbaek et al., 2021). Stigma may even influence one's experiences with police. In one study, participants discussed how the discovery of a syringe during personal searches frequently resulted in escalation of violence towards persons experiencing homelessness due to fear of a needle stick incident (Friedman et al., 2021).

4.1 | Research implications

Our review offers insights into a critical area of research pertaining to a multiply marginalised population of people in several countries internationally. Authors of several of the included studies identified an association between trauma and use of MA among individuals experiencing homelessness. Use of MA in these studies, however, has inadequately explored the ways in which the use of this specific substance may enable coping with trauma. Future research should explore how the use of MA may specifically help individuals to cope with the trauma that they've experienced as a way of informing intervention strategies that may support this population more effectively. The strategy of using MA to avoid victimisation (Bungay et al., 2006) is an intriguing concept that has important implications for how services and policy might be shifted to help individuals experiencing homelessness to avoid exposure to trauma and thus decrease the need to use MA as an avoidance strategy. Research on this topic, however, is insufficient for informing the development of services and policy. Future research is needed to arrive at a more fulsome understanding of this relationship – especially considering the findings of several studies in this review identifying that use of MA is frequently associated with exposure to trauma. The relationship between MA use and violence continues to be underdeveloped (Brecht & Herbeck, 2013; Cretzmeyer et al., 2003; Tyner & Fremouw, 2008), and has inadequately accounted for the unique contexts in which it occurs in the lives of persons who experience homelessness. This association needs to be more adequately explored in future research. Finally, challenging behaviour demonstrated by individuals who experience homelessness and use MA requires further study in future research, and needs to be distinguished from violence methodologically to enable a combined and independent interpretation of these constructs and their contributions to the well-being of this population.

4.2 | Practice implications

The high rates of trauma, victimisation and childhood abuse among persons experiencing homelessness who use MA in the studies included in this review emphasises the critical importance of incorporating a trauma-informed approach in all services aimed at supporting persons with histories of homelessness and MA use. Incorporating this approach can enhance the physical and emotional safety of this population, and help to avoid activation of experienced trauma. Service providers may consider reviewing existing frameworks to guide practitioners working in the housing and homelessness sectors to align their practices with a more trauma-informed approach. One framework developed to guide organisations and practitioners who support individuals who experience homelessness includes the following components: (a) staff training, consultation and supervision; (b) implementing practices that promote physical and emotional safety for service users and providers; (c) offering choice and providing predictable environments to promote agency and control; and 4) focussing on the future and developing skills that build on strengths (Hopper et al., 2010).

To address challenging behaviour that may emerge in the context of MA use, service providers and law enforcement officers should be adequately trained in effective de-escalation practices that avoid activation of trauma and the escalation of challenging behaviours associated with MA use among persons experiencing homelessness.

This may include creating environments that keep individuals experiencing homelessness safe from victimisation, provide privacy and opportunities for de-escalation. Providing safe spaces for individuals to safely consume substances may limit harms associated with MA use and offer the additional benefit of having trained supports available when challenging behaviour may emerge.

4.3 | Policy implications

Organisations that support individuals who experience homelessness and use MA may consider re-examining their policies to create protective spaces that help individuals to avoid ongoing victimisation. Implementing trauma-informed approaches that will minimise triggering a trauma response should be considered by organisational policymakers. These include: eliminating strict curfews resulting in the loss of a shelter bed; closing shelters during daytime hours; and strict behavioural policies that remove individuals from programmes for "challenging" behaviours that are disruptive but do not place other residents or staff at risk. These policies can both decrease vulnerability to victimisation for persons who experience homelessness and use MA, while simultaneously serving to reduce retraumatising individuals who are known to have significant trauma experiences (Hopper et al., 2010; Jones et al., 2020). Further, both harm reduction and abstinence-based programmes based on the desire of an individual should be made more available to individuals using MA who experience homelessness both to reduce harms associated with MA use, and to offer support for individuals who choose to reduce or abstain from substance use.

4.4 | Limitations

We chose a scoping review methodology based on the emerging state of this body of literature yet recognise that this approach is limited in it's ability to describe the quality of existing studies, or to focus on a more specific subset of this body of literature (Arksey & O'Malley, 2005). As the literature on this topic grows, we believe there would be value in conducting systematic reviews that include a critical appraisal stage to identify the quality of existing studies, and to pose questions about experiences of homelessness for individuals who use MA or the effectiveness of interventions that have been evaluated. Despite the comprehensiveness of our search, there is always a possibility that we may have failed to uncover all the existing literature pertaining to our research question. Further, we decided to include only empirical studies in our review, which may have omitted potentially relevant results from existing publications that were non-empirical in nature.

The demographic composition of samples in the included empirical studies means that the findings of this review primarily pertain to the experiences of adults. While only six studies focussed on the experiences of youth, no studies had samples that included children under the age of 16. Researchers may consider filling this gap in existing literature by conducting research with children and youth who experience homelessness and use MA. This is particularly important as youth represent approximately 20% of all Canadians experiencing homelessness (Gaetz et al., 2016). We also acknowledge that a large majority of the research included in this review was conducted in an urban North American context, therefore limiting the generalisability of the findings to other geographic locations. Finally, only four studies reported on the sexual orientation of their samples. It is an unfortunate reality that individuals who identify as LGBTQ2+ are overrepresented in statistics on homelessness in high income countries (Gaetz et al., 2016). As a key population, it is important that researchers in future studies report on the sexual orientation of their samples to enable researchers, policymakers and service providers generate a more specific understanding of how best to support individuals who use MA, identify as LGBTQ2+ and experience homelessness.

5 | CONCLUSION

Methamphetamine use has tripled among persons experiencing homelessness in recent years, and the findings of this review and other extant literature suggests that this is placing this population at increased risk of victimisation (Cretzmeyer et al., 2003; Darke et al., 2010; Das-Douglas et al., 2008). This concerning rise in the use of MA among persons who experience homelessness, high rates of trauma that are known to be experienced by individuals who experience homelessness (Hopper et al., 2010) and the common associations between MA use and violence (Tyner & Fremouw, 2008) elicited our interest in this topic. Our review has identified a body of literature that primarily identifies high rates of physical, sexual and childhood trauma as common experiences for persons who use MA and experience homelessness. The findings of this review also contrast the commonly held notion that MA use leads to the perpetration of violence, and instead, suggests that MA use is more closely associated with challenging behaviours that may not always lead to violence, but that can play a role in perpetuating negative perceptions and stigma. The linkage between MA use leading to the perpetration of violence continues to be poorly understood, and as such, future research on this topic is needed.

CONFLICT OF INTEREST

We have no known conflict of interest to disclose.

AUTHOR CONTRIBUTIONS

Ms. Rozelen Carrillo Beck made all necessary revisions throughout the publication process. Ms Carrillo Beck, Ms. Jessica Szlapinski, Ms. Nicole Pacheco, Mr. Shahriar Sabri Laghaei, and Dr. Carrie Anne Marshall developed the initial search strategy in collaboration with Ms. Roxanne Isard, an Academic Research Librarian and co-author. Ms. Isard ran the initial search. Ms. Carrillo Beck, Ms. Szlapinski, Ms. Pacheco and Mr. Sabri Laghaei conducted the title and abstract

screening and full-text review, extracted data, conducted a narrative synthesis of included studies, and collaborated on the first draft of the manuscript under the supervision and guidance of Dr. Marshall. Dr. Marshall and Dr. Abe Oudshoorn contributed to the first draft of the manuscript, and held the grant that funded this study as principal and co-investigator respectively.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no empirical data were generated or analysed during the current study. The authors are willing to provide search strategies for the applicable databases upon request.

ORCID

Rozelen Carrillo Beck https://orcid.org/0000-0003-1886-4221
Abe Oudshoorn https://orcid.org/0000-0003-0277-8724
Carrie Anne Marshall https://orcid.org/0000-0002-0592-7716

REFERENCES

Argento, E., Strathdee, S. A., Goldenberg, S., Braschel, M., Montaner, J., & Shannon, K. (2017). Violence, trauma and living with HIV: Longitudinal predictors of initiating crystal methamphetamine injection among sex workers. *Drug and Alcohol Eependence*, *175*, 198–204. https://doi.org/10.1016/j.drugalcdep.2017.02.014

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, *8*(1), 19–32. https://doi.org/10.1080/1364557032000119616

Basking-Sommers, A., & Sommers, I. (2006). Methamphetamine use and violence among young adults. *Journal of Criminal Justice*, *34*(6), 661–674. https://doi.org/10.1016/j.jcrimjus.2006.09.019

Brecht, M. L., & Herbeck, D. M. (2013). Methamphetamine use and violent behavior: User perceptions and predictors. *Journal of Drug Issues*, *43*(4), 468–482. https://doi.org/10.1177/0022042613491098

Bungay, V., Malchy, L., Buxton, J. A., Johnson, J., MacPherson, D., & Rosenfeld, T. (2006). Life with jib: A snapshot of street youth's use of crystal methamphetamine. *Addiction Research & Theory*, *14*(3), 235–251. https://doi.org/10.1080/16066350500270901

Canadian Centre on Substance Use and Addiction. (2020). *Informing responses to harms related to methamphetamine use with lessons from public health crises*. Canadian Centre on Substance Use and Addiction. Retrieved February 22, 2021, from https://www.ccsa.ca/informing-responses-harms-related-methamphetamine-use-lessons-public-health-crises-report

Canadian Population Health Initiative. (2009). Mental health, mental illness, and homelessness in Canada. In J. D. Hulchanski, P. Campsie, S. Chau, S. W. Hwang, & E. Paradis (Eds.), *Finding home: Policy options for addressing homelessness in Canada*. Canadian Observatory on Homelessness Press.

Casey, B. (2019). *Impacts of methamphetamine abuse in Canada: Report of the Standing Committee on Health*. House of Commons Canada.

Chermack, S. T., & Giancola, P. R. (1997). The relation between alcohol and aggression: An integrated biopsychosocial conceptualization. *Clinical Psychology Review*, *17*(6), 621–649. https://doi.org/10.1016/S0272-7358(97)00038-X

Cretzmeyer, M., Sarrazin, M. V., Huber, D. L., Block, R. I., & Hall, J. A. (2003). Treatment of methamphetamine abuse: Research findings and clinical directions. *Journal of Substance Abuse Treatment*, *24*(3), 267–277. https://doi.org/10.1016/S0740-5472(03)00028-X

Darke, S., Torok, M., Kaye, S., Ross, J., & McKetin, R. (2010). Comparative rates of violent crime among regular methamphetamine and opioid users: Offending and victimization. *Addiction*, *105*(5), 916–919. https://doi.org/10.1111/j.1360-0443.2009.02872.x

Das-Douglas, M., Colfax, G., Moss, A. R., Bangsberg, D. R., & Hahn, J. A. (2008). Tripling of methamphetamine/amphetamine use among homeless and marginally housed persons, 1996–2003. *Journal of Urban Health*, *85*(2), 239–249. https://doi.org/10.1007/s11524-007-9249-4

European Monitoring Centre for Drugs and Drug Addiction. (2019). *Methamphetamine in Europe*. https://www.emcdda.europa.eu/system/files/publications/12132/20195788_TD0119853ENN.pdf

Farrington, D. P. (1998). Predictors, causes, and correlates of male youth violence. *Crime and Justice*, *24*, 421–475. https://doi.org/10.1086/449284

Fast, D., Kerr, T., Wood, E., & Small, W. (2014). The multiple truths about crystal meth among young people entrenched in an urban drug scene: A longitudinal ethnographic investigation. *Social Science & Medicine*, *1982*(110), 41–48. https://doi.org/10.1016/j.socscimed.2014.03.029

Fazel, S., Geddes, J. R., & Kushel, M. (2014). The health of homeless people in high-income countries: Descriptive epidemiology, health consequences, and clinical and policy recommendations. *The Lancet*, *384*(9953), 1529–1540. https://doi.org/10.1016/S0140-6736(14)61132-6

FEANTSA & Fondation Abbe-Pierre. (2019). *Fourth overview of housing exclusion in Europe 2019*. https://www.feantsa.org/download/oheeu_2019_eng_web5120646087993915253.pdf

Foulds, J. A., Boden, J. M., McKetin, R., & Newton-Howes, G. (2020). Methamphetamine use and violence: Findings from a longitudinal birth cohort. *Drug and Alcohol Dependence*, *207*, 107826. https://doi.org/10.1016/j.drugalcdep.2019.107826

Frankish, C. J., Hwang, S. W., & Quantz, D. (2005). Homelessness and health in Canada: Research lessons and priorities. *Canadian Journal of Public Health*, *96*(Suppl. 2), S23–S29. https://doi.org/10.1007/BF03403700

Friedman, J., Syvertsen, J. L., Bourgois, P., Bui, A., Beletsky, L., & Pollini, R. (2021). Intersectional structural vulnerability to abusive policing among people who inject drugs: A mixed methods assessment in California's central valley. *The International Journal of Drug Policy*, *87*, 102981. https://doi.org/10.1016/j.drugpo.2020.102981

Gaetz, S., Dej, E., Richter, T., & Redman, M. (2016). *The state of homelessness in Canada 2016*. Canadian Observatory on Homelessness Press. http://homelesshub.ca/sites/default/files/SOHC16_final_20Oct2016pdf

Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, *24*(2), 105–112. https://doi.org/10.1016/j.nedt.2003.10.001

Hopper, E., Bassuk, E., & Olivet, J. (2010). Shelter from the storm: Trauma-informed care in homelessness services settings. *The Open Health Services and Policy Journal*, *3*(1). https://doi.org/10.2174/1874924001003010080

Hwang, S. W. (2001). Homelessness and health. *Canadian Medical Association Journal*, *164*(2), 229–233.

International Monetary Fund. (2018). *Global Price Index*. https://www.imf.org/external/research/housing/

Johnson, G., & Chamberlain, C. (2008). Homelessness and substance abuse: Which comes first? *Australian Social Work*, *61*(4), 342–356. https://doi.org/10.1080/03124070802428191

Jones, A. A., Gicas, K. M., Seyedin, S., Willi, T. S., Leonova, O., Vila-Rodriguez, F., Procyshyn, R. M., Smith, G. N., Schmitt, T. A., Talia Vertinsky, A., Buchanan, T., Rauscher, A., Lang, D. J., William MacEwan, G., Lima, V. D., Montaner, J. S. G., Panenka, W. J., Barr,

A. M., Thornton, A. E., & Honer, W. G. (2020). Associations of substance use, psychosis, and mortality among people living in precarious housing or homelessness: A longitudinal, community-based study in Vancouver, Canada. *PLoS Medicine*, *17*(7), e1003172. https://doi.org/10.1371/journal.pmed.100312

Lam, J. A., & Rosenheck, R. (1998). The effect of victimization on clinical outcomes of homeless persons with serious mental illness. *Psychiatric Services*, *49*(5), 678–683. https://doi.org/10.1176/ps.49.5.678

Larney, S., Conroy, E., Mills, K. L., Burns, L., & Teesson, M. (2009). Factors associated with violent victimisation among homeless adults in Sydney, Australia. *Australian and New Zealand Journal of Public Health*, *33*(4), 347–351. https://doi.org/10.1111/j.1753-6405.2009.00406.x

Lorvick, J., Lutnick, A., Wenger, L. D., Bourgois, P., Cheng, H., & Kral, A. H. (2014). Non-partner violence against women who use drugs in San Francisco. *Violence Against Women*, *20*(11), 1285–1298. https://doi.org/10.1177/1077801214552910

Lutnick, A., Harris, J., Lorvick, J., Cheng, H., Wenger, L. D., Bourgois, P., & Kral, A. H. (2015). Examining the associations between sex trade involvement, rape, and symptomatology of sexual abuse trauma. *Journal of Interpersonal Violence*, *30*(11), 1847–1863. https://doi.org/10.1177/0886260514549051

Martin, I., Lampinen, T., & McGhee, D. (2006). Methamphetamine use among marginalized youth in British Columbia. *Canadian Journal of Public Health*, *97*(4), 320–324. https://doi.org/10.1007/BF03405613

Martin, I., Palepu, A., Wood, E., Li, K., Montaner, J., & Kerr, T. (2009). Violence among street-involved youth: The role of methamphetamine. *European Addiction Research*, *12*(1), 32–38. https://doi.org/10.1159/000173007

Meinbresse, M., Brinkley-Rubinstein, L., Grassette, A., Benson, J., Hall, C., Hamilton, R., Malott, M., & Jenkins, D. (2014). Exploring the experiences of violence among individuals who are homeless using a consumer-led approach. *Violence and Victims*, *29*(1), 122–136. https://doi.org/10.1891/0886-6708.vv-d-12-00069

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2010). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *International Journal of Surgery*, *8*(5), 336–341. https://doi.org/10.1016/j.ijsu.2010.02.007

National Alliance on Ending Homelessness. (2021). *State of Homelessness: 2021 Edition*. https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness-2021/

Nyamathi, A. M., Salem, B. E., Farabee, D., Hall, E., Zhang, S., Marfisee, M., Khalilifard, F., Musto, S., Faucette, M., & Leake, B. (2014a). Correlates of heroin and methamphetamine use among homeless male ex-jail and prison offenders. *Addiction Research & Theory*, *22*(6), 463–473. https://doi.org/10.3109/16066359.2013.877453

Nyamathi, A., Salem, B. E, Farabee, D., Hall, E., Zhang, S., Khalilifard, F., Faucette, M., & Leake, B. (2014b). Predictors of high level of hostility among homeless men on parole. *Journal of Offender Rehabilitation*, *53*(2), 95–115. https://doi.org/10.1080/10509674.2013.868388

Oei, J., Abdel-Latif, M. E., Clark, R., Craig, F., & Lui, K. (2010). Short-term outcomes of mothers and infants exposed to antenatal amphetamines. *Archives of Disease in Childhood – Fetal and Neonatal Edition*, *95*(1), F36–F41. https://doi.org/10.1136/adc.2008.157305

Omura, J. D., Wood, E., Nguyen, P., Kerr, T., & DeBeck, K. (2014). Incarceration among street-involved youth in a Canadian study: Implications for health and policy interventions. *The International Journal of Drug Policy*, *25*(2), 291–296. https://doi.org/10.1016/j.drugpo.2013.10.010

Organization for Economic Cooperation and Development (OECD). (2015). *In it together: Why less inequality benefits all*. OECD Publishing. https://read.oecd-ilibrary.org/employment/in-it-together-why-less-inequality-benefits-all_9789264235120-en#page3

Petering, R., Rhoades, H., Rice, E., & Yoshioka-Maxwell, A. (2017). Bidirectional intimate partner violence and drug use among homeless youth. *Journal of Interpersonal Violence*, *32*(14), 2209–2217. https://doi.org/10.1177/0886260515593298

Petering, R., Rhoades, H., Winetrobe, H., Dent, D., & Rice, E. (2017). Violence, trauma, mental health, and substance use among homeless youth Juggalos. *Child Psychiatry and Human Development*, *48*(4), 642–650. https://doi.org/10.1007/s10578-016-0689-5

Pleace, N., Baptista, I., Benjaminsen, L., & Busch-Geertsema, V. (2013). *The costs of homelessness in Europe: An assessment of the current evidence base*. www.feantsaresearch.org/IMG/pdf/feantsa-studies_03_web.pdf

Public Health Agency of Canada. (2006). *The human face of mental health and mental illness in Canada 2006*. Minister of Public Works and Government Services Canada. https://www.phac-aspc.gc.ca/publicat/human-humain06/pdf/human_face_e.pdf

Riley, E. D., Shumway, M., Knight, K. R., Guzman, D., Cohen, J., & Weiser, S. D. (2015). Risk factors for stimulant use among homeless and unstably housed adult women. *Drug and Alcohol Dependence*, *153*, 173–179. https://doi.org/10.1016/j.drugalcdep.2015.05.023

Saddichha, S., Fliers, J. M., Frankish, J., Somers, J., Schuetz, C. G., & Krausz, M. R. (2014). Homeless and incarcerated: An epidemiological study from Canada. *International Journal of Social Psychiatry*, *60*(8), 795–800. https://doi.org/10.1177/0020764014522776

Saddichha, S., Werker, G. R., Schuetz, C., & Krausz, M. R. (2015). Stimulants and cannabis use among a marginalized population in British Columbia, Canada: Role of trauma and incarceration. *International Journal of Offender Therapy and Comparative Criminology*, *59*(13), 1487–1498. https://doi.org/10.1177/0306624X14541661

Sadeghi, S., Addelyan Rasi, H., Parvin, S., & Salomoni, F. (2021). Life experience of pregnancy among Iranian homeless women. *International Social Work*, *64*(1), 24–39. https://doi.org/10.1177/0020872818804596

Semple, S. J., Strathdee, S. A., Zians, J., & Patterson, T. L. (2011). Correlates of trading sex for methamphetamine in a sample of HIV-negative heterosexual methamphetamine users. *Journal of Psychoactive Drugs*, *43*(2), 79–88. https://doi.org/10.1080/02791072.2011.587390

Siersbaek, R., Ford, J. A., Burke, S., Cheallaigh, C. N., & Thomas, S. (2021). Contexts and mechanisms that promote access to healthcare for populations experiencing homelessness: A realist review. *British Medical Journal Open*, *11*(4), e043091. https://doi.org/10.1136/bmjopen-2020-043091

Sociocultural Research Consultants, LLC. (2018). *Dedoose, web application for managing, analyzing, and presenting qualitative and mixed method research data (Version 8.0.35)*. Author. https://www.dedoose.com/

Somers, J. M., Moniruzzaman, A., & Palepu, A. (2015). Changes in daily substance use among people experiencing homelessness and mental illness: 24-month outcomes following randomization to housing first or usual care. *Addiction*, *110*(10), 1605–1614. https://doi.org/10.1111/add.13011

Statistics Canada. (2015, November 30). *Criminal victimization in Canada, 2014*. https://www150.statcan.gc.ca/n1/pub/85-002-x/2015001/article/14241-eng.htm

Tyner, E. A., & Fremouw, W. J. (2008). The relation of methamphetamine use and violence: A critical review. *Aggression and Violent Behavior*, *13*(4), 285–297. https://doi.org/10.1016/j.avb.2008.04.005

Uhlmann, S., DeBeck, K., Simo, A., Kerr, T., Montaner, J. S., & Wood, E. (2014). Health and social harms associated with crystal methamphetamine use among street involved youth in a Canadian setting. *The American Journal on Addictions*, *23*(4), 393–398. https://doi.org/10.1111/j.1521-0391.2014.12123.x

United Nations Office on Drugs and Crime. (2020, June). *World drug report 2020*. https://www.unodc.org/unodc/en/data-and-analysis/wdr2021html

Veritas Health Innovation. (2016). *Covidence systematic review software*. Veritas Health Innovation. www.covidence.org

World Bank Group. (n.d.). *World Bank Country and Lending Groups – Country classification. World Bank Country and Lending Groups – World Bank data help desk*. https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

Yamamoto, A., Needleman, J., Gelberg, L., Kominski, G., Shoptaw, S., & Tsugawa, Y. (2019). Association between homelessness and opioid overdose and opioid-related hospital admissions/emergency department visits. *Social Science & Medicine*, *242*, 112585. https://doi.org/10.1016/j.socscimed.2019.112585

Young, M., & Fandrey, S. (2018). *Canadian Centre on Substance Use and Addiction*. Presentation on the impacts of methamphetamine use in Canada to the House of Commons Standing Committee on Health. Ottawa, ON: Author. https://www.ccsa.ca/sites/default/files/2019-04/CCSA-House-of-Commons-HESA-Methamphetamine-Presentation-2018-enpdf

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

How to cite this article: Carrillo Beck, R., Szlapinski, J., Pacheco, N., Sabri Laghaei, S., Isard, R., Oudshoorn, A., & Marshall, C. A. (2022). Violence and victimisation in the lives of persons experiencing homelessness who use methamphetamine: A scoping review. *Health & Social Care in the Community*, 30, 16189–1636. https://doi.org/10.1111/hsc.13716