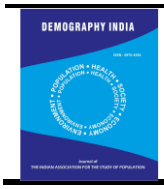


**Demography India**

A Journal of Indian Association of Study of Population

Journal Homepage: https://demographyindia.iasp.ac.in/

# Family relationship among Inject Drug Users in Northeast, India

Daphisha Manner[1]* and Reshma Santhosh[2]

**Abstract**

In Northeast India, a region heavily impacted by drug trafficking, substance abuse, and socio-political instability, injecting drug use (IDU) continues to be a significant public health concern. Psychosocial aspects, especially the function and circumstances of family relationships, have received less attention. The purpose of this study is to compile the body of research on the effects of injecting drug use on Northeast Indian family dynamics and how these relationships impact health outcomes. A thorough search for peer-reviewed articles was done using databases including PubMed, Scopus, and Google Scholar. Studies that examined familial relationships, social support, stigma, and caregiving while concentrating on IDUs in Northeast Indian states (Manipur, Meghalaya, Nagaland, Mizoram, Assam, Tripura, Arunachal Pradesh) were included in the inclusion criteria. The following search terms were used: "substance use, "family relationships," "Northeast India," "injecting drug users," "psychosocial support," and "stigma." A study using a mixed method is taken into consideration. Information about the study's design, sample composition, family interaction metrics, and health-related results were extracted. Twenty-four studies met the requirements for inclusion. According to research, injecting drug use (IDU) erodes family ties by causing conflict, financial strain, emotional distance, and a loss of trust. Isolation and delayed care are frequently caused by stigma in families. Supportive families, on the other hand, greatly improve recovery following rehabilitation, treatment adherence, and mental health stability. According to gender disparities, female IDUs face more stigma and less support from their families (Dasgupta & Hazarika, 2021). Families in Northeast India are important protective and rehabilitative factors that support recovery and well-being, even though IDU strains family relationships.

***Keywords***

Injecting Drug Use (IDU), Family Relationships, Hepatitis C (HCV), Northeast India, Psychosocial Support, Stigma, Substance Abuse

*Corresponding Author

[1] *MPH student, School of Public Health, SRM University Sikkim, Gangtok, Sikkim, India 737102. Email Id: daphishamannnar@gmail.com*

[2] *Assistant Professor, School of Public Health, SRM University Sikkim, Gangtok, Sikkim, India 737102 Email Id: reshma.s@srmus.edu.in*

## Introduction

Drug trafficking and injecting drug use (IDU) are two major public health concerns in Northeast India, a region distinguished by its ethnic diversity, complicated political past, and porous international borders. The area is particularly susceptible to drug inflows and substance abuse among its citizens due to its closeness to the "Golden Triangle," a well-known centre for the production of heroin and opium (UNODC, 2022). According to Sharma et al. (2019), states like Manipur, Mizoram, and Nagaland routinely have some of India's highest prevalence rates of IDU, which fuels widespread addiction and related diseases like HIV, hepatitis B, and hepatitis C. Drug injections have an impact on families, communities, and individual users. Clinical and epidemiological aspects of IDU, such as monitoring disease transmission, overdose deaths, and behavioural risks, have been the main focus of research in India (Gupta et al., 2021). The psychosocial aspects, especially those pertaining to family relationships, are still relatively unexplored, though. Family systems have the potential to either make substance use worse or act as safe havens that aid in recovery. Family relationships are important in two ways, according to Velleman and Templeton (2007): they can be sources of stress and conflict, but they also provide vital support during detoxification, treatment, and reintegration.

These dynamics are even more noticeable in Northeast India. Many tribal communities have traditional extended and clan-based family structures, which can be strong support systems but are also vulnerable to social stigmas and cultural taboos related to addiction (Mohan et al., 2015). Secondary trauma, such as psychological stress, financial difficulties, and social embarrassment, frequently affects family members, especially when a relative becomes an IDU. Relationship disintegration, emotional disengagement, mistrust, and even domestic violence are among the repercussions (Nongkynrih & Khonglah, 2018). According to the National AIDS Control Organization's (NACO) demographic data, the majority of IDUs in the area are young men between the ages of 18 and 35 who have low literacy, high unemployment, and little access to harm-reduction and mental health services (NACO, 2022). A concerning increase in substance use has also been reported recently among women, who are more likely to experience stigma, family rejection, and gender-based violence (Panda et al., 2020). Addiction is only one factor that shapes these experiences; other factors include cultural expectations of femininity, honour, and family reputation, which penalise women more severely than men for transgressive behaviours like drug use (Chakraborty & Jacob, 2019).

Global literature has extensively documented the role of the family in the emergence and resolution of substance use behaviours. Research conducted in Southeast Asian and Western settings has demonstrated that family-based interventions, such as group therapy, psychoeducation, and counselling, can greatly improve treatment outcomes, lower relapse rates, and improve users' psychological well-being (Liddle et al., 2001; Roozen et al., 2010). Despite this, harm-reduction plans in India still mostly lack these interventions, particularly in the northeastern states where community involvement and cultural sensitivity are crucial. Therefore, by thoroughly reviewing the literature on family dynamics among

injecting drug users in Northeast India, this study aims to close the gap in current scholarship. It seeks to pinpoint recurrent themes, including conflict, emotional support, stigma, and caregiving, and examine the gaps, inconsistencies, and consistency in the body of current research. This review aims to influence culturally sensitive, family-inclusive interventions that could improve treatment effectiveness and long-term recovery outcomes in the area by placing family relationships at the forefront of the conversation on IDU.

**Materials and Methods**

• A methodical approach to searching the literature for published and grey literature systematic reviews.

• Selection and screening of pertinent systematic and meta-analytic reviews with objectivity

• Evaluation of the included systematic reviews critically: data evaluation

• A methodical compilation of the study's conclusions: data analysis

Details of these steps are described below.

**Search strategy**

Several electronic databases, including PubMed/MEDLINE, Scopus, Web of Science, EMBASE, PsycINFO, IndMed, and Google Scholar, were searched in a systematic manner. Articles published up until September 2024 were the focus of the search. Boolean operators were used to combine keywords in order to capture the scope of the study. Injecting drug use (injecting drug use, people who inject drugs, IDU, PWID) was the main concept of interest. Terms pertaining to families (family, family support, family dynamics, caregiver, spouse, and marital relationship) intersected with this. Lastly, the scope was limited to Northeast India (Manipur, Nagaland, Assam, Meghalaya, Tripura, Mizoram, Sikkim and Arunachal Pradesh) by applying geographical filters

The approach was specifically created to include both quantitative and qualitative research on PWID treatment outcomes, stigma, caregiving responsibilities, family influence, and support systems.

**Screening and selection**

To make sure that only the most pertinent and excellent studies were included in the review, the screening and selection process was conducted methodically. Duplicate records were eliminated after all records found by database searches (PubMed, Scopus, and Google Scholar) were exported into a single reference list. The predetermined inclusion criteria, which focused on studies carried out in Northeast India, published in English between 2000 and 2024, and addressing family relationships and psychosocial outcomes among injecting drug users (IDUs), were checked independently for titles and abstracts. Studies that did not focus on family dynamics, were not region-specific, did not contain primary data (e.g., editorials, letters, or commentaries), or were published in languages other than English were not included. After that, full-text publications of possibly qualifying research were obtained and thoroughly examined. At this point, a more thorough evaluation was carried out to verify the reporting's sufficiency, methodological quality and relevance. Excluded studies included only biomedical outcomes without social context or did not adequately describe psychosocial or family relationships. To guarantee alignment with the research objectives, the final selection of articles was decided by consensus.

**Inclusion**

(i) Publication type: Only journal articles that have undergone peer review and written exclusively in English.

(ii) Duration - Research papers released from 2000 to 2024.

(iii) Focus on geography: Only research conducted in Northeastern India, which includes states such as Manipur, Nagaland, Mizoram, Tripura, Assam, Meghalaya, Arunachal Pradesh, and Sikkim.

(iv) Focus of the topic: In the context of injecting drug use (IDUs/PWID), studies had to examine family relationships, stigma, psychosocial well-being, or emotional outcomes.

(v) Research designs permitted: Numerous approaches, including mixed-methods research, qualitative interviews, cross-sectional studies, quantitative surveys, ethnographies, and secondary analyses.

(vi) Particular importance: Studies that concentrated on spouses, partners, widows, or children of IDUs were given priority due to direct impact of IDU on the social and familial aspects.

**Exclusion**

(i) Studies that were exclusively epidemiological or biomedical, reporting only clinical outcomes, medication pharmacology, or HIV/HCV prevalence, without addressing family or psychosocial context were not included for review.

(ii) Excluded studies that carried out outside of Northeast India.

(iii) Excluded studies did not consider family, household, or psychosocial dynamics; instead, they focused on individual risk behaviors, harm-reduction adoption, or epidemiological trends.

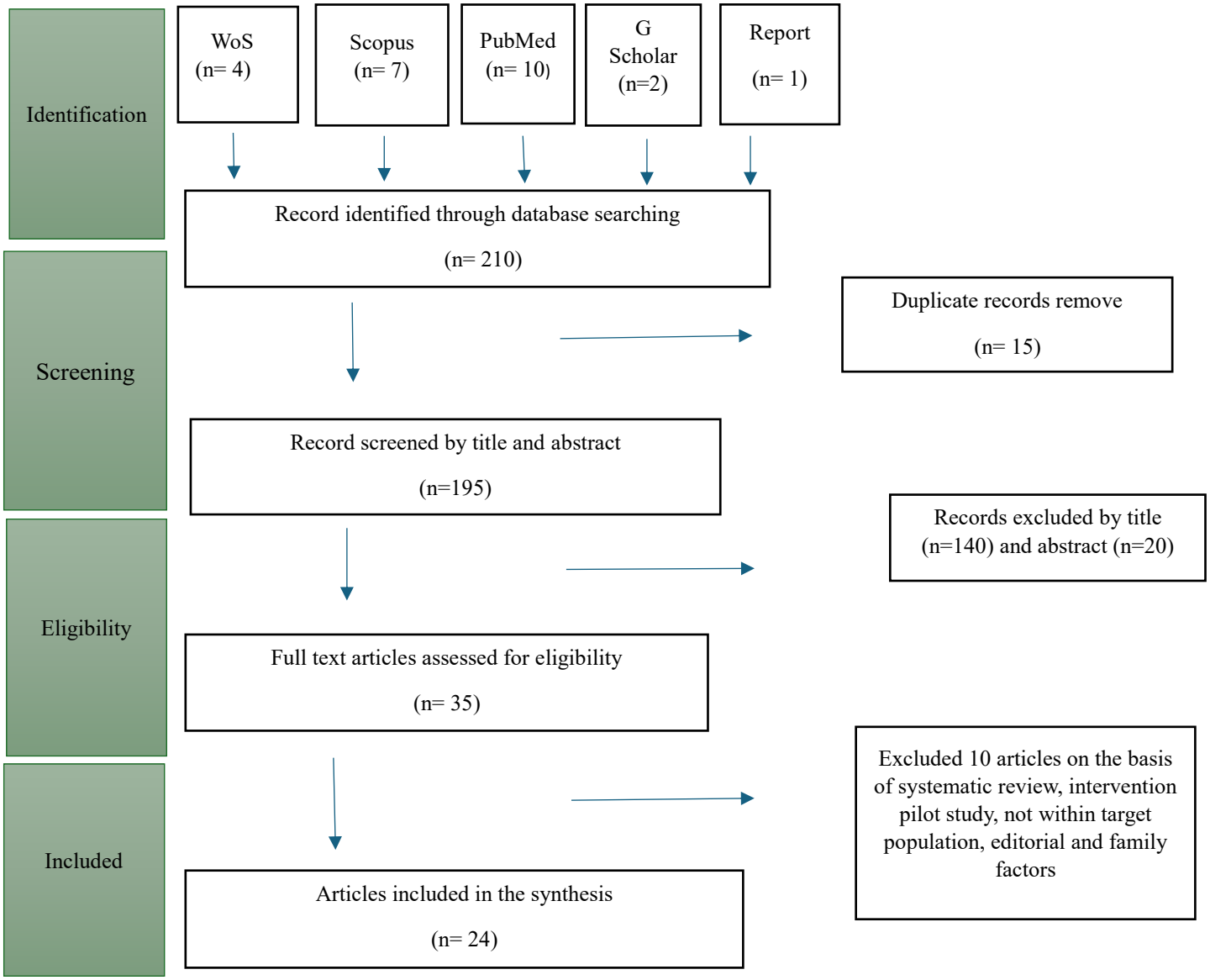
**Data extraction**

The procedure made certain that data about the study's design, sample size, thematic focus, main conclusions, and declared limitations were consistently taken out and documented in every article. Comparability between studies was made possible by the use of a standardized form, and the chronological arrangement made it easier to spot changes in emphasis, new trends, and knowledge gaps. In order to gain a better understanding of how family relationships impact the lived experiences of injecting drug users in Northeast India, the synthesis was further enhanced by the inclusion of both qualitative and quantitative designs. All things considered, the meticulous approach to data extraction improved the review's dependability and gave thematic analysis a solid basis.

**Study Selection**

The PRISMA flow diagram provides an illustration of the study identification and selection process. Initially, 210 records were found, 200 of which were obtained by searching electronic databases and 10 by manually searching reference lists. After 15 duplicate records were eliminated, 195 titles and abstracts underwent relevance screening. About 140 records were eliminated during the screening phase on the basis of title, and 20 on the basis of abstract. After retrieving the remaining 35 full-text

articles, their eligibility was evaluated. Ten of these studies were eliminated for the following reasons: editorial (n = 1), family factors (n = 1), not being in the target population (n = 5), systematic review (n = 2), and intervention pilot study (n = 1). Ultimately, 24 studies were included in the qualitative synthesis after meeting the inclusion criteria.




PRISMA flowchart for selection of articles for review

**Results**

After screening and full-text evaluation, 24 studies out of the 210 records our search turned up satisfied the inclusion requirements (PRISMA flow diagram). The included studies used a variety of methodologies, such as mapping studies, pilot interventions, mixed-methods designs, cross-sectional surveys, and secondary analyses, and they were conducted between 2000 and 2024. Geographically, Manipur and Nagaland were the focus of the studies, though Mizoram, Tripura, Assam, and Meghalaya were also included in a number of multi-site investigations. When taken as a whole, these studies offer a varied but complementary view of how family ties, injecting drug use, and related health outcomes interact in Northeast India.

| No | Authors | Year | Geographic location | Study design | Sample size | Thematic focus | Key findings | Limitations |
|---|---|---|---|---|---|---|---|---|
| 1 | Kermode, M et.al | 2008 | Manipur and Nagaland | Pilot community-based intervention, mixed-method evaluation | 74 widows | Psychosocial support / mental health of widows of IDUs | Many widows described being abandoned by in-laws and facing economic hardship in supporting children. | Conducted in one district of Manipur; results may not generalise across Northeast India. |
| 2 | Medhi, G. k et.al | 2011 | Assam, Manipur, Nagaland, Mizoram, and Tripura | Cross-sectional mapping and descriptive analysis of IDU locations; field verification. | 2,462 IDU locations identified (specific of IDUs not reported) | Spatial distribution, gender (female IDU presence), settings of injecting, stigma contexts. | A significant presence of female IDUs was observed in all five states, with some engaging in sex work, highlighting gender-specific vulnerabilities and the need for targeted interventions. | The study identified 2,462 IDU locations but did not specify the number of individual IDUs surveyed, making it difficult to assess the representativeness of the sample. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | Cepeda, J.A et.al | 2017 | Mizoram, Manipur, Nagaland, Gangtok | Cross-sectional respondent-driven sampling (RDS) study | 14,481 PWID, 796 women who inject drugs | identify injection-related and sexual risk correlates of HIV and HCV among women who inject drugs | 53% of women were HIV-infected (95% CI: 49–57%), while 22% were HCV-infected — an unusual pattern compared with men (men: HIV 17%, HCV 32%). | although RDS weighting was used, authors acknowledge they cannot be certain the sample fully represents the underlying population of women PWID. |
| 4 | Chakrapani V et.al | 2011 | Manipur | Mixed methods — cross-sectional structured survey + qualitative component (focus groups, in-depth interviews) | Survey n = 75 (50 men, 25 women); qualitative: 2 focus groups (n = 17), seven in-depth interviews, and two key-informant interviews | Barriers and coping strategies shaping HIV-positive IDU syringe sharing | Structural constraints (policing, access) and stigma increase needle sharing and risk; family/community norms shape practices. | Small, convenience sample recruited largely through MNP+ and NGOs — limits generalizability to all HIV-positive IDUs in Manipur. |
| 5 | Armstrong G et.al | 2014 | Manipur and Nagaland | Secondary analysis merging IBBA and BTS cross-sectional surveys to assess behaviours and risks. | Pool sample=3,362 | Study compared demographics, injecting, and sexual behaviors across PWID age groups to identify risks and interventions. | Non-injecting wives of PWID face hidden HIV risks, causing family vulnerability, stigma, and caregiving burdens. | Self-reported behaviours may be inaccurate due to memory lapses and social-desirability influenced underreporting. |
| 6 | Pachuau L. N et.al | 2023 | Mizoram | The study analysed 15 years of TI program data to examine HIV trends and predictors among PWID. | Data from 14,783 PWID records were analyzed. | Study analyzed HIV trends and predictors among PWID to guide prevention and harm-reduction strategies. | Fluctuating HIV among PWID creates family stress, infection risk for partners, caregiving burdens, and household stigma. | Potential selection bias (TI clients may not represent all PWID, especially those not engaged with services) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7 | State TI program evaluation | 2014 | Northeast Region. | Program evaluation (TI = targeted intervention) — mixed methods. | | Service uptake, household impacts, family linkages. | Providing clean needles to PWID reduces HIV transmission, indirectly safeguarding their families' health. | The report focuses on service utilization and behavioral interventions, which may not capture all psychosocial impacts on families. |
| 8 | Biswas et.al | 2020 | Manipur, Mizoram, Nagaland, and Meghalaya | Population-based, cross-sectional survey using Integrated Bio-Behavioral Surveillance (IBBS) data from 2014–2015 | 4,272 male injecting drug users (IDUs) | Variation in demographic and injecting drug use behaviors among IDUs across four North-Eastern states | Variation across states in needle use, partner risks, and household contexts. | Secondary analysis; IBBS sampling limits |
| 9 | Chakravarty J et.al | 2024 | Assam | Retrospective chart review of 238 patients diagnosed with opioid dependence | 238 patients diagnosed with opioid dependence | Sociodemographic and clinical profiles of opioid-dependent individuals in Assam | Married PWID may cause family stress, financial burden, and HIV/HCV risk to spouses. | Clinic sample not community-representative. |
| 10 | Kermode M et.al | 2009 | Nagaland and Manipur | Qualitative exploratory study using in-depth interviews and focus group discussions | 44 women who use drugs and alcohol, plus key informant stakeholders. | Barriers and needs of women drug users for HIV prevention services. | Women faced stigma, family rejection, intimate partner violence, and limited emotional support networks. | Small qualitative sample limits generalizability |
| 11 | Pachuau et.al | 2023 | Mizoram | Cross-sectional analysis of 2,695 people who inject drugs (PWID) enrolled in Targeted | 2,695 PWID | HIV prevalence and associated factors among PWID | Marital disruptions or dynamics heighten HIV risk through shared injecting and limited partner support. | Study focused on registered PWID; may not represent all PWID in the population |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Intervention (TI) | | | | |
| 12 | Amberker A et.al | 2015 | Manipur, Nagaland, Assam and Meghalaya | Multi-centric, cross-sectional, comparative survey of female vs male IDUs | 98 female and 202 male IDUs | Drug-use patterns, injecting behaviors, HIV vulnerabilities among female IDUs compared to male. | | Cross-sectional means no causality; self-reporting may underreport family/psychosocial details. |
| 13 | Taranga Reang & Gambhir Singh | 2014 | Mizoram, Manipur. | Cross-sectional study | 825 eligible couples (response rate =99.28%) | Community/family narratives about drug use, stigma, burden. | Marital disruptions or dynamics heighten HIV risk through shared injecting and limited partner support | Small, non-representative samples. |
| 14 | Nongrum M et.al | 2025 | Meghalaya | Qualitative descriptive study using semi-structured interviews and thematic analysis. | 28 opioid substitution therapy clients and 17 service providers | Exploring reasons for drug initiation, types of drugs used, modes of use, and access patterns | Family problems as a trigger for initiation, Economic and psychosocial burden on users and families. | Self-reported data can be inaccurate because people may forget, exaggerate, or hide sensitive details. |
| 15 | S. Chakrabarti et.al | 2000 | Manipur | Cross-sectional serological survey assessing HIV-1 subtypes among injectors and spouses | 322 sample, 233 (72%) were HIV-1 seropositive | Transmission patterns, subtype distribution, spouse seropositivity rates. | 45% of non-injecting wives infected: showing substantial family transmission. | Posssible selection bias becausethe abstract does not describe how representative the sample is of all IDUs and spouses in Manipur |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 16 | S. Panda et.al | 2000 | Manipur | Case-control study of HIV-infected injecting drug users (IDUs) and their non-injecting wives. | 161 HIV-positive IDUs and their wives | Factors contributing to HIV transmission from IDU husbands to their wives. | Risk behaviour: Condom use was very low within marriages — contributing significantly to spousal transmission. | Self-reporting sexual/STD history may suffer recall or social desirability bias. |
| 17 | Kermode M et.al | 2007 | Manipur and Nagaland | Cross-sectional survey of injecting drug users plus contextual questionnaire. | 200 IDUs | Examines first injection circumstances, social networks, and initiation of others. | Initiation often happened in informal, intimate contexts (homes, friends' houses), highlighting the role of trust, belonging, and peer pressure. | Small female sample limits gender-comparisons. |
| 18 | Mukta S et.al | 2003 | Manipur | Situational analysis / programme review of syringe exchange programmes (case-study approach). | Review focused on two SEP sites; no single numeric participant sample reported. | Assessing SEP performance and contextual/structural barriers to effective harm-reduction. | Stigma, policing, and hostile environment undermined programme reach and users' psychosocial wellbeing. | Case-study review limits generalisability; structural complexities require broader longitudinal evaluation. |
| 19 | Monsumi Barroah & Roumi Deb | 2018 | Meghalaya (Jaintia Hills) | Cross-sectional survey using interview schedules among women aged 15-35. | 320 women in reproductive/vulnerable age group (15-35 years). | Women's knowledge and attitudes toward HIV/AIDS, risk behaviours, misconceptions. | HIV/AIDS stigma fostered negative attitudes, exclusion, and discrimination community-wide. | Survey design; social desirability may bias responses; lacks deep psychosocial detail. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 20 | Armstrong G et.al | 2010 | Manipur and Nagaland | Operational research analyzing routinely collected data from an NGO-based opioid substitution therapy (OST) program. | 2,569 clients enrolled between May 2006 and December 2007. | Evaluating OST outcomes, including treatment retention, HIV risk behaviors, and quality of life. | Regular family involvement in treatment reduced relapse likelihood. | Cross-sectional data; potential biases in self-reported information; limited generalizability. |
| 21 | Medhi G et.al | 2011 | Manipur, Meghalaya, Nagaland Mizoram & Assam | Cross-sectional mapping and interviews with IDUs to assess risk behaviors and locations | 2,462 identified IDU locations; individual IDU count not specified. | Mapping IDU hotspots and analyzing injecting behaviors and risk factors. | Female IDUs' drug use and sex work strain family support, trust, and emotional wellbeing, increasing stress. | Cross-sectional design; lacks longitudinal data; potential underreporting due to stigma |
| 22 | Sabri B et.al | 2017 | All Northeast | Cross-sectional study using respondent-driven sampling (RDS) to assess HIV risk behaviors. | 6,449 people who inject drugs (PWID); 5,653 men and 796 women. | Gender differences in HIV risk behaviors among PWID. | Women with relationship stigma and depression had higher HIV risk; men with depression shared needles more. | Cross-sectional design; self-reported data may be subject to bias; limited to urban settings. |
| 23 | Kermode M et.al | 2013 | Northeast India (multiple NE sites described). | Qualitative (KIIs, FGDs) focusing on women who use drugs/alcohol. | Not reported in table; qualitative sample (key informants, focus groups). | Women, stigma, family roles, HIV risk behaviours. | Families were main cause of stigma, discrimination of women and very few get help from siblings | Qualitative; local contexts limit generalisability. |
| 24 | Roy S et.al | 2024 | Assam | Qualitative study using in-depth interviews | N=7 | The study aims of treatment-seeking females in the region and discuss their unique treatment and recovery | Women often encounter social stigma, domestic violence and less family support | Very small sample size (N=7) limits generalisability and prevents estimation of prevalence or causal inference about family factors. |

**Social exclusion and family stigma**

A recurring theme in all of the studies was stigma. Numerous articles described how PWID faced discrimination, blame, and rejection in their own homes, which exacerbated the stigma they endured in society at large. Widows of IDUs, for instance, claimed that their in-laws had abandoned them (Kermode et al., 2008), and female PWID talked about the increased stigma associated with presumptions of promiscuity and sex work (Sabri et al., 2018). Social isolation, broken familial bonds, and poor mental health outcomes were all influenced by this dual burden of internal (family-level) and external (societal-level) stigma.

**Financial strain and the strain of providing care**

The strain that PWID families face in providing care and finances was a common theme among the studies. The impact was disproportionately felt by spouses, especially women. Armstrong et al. (2014) described how non-injecting wives had to manage the home and take care of the children while also facing hidden HIV risks. Other studies demonstrated how PWID's inability to contribute to family income increased financial strain, forcing family members—typically mothers and wives—to take on the dual responsibilities of providing care and earning a living. In situations of poverty, where families already had few resources, this intersection of financial and emotional burden was especially severe.

**Families as resilient and at risk**

The dual role that families play in the lives of PWID was highlighted by the results of several studies. Families, on the one hand, served as risk-enabling networks where peer and familial relationships made it easier to start and maintain injecting behaviors (Medhi et al., 2011). Additionally, research revealed that, particularly for women, intimate relationships frequently perpetuated cycles of risky injecting and sexual behavior (McFall et al., 2017). However, families also offered vital assistance for coping and rehabilitation. Interventions that engaged families, such as community-based psychosocial support programs (Kermode et al., 2008), showed promising effects in enhancing resilience, improving coping strategies, and encouraging treatment adherence. This ambivalence emphasizes how crucial it is to frame families in harm-reduction strategies as a place of risk mitigation as well as a resource for recovery.

**Trends over time and space**

The 24 studies showed a shift in focus over time when arranged chronologically. While later studies (2014–2018) focused more on gendered vulnerabilities, family-level consequences, and psychosocial dimensions, earlier studies (2008–2011) focused mainly on mapping IDU populations and documenting HIV risk. Geographically, Manipur and Nagaland dominated the literature, reflecting their status as epicenters of drug use in the region. More recent research, however, broadened the scope to include Mizoram, Tripura, and Meghalaya, indicating an awareness of the increasing prevalence of injecting practices in the Northeast.

**Synthesis**

Family relationships were identified as a significant but conflicting element in the lives of injecting drug users (PWID) in Northeast India across the 24 included studies. A recurrent theme was stigma, with PWID experiencing rejection in both their homes and society at large. Social isolation and negative psychosocial outcomes were caused by the increased exclusion of women, especially widows and female PWID. Families also bore the financial and

caregiving burden, with spouses—particularly women—generating both income and providing care, frequently in the face of poverty and concealed HIV risk.

Families served as both risk environments and sources of resilience at the same time. Family-based interventions showed promise in improving coping and treatment adherence, even though peer and familial relationships encouraged injecting behaviors and risky cycles. In terms of chronology, studies have moved from mapping and HIV risk documentation in the past to more recent investigations of gendered vulnerabilities and family-level effects. Geographically, recent research has extended to Mizoram, Tripura, and Meghalaya, despite the literature's dominance in Manipur and Nagaland. This reflects the region's broader prevalence of injecting drug use.

**Discussion**

According to this review, family relationships play a role in the experiences of people who inject drugs (PWID) in Northeast India, acting as both protective and risky environments. The 24 included studies revealed three recurring themes: family stigma, caregiving and financial burdens, and the dual role of families as risk facilitators and recovery anchors. Collectively, these findings demonstrate the significance of family dynamics in shaping not only individual psychosocial outcomes but also broader regional patterns in treatment adherence and health-seeking.

The evidence suggests that stigma operates on multiple levels and that rejection from family members often intensifies preconceptions that are already present in the community. This double burden of exclusion weakens mental health and shatters familial bonds, particularly for women. For instance, previous studies have demonstrated that widows and female PWID are disproportionately affected by layered stigma, social isolation, and vulnerability to violence (Kermode et al., 2008; Chakrapani et al., 2011; Sabri et al., 2018). Families were also burdened with significant caregiving and financial responsibilities, with spouses—who were primarily women—serving as both the household caregiver and the source of income in situations where there were no male breadwinners (Armstrong et al., 2014). These overlapping strains underscore the complex interrelationships among gender, poverty, and caregiving in PWID households.

The family served as a site of paradoxical risk and resilience at the same time. On the one hand, family networks-maintained cycles of dependency, encouraged risky behavior, and made injecting easier (Medhi et al., 2011; McFall et al., 2017). On the other hand, families that actively participated provided emotional support, encouraged treatment compliance, and employed psychosocial interventions to avoid relapse (Kermode et al., 2008). This ambivalence reflects the need for a paradigm shift in harm-reduction programming: families must be seen as crucial intervention units capable of transforming dangerous circumstances into healing spaces, not merely as supporting actors.

Notably, a change in priorities is reflected in the research trajectory over the last ten years. The epidemiological foundation was laid by earlier work (2008–2011) that focused on HIV risk assessment and population mapping (Medhi et al., 2011; Chakrapani et al., 2011). On the other hand, more recent research (2014–2018) focused on the relational, psychosocial, and gendered aspects of drug use, highlighting the ways in which household structures, intimate partner dynamics, and caregiving pressures affect protective pathways as well as risks (Armstrong et al., 2014; McFall et al., 2017).

This change in time is consistent with broader global public health trends that emphasize the importance of intervention in the home. The psychosocial risks that drug users in Manipur and Nagaland face were documented by Chatterjee et al. (2011), who observed that vulnerabilities were exacerbated by strained family relationships and a lack of support networks. Similarly, Kermode et al. (2009) highlighted that stigma was a significant obstacle to care and recovery for injecting drug users (IDUs) in Manipur, especially from within families and communities. The high frequency of risky behaviors in Northeast India was further highlighted by Mahanta et al. (2008), who demonstrated how social contexts, such as family conflict, influenced injecting patterns and unsafe practices. Panda and Kumar (2013) brought attention to the psychosocial aspects of drug use in India, highlighting the fact that families frequently serve as stressors and sources of support, impacting both recovery and relapse. Collectively, these studies support the themes found in the current review by highlighting the crucial influence of family dynamics on the lived experiences of IDUs in Northeast India.

The implications of these findings are wide-ranging. First, parents, spouses, and other family members should be included in community-based interventions, counseling, and aftercare as part of a family-centered harm-reduction strategy that replaces Northeast India's individual-centered approach. Programs must also address the unique vulnerabilities of women, both as PWID and as caregivers, in a gender-responsive manner to guarantee safety, confidentiality, and access to reproductive and mental health services. Third, professionals need specific training and resources to manage complex family dynamics, and policy frameworks must integrate family-based treatment models into state and federal drug control and public health initiatives. Finally, future research should examine how drug use impacts households across generations, examine culturally based family resilience strategies that could be employed in interventions, and cover underrepresented states.

In Northeast India, the family remains a major resource and a risk factor for PWID, according to the reviewed evidence taken as a whole. Addressing this duality through comprehensive, gender-responsive, culturally sensitive family-centered strategies is necessary to lower stigma, improve health outcomes, and strengthen community resilience in the area.

**Conclusion**

This review shows how family dynamics shape both vulnerabilities and recovery opportunities for people who inject drugs (PWID) in Northeast India. Three recurring themes surfaced in 24 studies: the ambivalent role of families as both risk-enabling networks and vital sources of support; the stigma and exclusion within households; and the disproportionate caregiving and financial burdens placed on women. Examining the relational and gendered aspects of injecting drug use has replaced mapping HIV risk in research over time, highlighting the significance of considering the home as the primary site of intervention.

Programs can lessen stigma, increase resilience, and enhance long-term health outcomes by presenting families as active participants in prevention, care, and recovery rather than as supporting characters. By doing this, family-centered harm-reduction techniques could help PWID in Northeast India turn their homes from places of risk and exclusion into hubs of support and healing.

**Conflict of Interest:** The authors declare no conflict of interests.

**Funding:** The authors has no support or funding to report.

**Acknowledgements:** The author sincerely thanks the faculty and peers at the School of Public Health, SRMUS for their continuous support and encouragement. The authors gratefully acknowledge the referee for valuable comments that helped to improve this manuscript.

## References

Kermode, M., Devine, A., Chandra, P., Dzuvichu, B., Gilbert, T., & Herrman, H. (2008). Some peace of mind: Assessing a pilot intervention to promote mental health among widows of injecting drug users in north-east India. *BMC Public Health, 8,* 294. https://doi.org/10.1186/1471-2458-8-294

Medhi, G. K., Mahanta, J., Adhikary, R., Akoijam, B. S., Liegise, B., Sarathy, K., Thomas, C. J., & Sarmah, B. (2009). Spatial distribution and characteristics of injecting drug users (IDU) in five northeastern states of India. *BMC Public Health, 9,* 271. https://doi.org/10.1186/1471-2458-9-271

Cepeda, J. A., Solomon, S. S., Srikrishnan, A. K., McFall, A. M., Kumar, M. S., Vasudevan, C. K., Anand, S., Celentano, D. D., Lucas, G. M., & Mehta, S. H. (2017). Injection drug network characteristics are important markers of HIV risk behavior and lack of viral suppression. *AIDS and Behavior, 21*(2), 335–346. https://doi.org/10.1007/s10461-016-1480-1

Chakrapani, V., Kershaw, T., Shunmugam, M., Newman, P. A., Cornman, D. H., & Dubrow, R. (2015). Prevalence of and barriers to dual-contraceptive methods use among married men and women living with HIV in India. *AIDS Care, 27*(3), 288–292. https://doi.org/10.1080/09540121.2014.972322

Armstrong, G., Medhi, G. K., Mahanta, J., Paranjape, R. S., & Kermode, M. (2010). Undiagnosed HIV among people who inject drugs in Manipur, India. *International Journal of STD & AIDS, 21*(3), 197–199. https://doi.org/10.1258/ijsa.2009.009362

Pachuau, L. N., Tannous, C., Chawngthu, R. L., & Agho, K. E. (2023). HIV and its associated factors among people who inject drugs in Mizoram, Northeast India. *BMC Infectious Diseases, 23,* 86. https://doi.org/10.1186/s12879-023-07983-1

Biswas, S., Ghosh, P., Chakraborty, D., Kumar, A., Aggarwal, S., & Saha, M. K. (2011). Variation in injecting drug use behavior across different north-eastern states in India. *Harm Reduction Journal, 8,* 36. https://doi.org/10.1186/1477-7517-8-36

Chakravarty, P. J., Mahintamani, T., Mukherjee, D., Daimary, P. P., & Dutta, H. (2022). Sociodemographic and clinical profiles of individuals with opioid dependence syndrome presenting to a tertiary care center in Assam: A retrospective review. *Indian Journal of Psychological Medicine, 44*(3), 231–237. https://doi.org/10.1177/02537176211043625

Kermode, M., Longleng, V., Singh, B. C., Hocking, J., Langkham, B., & Crofts, N. (2009). Killing time with enjoyment: A qualitative study of initiation into injecting drug use in north-east India. *Substance Use & Misuse, 44*(8), 1070–1089. https://doi.org/10.1080/10826080802486301

Ambekar, A., Rao, R., Agrawal, A., Goyal, S., Mishra, A., Kishore, K., Mukherjee, D., & Albertin, C. (2015). Pattern of drug use and associated behaviors among female injecting drug users from northeast India: A multi-centric, cross-sectional, comparative study. *Substance Use & Misuse, 50*(10), 1259–1267. https://doi.org/10.3109/10826084.2015.1013130

Nongrum, M. S., Nengnong, C. B., Passah, M., & Decruse, B. (2025). Understanding drug use in Meghalaya: A drug users' perspective. *Indian Journal of Public Health, 69*(2), 224–226. https://doi.org/10.4103/ijph.ijph_664_24

Panda, S., Chatterjee, A., Bhattacharya, S. K., Manna, B., Singh, P. N., Sarkar, S., Naik, T.

N., Chakrabarti, S., & Detels, R. (2000). Transmission of HIV from injecting drug users to their wives in Manipur, India. *International Journal of STD & AIDS, 11*(7), 468–473. https://doi.org/10.1258/0956462001916221

Kermode, M., Longleng, V., Singh, B. C., Hocking, J., Langkham, B., & Crofts, N. (2007). My first time: Initiation into injecting drug use in Manipur and Nagaland, north-east India. *Harm Reduction Journal, 4,* 19. https://doi.org/10.1186/1477-7517-4-19

National AIDS Control Organization. (2014). *Evaluation of targeted intervention (TI) programs for HIV prevention among people who inject drugs in Northeast India* [Program evaluation report]. Government of India.

Sharma, M., Panda, S., Sharma, U., Singh, H. N., Sharma, C., & Singh, R. R. (2006). Five years of needle syringe exchange in Manipur, India: Programme and contextual issues. *International Journal of Drug Policy, 17*(5), 373–382. https://doi.org/10.1016/j.drugpo.2006.02.007

Armstrong, G., Kermode, M., Sharma, C., Langkham, B., & Crofts, N. (2010). Opioid substitution therapy in Manipur and Nagaland, north-east India: Operational research in action. *Harm Reduction Journal, 7,* 29. https://doi.org/10.1186/1477-7517-7-29

Sabri, B., McFall, A. M., Solomon, S. S., Srikrishnan, A. K., Vasudevan, C. K., Anand, S., Celentano, D. D., Mehta, S. H., Kumar, S., & Lucas, G. M. (2016). Gender differences in factors related to HIV risk behaviors among people who inject drugs in North-East India. *AIDS and Behavior, 20*(12), 2663–2678. https://doi.org/10.1007/s10461-016-1359-1

Kermode, M., Sono, C. Z., Songput, C. H., & Devine, A. (2013). Falling through the cracks: A qualitative study of HIV risks among women who use drugs and alcohol in northeast India. *BMC International Health and Human Rights, 13,* 9. https://doi.org/10.1186/1472-698X-13-9

Roy, S., Mukherjee, D., Mahintamani, T., Daimary, P. P., & Dutta, H. (2021). The sociodemographic profile and the challenges associated with treatment and rehabilitation in female heroin users: A case series from Northeast India. *Indian Journal of Psychiatry, 63*(6), 595–598. https://doi.org/10.4103/psychiatry.IndianJPsychiatry_802_20

Chakrabarti, S., Panda, S., Chatterjee, A., Sarkar, S., Manna, B., Singh, N. B., Naik, T. N., Detels, R., & Bhattacharya, S. K. (2000). HIV-1 subtypes in injecting drug users and their non-injecting wives in Manipur, India. *Journal of Acquired Immune Deficiency Syndromes, 24*(4), 386–390. https://doi.org/10.1097/00126334-200008010-00009

Gupta, H., Kumar, N., & Singh, S. (2021). Injecting drug use in India: An emerging public health challenge. *International Journal of Community Medicine and Public Health, 8*(4), 1824–1828. https://doi.org/10.18203/2394-6040.ijcmph20211245

Liddle, H. A., Dakof, G. A., Turner, R. M., Henderson, C. E., & Greenbaum, P. E. (2001). Treating adolescent drug abuse: A randomized trial comparing multidimensional family therapy and cognitive behavior therapy. *Addiction, 96*(12), 1609–1620. https://doi.org/10.1080/09652140120080768

UNODC. (2022). *World Drug Report 2022*. United Nations Office on Drugs and Crime. https://www.unodc.org/unodc/en/data-and-analysis/world-drug-report-2022.html

Roozen, H. G., Boulogne, J. J., van Tulder, M. W., van den Brink, W., De Jong, C. A. J., & Kerkhof, A. J. F. M. (2010). A systematic review of the effectiveness of family therapy and systemic interventions for adult substance misuse. *Journal of Substance Abuse Treatment, 31*(1), 103–112.

Chatterjee, P., Badiaga, S., & Banerjee, A. (2011). Psychosocial risks among injecting drug users in Manipur and Nagaland: Implications for HIV prevention. *Substance Use & Misuse, 46*(2-3), 173–182. https://doi.org/10.3109/10826084.2011.521069

Kermode, M., Sono, C., Songput, C. H., Devine, A., & Langkham, B. (2009). Meeting the needs of people who inject drugs in Manipur, India: A public health and human rights imperative. *BMC International Health and Human Rights, 9*(Suppl 1), S7. https://doi.org/10.1186/1472-698X-9-S1-S7

Mahanta, J., Medhi, G. K., Paranjape, R. S., Roy, N., Kohli, A., Akoijam, B. S., ... & Bhattacharjee, P. (2008). Injecting and sexual risk behaviours, sexually transmitted infections and HIV prevalence in injecting drug users in three states in India. *International Journal of Drug Policy, 19*(1), 30–40. https://doi.org/10.1016/j.drugpo.2007.11.018

Panda, S., & Kumar, M. S. (2013). Understanding the psychosocial dimensions of drug use and its impact on families in India. *Indian Journal of Psychiatry, 55*(2), 212–219. https://doi.org/10.4103/0019-5545.111460