The shame and stigma among people with comorbid hepatitis C virus and substance use disorder: a narrative review

SYED, A.[1], DÉKÁNY, L.[2], RIEGEL, K. D.[2]

1 | Department of Psychiatry, First Faculty of Medicine, Charles University and General University Hospital in Prague, Czechia
2 | Department of Addictology, First Faculty of Medicine, Charles University and General University Hospital in Prague, Czechia
3 | National Institute of Mental Health, Klecany, Czechia

Citation | Syed, A., Dékány, L., & Riegel, K. D. (2026). The shame and stigma among people with comorbid hepatitis C virus and substance use disorder: A narrative review. *Adiktologie, 26*(1), 7–16.

ABSTRACT: The presence of dual diagnosis of Hepatitis C Virus (HCV) infection and substance use disorder (SUD) creates a significant medical and psychological burden, frequently intensifying feelings of Stigma and shame in an individual. Individuals living with both HCV and SUD frequently face dual stigmatization, which can result in widespread discrimination, social isolation, and worsened mental health, lowering their overall quality of life and motivation to seek treatment. Using a synthesis of existing literature, this narrative review aims to shed light on the complex nature of Stigma and shame among HCV-infected patients with co-occurring SUD and try to summarize how these characteristics influence treatment participation and long-term health outcomes. This review highlights the importance of comprehensive care methods that integrate physical and mental health interventions, addressing not only the biological components of these disorders but also the psychosocial implications that impede effective care. Targeted intervention techniques that aim to reduce Stigma and develop resilience have the potential to improve patient involvement, adherence, and recovery. Early diagnosis and risk stratification have been identified as essential components in establishing focused preventative and therapeutic strategies.

Keywords | HCV; substance use disorder; mental health stigma, shame

Submitted | July 7, 2025 **Accepted |** February 4, 2026

Grant affiliation | This manuscript was written as a part of Specific University Research No. 260632 and was supported by the institutional support programme Cooperatio, research area (HEAS)

Corresponding author | Areeba Syed, Department of Psychiatry, First Faculty of Medicine, Charles University and General University Hospital in Prague, Ke Karlovu 11, 121 08, Prague 2, Czechia **arie.syed@gmail.com**

1 INTRODUCTION

According to Link and Phelan (1995; 2001), Stigma is a "fundamental cause" of health, involving interconnected social and affective processes such as labeling, stereotyping, and discrimination that stigmatized (i.e., "marked") groups lose status and privileges. For people with substance use disorder (SUD), stigma-related prejudice, stereotypes, and discrimination may have an impact on their experiences navigating care for conditions directly related to drug use, such as hepatitis C virus (HCV), as well as care for other pressing health needs. As a result, research has shown Stigma as a ubiquitous determinant of health, with direct effects on the health status of more marginalized groups (Keyes & Galea, 2016), such as people with injectable drug use (PWID) and SUD survivors (Paquette et al., 2018).

The intersection of HCV infection and SUD presents unique challenges in healthcare, particularly related to the pervasive issues of shame and Stigma. Hepatitis C, a bloodborne virus primarily transmitted through activities associated with high-risk behaviors, such as injection drug use, disproportionately affects individuals with SUD, intensifying social and internalized Stigma (Brener et al., 2019; Radcliffe & Stevens, 2008). Stigma, both perceived and enacted, significantly impacts the psychological well-being and healthcare access of HCV-infected individuals, often resulting in social isolation, low self-esteem, and delayed treatment-seeking behaviors (Von Hippel et al., 2011).

Shame associated with HCV among individuals with SUD can lead to a variety of adverse outcomes, including avoidance of healthcare, reduced quality of life, and increased mortality (Treloar & Rhodes, 2009). Research demonstrates that people with HCV often experience shame related to both their infection status and drug use history, which is frequently compounded by the judgments of healthcare providers (Ahern et al., 2007; Harris & Rhodes, 2013). This form of dual Stigma, as documented by Butt et al. (2008), creates significant barriers to accessing and engaging in medical care, exacerbating health disparities within this population.

Studies show that eliminating Stigma is critical to improving health outcomes for HCV-infected people with SUD. Interventions aimed at lowering healthcare-based Stigma, delivering stigma-free educational programs, and improving empathetic communication between clinicians and patients show promise for minimizing the influence of shame on health behaviors (Gunn et al., 2018). The stigmatization of HCV-infected people extends beyond public perception into healthcare systems, where implicit biases and moral judgments about drug use can discourage patients from disclosing their health status or seeking care (Earnshaw et al., 2013). Such Stigma may also contribute to healthcare discrimination, in which people with SUD are denied fair treatment alternatives or receive subpar care because of misconceptions about their lifestyle and treatment adherence (Miller et al., 2016; Neale et al., 2008). As a result, HCV-positive people with SUD are frequently trapped in a cycle of Stigma, shame, and inadequate assistance, making them more vulnerable to future health difficulties (Ahern et al., 2007).

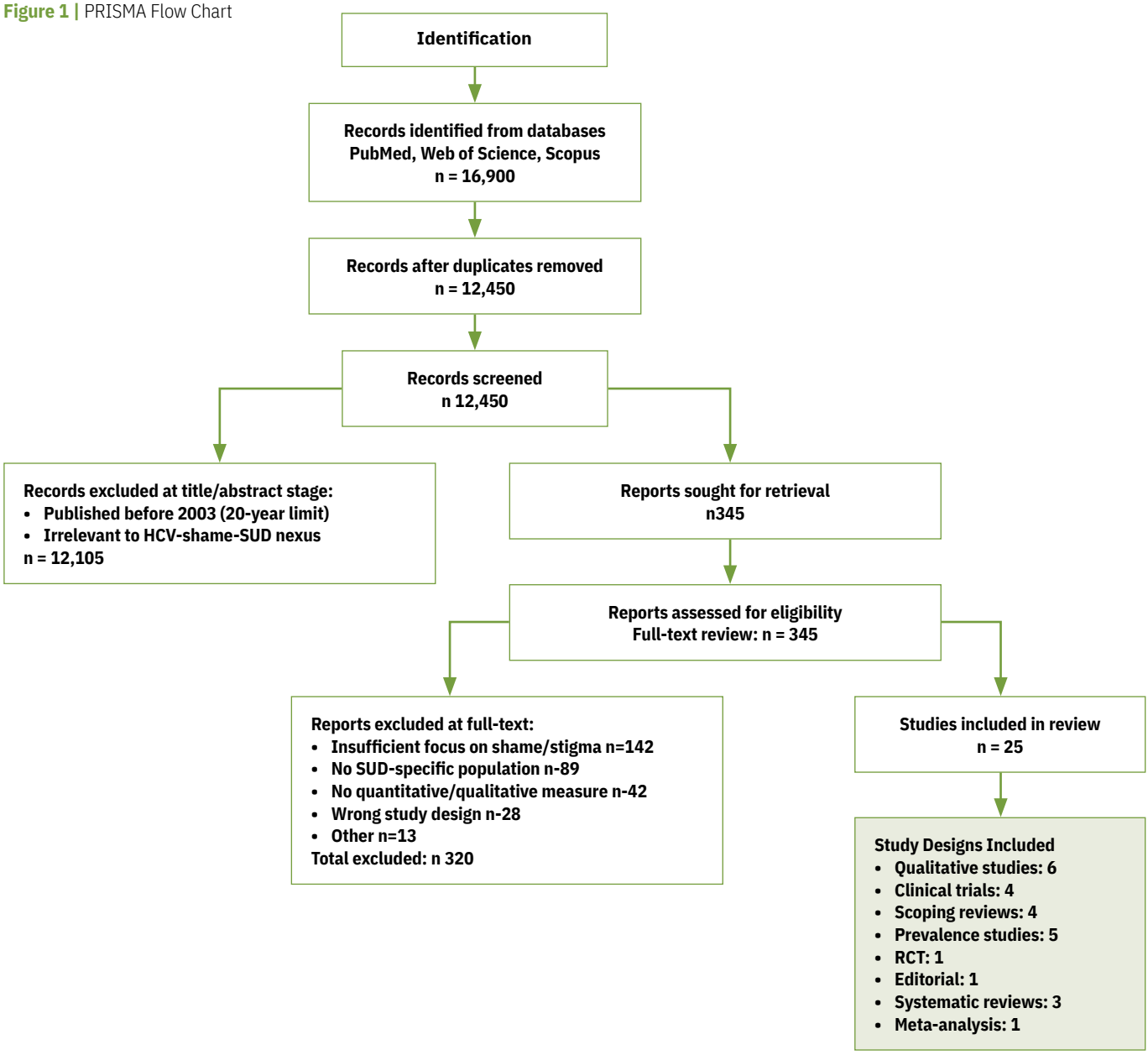
Wogen and Restrepo (2020) discovered that empathetic techniques in healthcare settings can improve patient satisfaction, treatment adherence, and general well-being. Despite these findings, there is still a significant gap in understanding the nuanced feelings of shame and Stigma among HCV-infected people living with SUD, particularly how these factors influence health behavior and treatment success. The goal of this narrative review is to integrate current literature on the topic of shame and Stigma among HCV-infected patients with SUD, looking at both the social and psychological aspects of the condition. This research aims to identify intervention techniques and inform healthcare practices to help eliminate Stigma, support positive health behaviors, and improve the overall quality of treatment for this vulnerable group.

2 METHODS

The research problem was defined based on a comprehensive, non-systematic review of the literature regarding the discrepancies and gaps in understanding the relationship among the concepts of shame, Stigma, HCV, and SUD. The study selection procedure was demonstrated using a modified PRISMA flow chart (*see figure1*). At first, Google Scholar searches yielded 16,900 records. To address this, a search was conducted on the citation databases PubMed, Web of Science, and SCOPUS using the following keywords: for PubMed "hepatitis C", "HCV", "shame", "stigma", "SUD" "substance use", "substance abuse", "substance misuse", "stigmatization", "adults", and "young adults"; for Web of Science ALL=(hepatitis C virus) OR ALL=(HCV) AND ALL=(SUD) OR ALL=(substance abuse) OR ALL=(substance misuse) AND ALL=(shame) OR ALL=(Stigma); and for SCOPUS TITLE-ABS-KEY (HCV AND infection) AND TITLE-ABS-KEY (substance AND abuse AND disorder) AND TITLE-ABS-KEY (Shame) AND TITLE-ABS-KEY (HCV) AND TITLE-ABS-KEY (substance AND use) AND TITLE-ABS-KEY (Stigma). Furthermore, the search was limited using the following filters: "English" and "Adult: 18+ years".

As such, papers not authored in English, dealing with underage subjects, and published in less recent periods were excluded. Studies with underage subjects were removed as inappropriate for the review, considering the variables of concern: substance use and HCV. Substance use in the underage is an exceptional circumstance accompanied by different variables such as physical and sexual abuse that are likely to have a confounding effect. The review was restricted to the relatively recent literature from the past 20 years since publication, given the evolution of the social environment brought on by the march of technology and globalization, which undermines the relevance of older research. Altogether, 25 articles were included in the review, comprising 6 qualitative studies, 4 clinical trials, 4 scoping reviews, 5 prevalence-based studies, 1 randomized controlled trial, 1 editorial, 3 systematic reviews, and 1 meta-analysis. In Table 1, we provide an overview of the selected papers. Findings from these articles were summarized and integrated. Despite our awareness of the higher risk of bias, the results of this paper are presented in a narrative format, which involves synthesis and a more contextualized interpretation of the findings of eligible studies.

Figure 1 | PRISMA Flow Chart



3. RESULTS

People Living with HCV and SUD

The co-occurrence of HCV and SUD has one of the highest prevalence rates worldwide. A study conducted by Degenhard et al. (2023) reports that 83.4% drug users globally inject opioids, with the highest proportions found in the Middle East and North Africa (96.2%) and Sub-Saharan Africa (91.9%). Regionally, the Caribbean and Australasia had the highest proportions of stimulants, with large ranges reported at the national level, such as 0.3% in Sri Lanka vs 92.8% in Puerto Rico. Globally, 38.8% of drug injectors have HCV infection, which equates to 5.8 million individuals. Eastern Europe, Latin America, the Caribbean, and North America have the highest current HCV infection rates. (Grebely et al, 2019) According to disease burden estimates, over 14.8 million individuals inject drugs in 190 countries, accounting for over 99% of the global population (Degenhard et al., 2023). Geographical differences in drug use, injection habits, and risk exposure were significant. In some countries, such as the Czech Republic, more than 80% of drug users predominantly inject stimulants, whereas over 80% globally inject opioids (Grebely et al, 2019). A recent meta-analysis of healthcare utilization patterns for patients with SUD, including injection drug use, found that on average, 29% of SUD patients visited an emergency room each year and 22% were hospitalized; these rates were up to 35 times those of the general population (Lewer et al., 2020).

Despite increased healthcare utilization rates, people with drug addiction are less likely to engage in primary care and obtain the preventive and chronic care treatments they require (Schindler, 2019).) There is a need to recognize and solve the challenges to engaging people with substance abuse and people with injective drug abuse across the spectrum of health care services. Haque's

Table 1 | Overview of the selected articles

Title	Article	Author	Year
People Living with HCV and Substance Abuse Disorder	Epidemiology of injecting drug use, prevalence of injecting-related harm, and exposure to behavioural and environmental risks among people who inject drugs: a systematic review	Degenhardt, Louisa, et al.	2023
	Global, regional, and country-level estimates of hepatitis C infection among people who have recently injected drugs	Grebely J, Larney S, Peacock A, et al.	2019
	Frequency of healthcare utilization by adults who use illicit drugs: a systematic review and meta-analysis.	Lewer, Dan, et al	2019
	Attachment and substance use disorders—theoretical models, empirical evidence, and implications for treatment	Schindler, A	2019
	Association between alcohol use disorder and receipt of direct-acting antiviral hepatitis C virus treatment	Haque, Lamia Y., et al	2022
	A Cross-Sectional Analysis of Tobacco Use and Concurrent Alcohol and Substance Use Among Patients Living with HIV/HCV Co-infection: Findings from a Large Urban Tertiary Center	Sims, O. T., Jackson, A, et al.	2020
Shame and Stigma among people with SUD	The association between shame and substance use in young people: a systematic review	Rahim, M., & Patton, R.	2015
	HIV stigma mechanisms and well-being among PLWH: a test of the HIV stigma framework.	Earnshaw, V. A., Smith, L. R., et al.	2013
	"Discredited" versus "discreditable": Understanding how shared and unique stigma mechanisms affect psychological and physical health disparities.	Chaudoir, S. R., Earnshaw, V. A., & Andel, S.	2016
	Shame and Stigma in association with the HCV cascade to cure among people who inject drugs.	Batchelder. A et al.	2023
	Examining effects of anticipated Stigma, centrality, salience, internalization, and outness on psychological distress for people with concealable stigmatized identities.	Quinn, D. M., Williams, M. K., et al.	2014
	Shame, anxiety, Stigma, and clinical encounters.	Dolezal L.	2022
	Stigma: how it affects patients with substance use disorder.	Zwick, J., Appleseth, H., & Arndt, S.	2020
Understanding the association of Stigma with SUD and chronic illness	Stigma as a fundamental cause of population health inequalities	Hatzenbuehler ML, Phelan JC, & Link BG	2013
	Advancing health equity through crosscutting approaches to health-related Stigma.	Birbeck GL, Bond V, et al.,	2019
	"Discredited" versus "discreditable": Understanding how shared and unique stigma mechanisms affect psychological and physical health disparities.	Chaudoir, S. R., Earnshaw, V. A., & Andel, S.	2013
	Intervening within and across levels: A multilevel approach to Stigma and public health.	Cook et al.,	2014
	A systematic review of multilevel stigma interventions: State of the science and future directions.	Rao D, Elshafei A, Nguyen M, et al.,	2019
	Facilitated telemedicine for hepatitis C virus: Addressing challenges for improving health and life for people with opioid use disorder.	Talal, A. H., Jaanimagi, U., Dharia, A., & Dickerson, S. S.	2023
	Slow and steady wins the race: a randomized clinical trial of acceptance and commitment therapy targeting shame in substance use disorders.	Luoma, J. B., Kohlenberg, B. S., et al.,	2012
	Pharmacists' Stigma toward patients engaged in opioid misuse: when „social distance" does not mean disease prevention.	Werremeyer A, Mosher S, Eukel H, et al.	2021
	Stigmatize the use, not the user? Attitudes on opioid use, drug injection, treatment, and overdose prevention in rural communities	Ezell JM, Walters S, Friedman SR, et al.	2021
	Hepatitis C treatment turned me around:" Psychological and behavioral transformation related to hepatitis C treatment.	Batchelder, A. W., Peyser, D., et al.	2015
Advocacy in reducing Stigma	The burden of Stigma on health and well-being: A taxonomy of concealment, course, disruptiveness, aesthetics, origin, and peril across 93 stigmas	Pachankis, J. E., Hatzenbuehler, M. L., et al	2018
	Stigma and substance use disorders: A clinical, research, and advocacy agenda.	Earnshaw, V. A.	(2020).

(2022) cohort study highlighted the burden of this disease, with 47% of HCV patients having an SUD, 34% having depression, and 36% having severe mental illness. 38% of patients had current alcohol use disorder, 6% had at-risk drinking, 14% had lower risk drinking, 12% were abstinent with a history of alcohol use disorder, and 30% were abstaining without a history of alcohol use disorder.

According to another study, the data revealed that low cooperativeness and self-directedness (CO/SD) were standard among HCV patients. Low CO/SD levels were independent predictors of risky behavior, quality of life, functioning, and social support, underscoring their importance in managing HCV treatment. Furthermore, substance abuse and significant depression were independent predictors of poor outcomes (Sims et al., 2021).

Types of Stigmas among SUD and HCV patients

Disentangling the many types of Stigma that operate in the setting of HCV and substance use disorders, which are frequently regarded as a unitary construct in the literature, is a significant addition of the current review. According to the results, Stigma is better understood as a multifaceted phenomenon that includes self-related stigma processes, structural Stigma, and public Stigma (Link & Phelan, 2001; Hatzenbuehler et al., 2013; Cook et al., 2014). According to Ahern et al. (2007), Zwick et al. (2020), and Werremeyer et al. (2021), public Stigma is the term used to describe socially prevalent unfavorable preconceptions, prejudices, and discriminatory actions directed against people with HCV and/or SUD, frequently portraying them as dangerous, immoral, or non-compliant.

Particularly for injecting drug users and those with co-occurring infectious diseases, structural Stigma is ingrained in institutional practices, healthcare policies, and legal frameworks that systematically limit access to care, harm reduction services, and equitable treatment (Birbeck et al., 2019; Hatzenbuehler et al., 2013; Grebely et al., 2019; Lewer et al., 2020). At the individual psychological level, Stigma takes the form of enacted Stigma (direct experiences of discrimination), internalized Stigma (incorporating negative societal beliefs into one's self-concept), and anticipated Stigma (expectations of rejection or devaluation). These processes have been empirically linked to psychological distress and decreased healthcare engagement (Earnshaw et al., 2013; Quinn et al., 2014; Muncan et al., 2020).

Although they are closely related, shame is a unique affective and identity-level process characterized by a global devaluation of the self rather than merely a condition. It seems to be especially important in influencing treatment avoidance, concealment behaviors, and disruptions in identity and personality organization (Rahim & Patton, 2015; Dolezal, 2022; Batchelder et al., 2023). Differentiating between these types is crucial from both clinical and theoretical standpoints because each has unique effects on psychological functioning, treatment engagement, and recovery trajectories, necessitating interventions that are correspondingly focused at the intrapsychic, interpersonal, and structural levels (Luoma et al., 2012; Rao et al., 2019; Earnshaw, 2020).

Shame and Stigma among people with SUD

The impact of shame and internalized (negative self-image), anticipated (expected public attitudes and concerns about disclosure), seems to be common among drug users (Rahim & Patton, 2015), and enacted (personally experienced) HCV stigma on individuals has not been quantitatively assessed in relation to the HCV treatment cascade. Furthermore, Earnshaw (2013) addressed how stigma manifestations can influence drug use outcomes among those at risk of and living with SUDs through mediating mechanisms. According to previous stigma theory and research (Chaudoir et al., 2016; Hatzenbuehler et al., 2013), three types of mediating mechanisms that link stigma manifestations to substance use outcomes are highlighted: psychological responses to Stigma, social isolation, and access to resources.

Batchelder. A et al. (2023) conducted a study in which the findings highlight the links between lower levels of shame and health-related behavior and treatment outcomes among people with injective drug use (PWID), implying that sustained virologic response (SVR) achievement may contribute to reductions in shame or that reductions in shame may contribute to continued treatment and thus SVR. The study found that PWID, who face significant Stigma, were more likely to complete HCV therapy and achieve SVR when they experienced low or reduced shame. The study found that PWID, who face significant Stigma, were more likely to complete HCV therapy and achieve SVR when they experienced low or diminished shame. Although it is unclear whether lower levels of shame contributed to HCV treatment completion and SVR achievement or whether HCV treatment completion and SVR achievement contributed to reductions in shame, these results suggest a clinically meaningful relationship between shame and HCV treatment success (Batchelder et al., 2023).

Stigma is often a significant social factor in health-related contexts (e.g., HIV, mental illness), and SUDs are no exception. Stigma can contribute to the development of SUDs among individuals with a variety of stigmatized statuses and impair recovery attempts for those who have developed SUDs. According to literature, people with SUDs and other concealable stigmatized identities feel the highest mental distress when they internalize Stigma linked with a status that is extremely important to their self-concept (Quinn et al., 2014).

Many factors have a detrimental effect on health outcomes that have been linked to Stigma, including delayed treatment, avoiding medical appointments, an extensive risk of transmission, poor treatment adherence, mental distress, mental illness, and a higher chance of recurrent health issues. Although the health literature has long acknowledged the adverse effects and burdens of Stigma, there remains some uncertainty about how those who experience it perceive it. (Dolezal, 2022)

However, we are better prepared to combat this Stigma by utilizing what we know about why Stigma arises, how it manifests within organizations and individuals, how it influences outcomes through mediating processes, and the factors that moderate it. Changing how people see and represent those who are recovering can lessen Stigma. The community must establish a clear social identity centered around recovery and meaningful

activities. Reducing the Stigma associated with SUD requires a multimodal strategy. It is critical to provide thorough education to the public and medical professionals to clarify the intricacies of SUD and emphasize the adverse effects of Stigma. The cornerstone of stigma reduction is treating people with dignity and taking a nonjudgmental attitude (Zwick et al., 2020).

Further research is needed to define the processes by which stigma manifestations affect mediating mechanisms and substance use outcomes to have a better understanding of Stigma's influence on substance use. Furthermore, additional research employing an intersectional lens and considering moderating factors is needed to identify who is most sensitive to Stigma's effects on substance use. Youth with SUDs and their caregivers also report refraining from disclosing their or their child's substance use to others due to anticipated Stigma, which contributes to social isolation and can result in personality dysfunction and emotional trauma (Earnshaw, 2020).

Understanding the association of Stigma with SUD and chronic illness

Stigma is acknowledged as a major driver of health disparities (Hatzenbuehler et al., 2013). Stigma has some similar characteristics that apply to all stigmatized statuses (Birbeck et al., 2019). For example, the pathways linking Stigma to health disparities (Chaudoir et al., 2013; Hatzenbuehler et al., 2013) and the intervention strategies for addressing stigmatization (Cook et al., 2014; Rao et al., 2019) are comparable across statuses. Given these shared and crosscutting characteristics, psychologists can apply what they have learned about Stigma in a variety of contexts (e.g., race, HIV) to better understand and address Stigma in the context of SUD. Stigma is understood to be intersectional. According to intersectionality theory, people have numerous interrelated statuses that signify different levels of marginalization and privilege. Stigma associated with sexual and gender minority identities and expressions, race/ethnicity, incarceration, socioeconomic status, physical and mental illnesses (e.g., HIV and chronic pain), and other statuses all contribute to substance use behaviors among people at risk of developing an SUD.

Stigma and Shame in People with HCV and Comorbid SUD

Individuals with severe mental illness, such as schizophrenia or bipolar disorder, often struggle with comorbid SUD. Epidemiological data suggest that the prevalence of co-occurring mental health and SUDs in the United States is alarmingly high, with estimates indicating that as many as 7 to 10 million individuals may be affected by these issues concurrently. This complex interplay between mental health and substance abuse can have profound implications for treatment, recovery, and overall quality of life. Understanding the unique psychological and social factors that contribute to the development and maintenance of these dual diagnoses is crucial to building more efficient, integrated care strategies. Personality functioning is a key domain that merits deeper exploration in this context, as certain personality traits and coping styles may predispose individuals towards substance abuse as a means of self-medication or emotion regulation, while also shaping the trajectory of stigmatization.

SUD symptoms, such as shame, can hinder HCV treatment efforts. In literature, shame or Stigma is defined as a process of separation caused by prejudice against those who exhibit qualities outside the norm (Batchelder et al., 2023; Talal et al., 2023).

In a Talal et al. (2023) qualitative study, participants were found to refer to themselves as ‚addicts', an acquired label and attitude linked with substance abuse that perpetuates negative self-perceptions. This mindset was indicated in the vocabulary that participants used to refer to themselves as ‚dirty' or ‚clean', depending on their present level of substance abuse. As individuals advance through opioid addiction treatment, they gain self-awareness of misconceptions about SUD, comorbid conditions like HCV, and negative attitudes held by those outside the opioid treatment programs. „They think that because you're on methadone, you're sh**, dirt, and lower than low."

Another study discusses that people with SUDs express significant anxiety about how others will perceive them, which undermines symptom disclosure and access to treatment (Earnshaw et al., 2019). Internalized Stigma refers to the extent to which people accept prejudices and stereotypes connected with a stigmatized status and apply them to themselves. Shame, defined as the „emotional core" of internalized Stigma, is widespread among patients with SUDs (Luoma et al., 2012).

The study by Talal et al. (2023) discusses the social perspective, in which participants described situations in which they were condemned for their SUD as a moral failing, as well as for a misunderstanding of SUD's physiological medical basis. Participants reported sentiments of shame and despair after receiving an HCV diagnosis. HCV is not only dirty but also nasty, because people may believe that someone who contracted it was using needles for drugs. Because of these feelings, some participants initially avoided obtaining HCV therapy. *„I didn't tell anyone, not even my family members."* Patients are hesitant to communicate their HCV diagnosis with others due to shame and Stigma associated with the disease. They often express worries about privacy and confidentiality throughout treatment.

The pursuit of HCV treatment is hampered by the effects of SUD, such as anticipated and experienced shame. According to the literature, Stigma or shame is a process of alienation brought on by prejudice toward people who exhibit traits that deviate from the norm (Werremeyer, 2021; Ezell, 2021). According to Heidegger, *ordinary cultural expectations of „the they" (i.e., social standards) are also taken for granted, such as the idea that those who suffer from opiate use disorders are undeserving. The term „they" itself dictates a perspective on the universe (p. 167)* that limits others' options. (Heidegger, 2010) The participant interviews provide examples of how self-perceptions and perceptions of others in healthcare facilities and society can lead to SUD shame, also known as Stigma. The internalization of blame, low self-esteem, and lack of confidence is known as self-stigma (Talal et al., 2023).

This Stigma is exacerbated by the close link between HCV and substance abuse, which makes some people feel condemned or

stigmatized for their prior actions. Patients' decisions regarding disclosure and treatment are frequently influenced by the Stigma and embarrassment surrounding HCV diagnosis. Many people conceal their diagnoses from others due to feelings of extreme embarrassment and self-consciousness. In a particular study, one participant commented, for example, *„At first, I didn't want anybody to know. Telling folks that I have Hep C made me feel ashamed". „At first, I didn't want anybody to know that I was on Hep C medication, because I didn't want anybody to look at me like I'm sick,"* said another participant, who also described their reluctance (Batchelder, 2015).

This Stigma has been heightened by the close link between HCV and substance abuse, which makes some people feel condemned or stigmatized for their prior actions. *„HCV brings up feelings like, ,oh, man, you used to get high, you're no good,"* said one participant, illustrating how this relationship affects how one views oneself. The general health and well-being of people with HCV can be negatively impacted by these internalized sentiments of shame and Stigma, which can significantly influence decision-making and frequently result in delays in seeking treatment or sharing medical information (Batchelder, 2015).

Advocacy in reducing Stigma

Earnshaw (2020) discussed that psychologists, as experts in mental and behavioral health, can play a leading role in reducing Stigma to prevent and treat SUDs through clinical care, research, and advocacy. Psychologists may focus on stigma-based therapies to prevent the development of SUDs at a young age. Psychologists can use acceptance and mindfulness practices to reduce internalized Stigma among individuals with SUDs. Earnshaw (2020) also proposed that psychologists can foster resilience among people with stigmatized statuses in order to prevent the development of SUDs. As previously stated, research has found a range of resilience resources that protect targets against the adverse effects of Stigma on health. Psychologists can create, adapt, and implement evidence-based affirmative treatment strategies for specific targets. Pachankis (2018) has advocated for evidence-based affirmative treatments for sexual and gender minorities that are tailored to address unique life experiences, such as Stigma, that shape these populations' mental health but are not shared by heterosexual and cisgender people. According to Pachankis, key principles of affirmative treatments include assisting individuals in developing insight into how Stigma affects their mental health, desensitizing individuals to negative feelings and cognitive styles that can result from Stigma (e.g., shame, hopelessness), promoting resilience, and providing resources and advocacy. These principles could be used in mental health therapies for people with a variety of stigmatized statuses, including SUDs, thereby enhancing mental health outcomes and potentially contributing to SUD prevention and treatment.

Bias and Heterogeneity Across Included Studies

Although the Narrative review enhances conceptual comprehension, it prevents quantitative synthesis and restricts direct comparability between findings. Specifically, the stigma literature is dominated by cross-sectional designs, which limit causal inferences about the temporal relationships among Stigma, shame, and clinical outcomes.

Variations in the study populations lead to significant heterogeneity. While some research looked at larger populations with SUD, HCV, HIV/HCV co-infection, or concealable stigmatized identities more broadly, others concentrated especially on individuals who inject drugs (PWID). Clinical severity, social marginalization, treatment access, and exposure to many stigmas (e.g., drug use, infectious disease, poverty) vary significantly among these communities. The operationalization of shame and Stigma is a significant source of heterogeneity. While some studies focused on internalized Stigma, expected Stigma, identity centrality, or shame anxiety in clinical interactions, others used structural or public stigma frameworks (e.g., Stigma as a basic driver of health disparities). Standardized psychometric instruments and study-specific or proxy indicators (e.g., healthcare utilization, treatment uptake, concealment practices) were among the measures used.

Constructs classified as „stigma" or „shame" may therefore represent partially overlapping but theoretically distinct occurrences, restricting conceptual consistency across investigations. Convenience samples from clinical settings, harm reduction initiatives, or urban tertiary centers were used in several studies, potentially overrepresenting people already using health services and underrepresenting more marginalized or hidden populations.

On the other hand, community-based research conducted in high-risk or rural areas may magnify some stigma-related effects that are less noticeable in settings with greater resources. When combined, these forms of bias and heterogeneity highlight the need for caution when drawing cohesive conclusions from the research. This variability illustrates the complex and context-sensitive character of Stigma and shame in HCV and SUD rather than implying inconsistency.

It emphasizes the importance of using integrative, multilevel, and psychologically informed models when analysing results and developing solutions. To improve causal inference and theoretical integration, future research might benefit from more conceptual uniformity, longitudinal designs, and culturally appropriate measures.

Recommendations for research and clinical practice

Future studies should use a multilayered, psychologically informed approach to deal with the issue of Stigma and shame in people with HCV and SUD based on the collected data. In addition to longitudinal and culturally responsive designs that can elucidate causal pathways and developmental implications on identity and personality organization, researchers are urged to use more conceptual clarity and consistency when measuring Stigma and shame.

Clinically, addiction and hepatology services should incorporate stigma-informed care through provider education, regu-

lar evaluation of stigma-related distress, and the use of therapeutic interventions that address shame and self-stigma, such as acceptance-based and compassion-focused approaches. Enhancing fair access to treatment, harm reduction programs, and public education campaigns that shift moralizing narratives toward recovery-oriented, humanizing frameworks should be the top priorities for policy-level initiatives aimed at reducing structural Stigma.

Limitations

When interpreting the results of this narrative review, several limitations should be taken into account. First, even though a transparent and organized search method was used, the narrative design does not permit thorough coverage or a formal risk-of-bias assessment, which limits the capacity to assess the relative importance of particular studies. Second, there was significant variation in the populations, study designs, and stigma and shame measures across the evaluated literature, limiting direct comparability and preventing quantitative synthesis. Third, it is difficult to conclude the causal relationship between Stigma, shame, and psychological or clinical effects because most studies are cross-sectional. Lastly, the underrepresentation of culturally distinctive stigma experiences from non-English-speaking contexts may have resulted from the emphasis on English-language publications.

4. CONCLUSIONS

Stigmatization is frequently caused by both an HCV diagnosis and a history of substance abuse, resulting in a compounded feeling of prejudice. Patients frequently internalize negative societal opinions, resulting in self-stigmatization, which reinforces feelings of shame and distances them from healthcare services. This cycle of shame and Stigma is especially damaging in this community because frequent naming and identification as „addicts“ exacerbates their susceptibility and sense of marginalization. Dual stigmatization fosters patient isolation and causes delayed therapy and increases patient isolation, resulting in delayed treatment engagement, lower adherence, and poorer health outcomes. Furthermore, the findings suggest that patients‘ perceptions of being judged by healthcare providers and society at large frequently deter them from seeking necessary care, emphasizing the need for interventions that prioritize destigmatization and tailored psychological support within HCV treatment protocols. In this regard, the presented review supports a multimodal approach that includes integrated mental health therapy, stigma reduction measures, targeted psychosocial interventions, early diagnosis, and rigorous clinical assessments to meet the special requirements of HCV patients with SUD. Such an approach could result in better health outcomes, less Stigma, and a higher quality of life for this marginalized community.

Authors' contributions: AS wrote the paper, and LD and KDR collaborated on revisions of the final text. All authors approved the final form of the paper.

Declaration of interest: The authors declare no conflict of interest.

Funding: This manuscript was written as a part of Specific University Research No. 260632 and was supported by the institutional support programme Cooperation, research area (HEAS). This study was created within the framework of a Specific University Research project. 260-758.

REFERENCES

Ahern, J., Stuber, J., & Galea, S. (2007). Stigma, discrimination, and the health of illicit drug users. *Drug and alcohol dependence*, *88*(2-3), 188–196.

Anderson, Erik S., Carly Russell, Kellie Basham, Martha Montgomery, Helen Lozier, Abigail Crocker, Marisa Zuluaga, and Douglas AE White. „High prevalence of injection drug use and bloodborne viral infections among patients in an urban emergency department." *PLoS One* 15, no. 6 (2020): e0233927.

Batchelder AW, Heo M, Foley JD, et al. Shame and Stigma in association with the HCV cascade to cure among people who inject drugs. *Drug Alcohol Depend.* 2023;253:111013. doi:10.1016/j.drugalcdep.2023.111013

Batchelder, A. W., Peyser, D., Nahvi, S., Arnsten, J. H., & Litwin, A. H. (2015). "Hepatitis C treatment turned me around:" Psychological and behavioral transformation related to hepatitis C treatment. *Drug and Alcohol Dependence*, *153*, 66-71.

Birbeck GL, Bond V, Earnshaw VA., & El-nasoor ML (2019). Advancing health equity through crosscutting approaches to health-related Stigma. *BMC Medicine*, 17(40), 1–5. [PubMed: 30651111]

Brener, L., Cama, E., Hull, P., & Treloar, C. (2017). Evaluation of an online injecting drug use stigma intervention targeted at health providers in New South Wales, Australia. *Health Psychology Open*, *4*(1), 2055102917707180.

Butt, G. (2008). Stigma in the context of hepatitis C: concept analysis. *Journal of advanced nursing*, *62*(6), 712-724.

Chaudoir, S. R., Earnshaw, V. A., & Andel, S. (2016). "Discredited" versus "discreditable": Understanding how shared and unique stigma mechanisms affect psychological and physical health disparities. *In Social Psychological Perspectives on Stigma* (pp. 75–87). Routledge.

Cook JE, Purdie-Vaughns V, Meyer IH, & Busch JTA (2014). Intervening within and across levels: A multilevel approach to Stigma and public health. *Social Science & Medicine*, 103, 101–109. 10.1016/j.socscimed.2013.09.023 [PubMed: 24513229]

Cullen, W., O›Brien, S., O›Carroll, A., O›Kelly, F. D., & Bury, G. (2009). Chronic illness and multimorbidity among problem drug users: a comparative cross-sectional pilot study in primary care. *BMC Family Practice*, *10*, 1–10.

Degenhardt, L., Webb, P., Colledge-Frisby, S., Ireland, J., Wheeler, A., Ottaviano, S., Willing, A., Kairouz, A., Cunningham, E. B., Hajarizadeh, B., Leung, J., Tran, L. T., Price, O., Peacock, A., Vickerman, P., Farrell, M., Dore, G. J., Hickman, M., & Grebely, J. (2023). Epidemiology of injecting drug use, prevalence of injecting-related harm, and exposure to behavioural and environmental risks among people who inject drugs: a systematic review. *Lancet Global Health,* 11(5), e659-e672. https://doi.org/10.1016/S2214-109X(23)00057-8

Dolezal, L. Shame anxiety, Stigma, and clinical encounters. J Eval Clin Pract. 2022 Oct;28(5):854-860. doi: 10.1111/jep.13744. Epub 2022 Jul 28. PMID: 35903848; PMCID: PMC7613638.

Earnshaw, V. A. (2020). Stigma and substance use disorders: A clinical, research, and advocacy agenda. *American Psychologist*, *75*(9), 1300.

Earnshaw, V. A., Smith, L. R., Chaudoir, S. R., Amico, K. R., & Copenhaver, M. M. (2013). HIV stigma mechanisms and well-being among PLWH: a test of the HIV stigma framework. *AIDS and Behavior*, *17*, 1785-1795.

Ezell JM, Walters S, Friedman SR, et al. Stigmatize the use, not the user? Attitudes on opioid use, drug injection, treatment, and overdose prevention in rural communities. *Soc Sci Med*. 2021; 268:113470.

Grebely J, Larney S, Peacock A, et al. Global, regional, and country-level estimates of hepatitis C infection among people who have recently injected drugs. *Addiction.* 2019;114(1):150-166. doi:10.1111/add.14393

Gunn, A. J., Sacks, T. K., & Jemal, A. (2018). "That's not me anymore": Resistance strategies for managing intersectional stigmas for women with substance use and incarceration histories. *Qualitative Social Work*, *17*(4), 490–508.

Haque, L. Y., Fiellin, D. A., Tate, J. P., Esserman, D., Bhattacharya, D., Butt, A. A., Crystal, S., Edelman, E. J., Gordon, A. J., Lim, J. K., Tetrault, J. M., Williams, E. C., Bryant, K., Cartwright, E. J., Rentsch, C. T., Justice, A. C., Lo Re, V., 3rd, & McGinnis, K. A. (2022). Association Between Alcohol Use Disorder and Receipt of Direct-Acting Antiviral Hepatitis C Virus Treatment. *JAMA Netw Open*, 5(12), e2246604.

Harris, M., & Rhodes, T. (2013). Injecting practices in sexual partnerships: hepatitis C transmission potentials in a 'risk equivalence'framework. *Drug and Alcohol Dependence*, *132*(3), 617–623.

Hatzenbuehler ML, Phelan JC, & Link BG (2013). Stigma as a fundamental cause of population health inequalities. *American Journal of Public Health, 103*(5), 813–821. [PubMed: 23488505]

Heidegger, M. (2010). *Being and time*. SUNY Press.

Keyes, K. M., & Galea, S. (2016). *Population health science*. Oxford University Press.

Lewer, D., Freer, J., King, E., Larney, S., Degenhardt, L., Tweed, E. J., ... & Morley, K. I. (2020). Frequency of healthcare utilization by adults who use illicit drugs: a systematic review and meta-analysis. *Addiction*, *115*(6), 1011–1023.

Link, B. G., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *Journal of health and social behavior*, 80–94.

Link, B. G., & Phelan, J. C. (2001). Conceptualizing Stigma. *Annual review of Sociology*, *27*(1), 363–385.

Luoma, J. B., Kohlenberg, B. S., Hayes, S. C., & Fletcher, L. (2012). Slow and steady wins the race: a randomized clinical trial of acceptance and commitment therapy targeting shame in substance use disorders. *Journal of consulting and clinical psychology*, *80*(1), 43.

Miller, K. A., Hitschfeld, M. J., Lineberry, T. W., & Palmer, B. A. (2016). How does active substance use at psychiatric admission impact suicide risk and hospital length-of-stay?. *Journal of addictive diseases*, *35*(4), 291-297.

Muncan, B., Walters, S. M., Ezell, J., & Ompad, D. C. (2020). «They look at us like junkies»: influences of drug use Stigma on the healthcare engagement of people who inject drugs in New York City. *Harm reduction journal*, *17*, 1–9.

Neale, Z. E., Sally, I., Kuo, C., & Dick, D. M. (2021). A systematic review of gene-by-intervention studies of alcohol and other substance use. *Development and psychopathology*, *33*(4), 1410–1427.

Pachankis, J. E., Hatzenbuehler, M. L., Wang, K., Burton, C. L., Crawford, F. W., Phelan, J. C., & Link, B. G. (2018). The burden of Stigma on health and well-being: A taxonomy of concealment, course, disruptiveness, aesthetics, origin, and peril across 93 stigmas. *Personality and Social Psychology Bulletin*, *44*(4), 451–474.

Quinn, D. M., Williams, M. K., Quintana, F., Gaskins, J. L., Overstreet, N. M., Pishori, A., ... & Chaudoir, S. R. (2014). Examining effects of anticipated Stigma, centrality, salience, internalization, and outness on psychological distress for people with concealable stigmatized identities. *PloS one*, *9*(5), e96977.

Rahim, M., & Patton, R. (2015). The association between shame and substance use in young people: a systematic review: *PeerJ*, *3*, e737.

Rao D, Elshafei A, Nguyen M, Hatzenbuehler ML, Frey S, & Go VF (2019). A systematic review of multilevel stigma interventions: State of the science and future directions. *BMC Medicine, 17*(41), 1–11. [PubMed: 30651111]

Schindler, A. (2019). Attachment and substance use disorders—theoretical models, empirical evidence, and implications for treatment. Frontiers in psychiatry, 10, 727.Rowe, C. L. (2012). Family therapy for drug abuse: Review and updates 2003–2010. *Journal of marital and family therapy*, *38*(1), 59–81.

Sims, O. T., Jackson, A., Guo, Y., Truong, D. N., Odame, E. A., & Mamudu, H. M. (2021). A Cross-Sectional Analysis of Tobacco Use and Concurrent Alcohol and Substance Use Among Patients Living with HIV/HCV Co-infection: Findings from a Large Urban Tertiary Center. *J Clin Psychol Med Settings*, 28(3), 553–561. https://doi.org/10.1007/s10880-020-09744-2

Talal, A. H., Jaanimagi, U., Dharia, A., & Dickerson, S. S. (2023). Facilitated telemedicine for hepatitis C virus: Addressing challenges for improving health and life for people with opioid use disorder. Health Expect, 26(6), 2594–2607. https://doi.org/10.1111/hex.13854

Von Hippel, C., Issa, M., Ma, R., & Stokes, A. (2011). Stereotype threat: Antecedents and consequences for working women. *European Journal of Social Psychology*, *41*(2), 151-161.

Werremeyer A, Mosher S, Eukel H, et al. Pharmacists› Stigma toward patients engaged in opioid misuse: when «social distance» does not mean disease prevention. *Subst Abus*. 2021; 42(4): 919-926.

Wogen, J., & Restrepo, M. T. (2020). Human rights, Stigma, and substance use. *Health and human rights*, *22*(1), 51.

Zwick, J., Appleseth, H., & Arndt, S. (2020). Stigma: How it affects the substance use disorder patient. *Substance abuse treatment, prevention, and policy*, *15*, 1-4.