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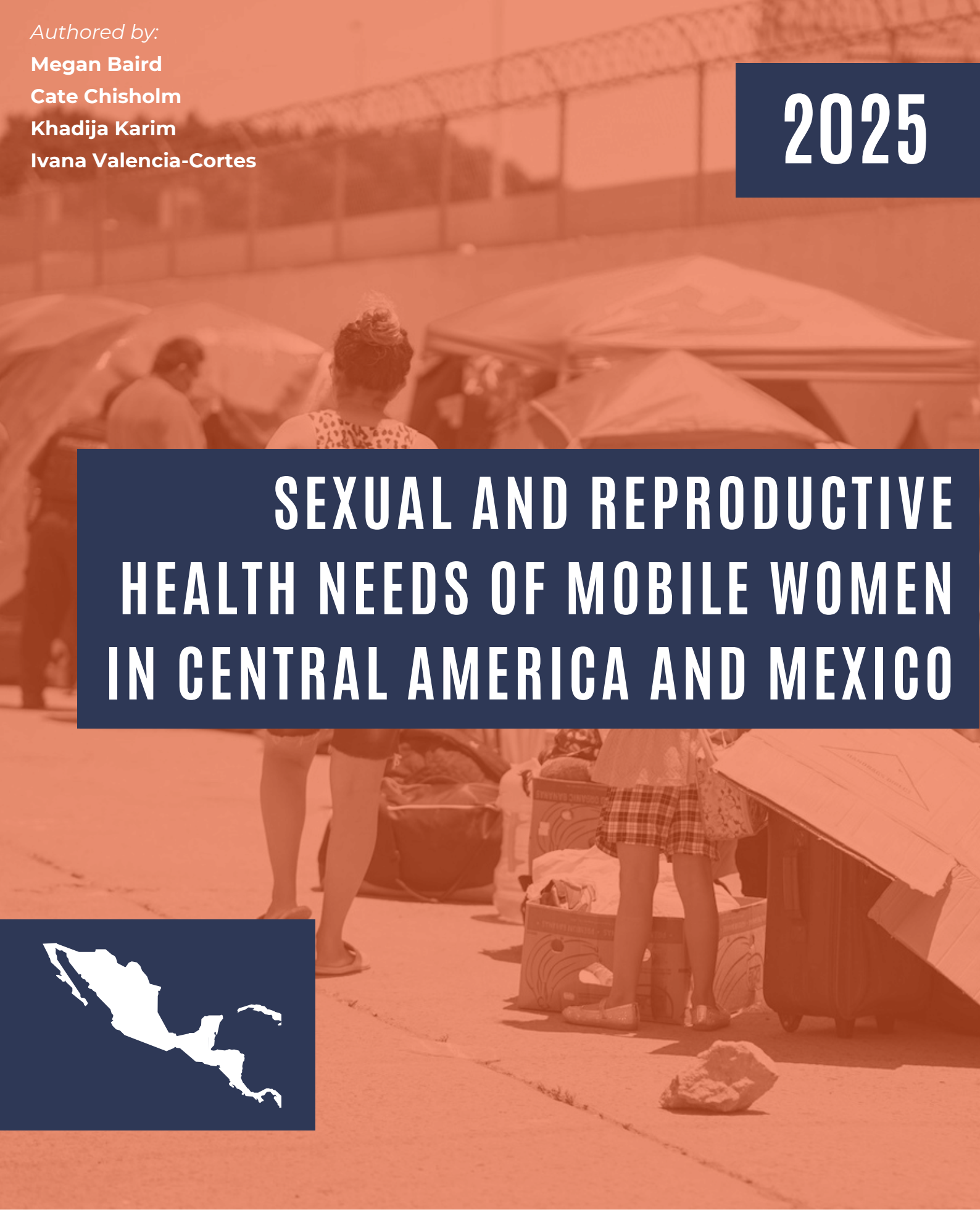
SEXUAL AND REPRODUCTIVE HEALTH NEEDS OF MOBILE WOMEN IN CENTRAL AMERICA AND MEXICO



LSE Department of International Development

Ipas LATINOAMÉRICA Y EL CARIBE

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Disclaimer: The views and opinions expressed in this report are the authors' own and do not necessarily reflect the views or positions of Ipas LAC or the LSE.

Table of Contents

Acronyms

ANC: Antenatal Care

FSW: Female Sex Worker

GBV: Gender-Based Violence

HIV/AIDS: Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome

IFRC: International Federation of Red Cross and Red Crescent Societies

IGO: Inter-Governmental Organisation

IOM: International Organization for Migration

IUD: Intrauterine Device

LATAM: Latin America

LAC: Latin America and the Caribbean

LARC: Long-Acting Reversible Contraception

MSF: Médecins Sans Frontières

NGO: Non-Governmental Organisation

STI: Sexually Transmitted Infection

SRH: Sexual and Reproductive Health

SRHR: Sexual and Reproductive Health and Rights

UNFPA: United Nations Population Fund

UNHCR: United Nations High Commissioner for Refugees

US: United States

WHO: World Health Organisation

Key Terms

Coyote: migration facilitator who charges a fee to help smuggle migrants through migration routes in Central America into the US (Angulo-Pasel 2019).

Gender-based violence (GBV): violence that results in physical, sexual, or mental harm or suffering on the basis of gender. This includes threats, coercion, or deprivation of liberty, and can occur in public or private life (United Nations 1993).

Sexual violence: an attempted or threatened act which is sexual in nature and not consensual. This is inclusive of acts of rape, sexual abuse and harassment, exploitation, and forced prostitution. In addition, any sexual activity with a child is considered sexual violence (UNHCR n.d.).

Sex work: encompasses a wide range of activities which involve the exchange of money (or an equivalent) for the provision of a sexual service. It is the preferred term used in the literature, as it attempts to remove derogatory and sexist connotations commonly associated with the term “prostitute” (British Medical Association 2021).

Executive Summary

Introduction

Migration through Central America and Mexico is an increasingly urgent humanitarian issue, with over 500,000 migrants from El Salvador, Honduras, and Guatemala reaching the Mexico-US border in 2022 alone. Migrants face precarious conditions, including violence, disease, and lack of access to essential healthcare services. Women constitute a growing proportion of this migratory flow and face unique challenges, particularly regarding sexual and reproductive health (SRH). Gender-based violence (GBV), sexual violence, and lack of access to contraceptive and maternal healthcare exacerbate the risks faced by women in transit.

Objectives

This report seeks to (1) assess the current literature on the sexual and reproductive health of women in situations of mobility in Central America and Mexico, and (2) analyse and interpret the results of the *Regional Diagnostic Study on Health Conditions in Central American Migrants in Route to Mexico and the United States* to (2a) understand the sociodemographic characteristics and migration reasons of female study participants and (2b) describe the conditions and challenges they face during migration, specifically as it relates to sexual and reproductive health conditions and violence. Lastly, the report develops strategies to address the SRH needs of mobile women in Central America and Mexico.

Methodology

A two-pronged approach was employed to achieve our objectives: a scoping review and data analysis. The scoping review followed the PRISMA-ScR protocol, ultimately identifying 29 relevant studies from databases and grey literature sources. The review focused on sexual violence, pregnancy, STIs and HIV/AIDs, contraception, and barriers to care.

The data analysis utilised a dataset from *the Regional Diagnostic Study on Health Conditions in Central American Migrants in Route to Mexico and the United States.* The sample included 1,500 female respondents. Statistical analysis using R software examined sociodemographic characteristics, migration motives, and SRH challenges, with particular attention to contraceptive use, pregnancy, and experiences of violence.

Results

Scoping Review

Findings indicate that mobile women face extreme vulnerabilities, particularly regarding sexual violence, contraception, and pregnancy. High-risk areas for violence include migration routes like La Bestia, jungle regions controlled by criminal groups, and border crossings where sexual coercion is rampant. Transactional and survival sex are common, exacerbated by economic deprivation.

Regarding SRH, mobile women often resort to long-acting reversible contraceptives (LARCs) due to limited healthcare access. Condoms are less frequently used, increasing vulnerability to sexually transmitted infections (STIs) and HIV/AIDS. Pregnancy-related complications are common, with some women resorting to dangerous methods to terminate pregnancies due to lack of access to safe abortion services.

Barriers to SRH services include geographic inaccessibility, lack of awareness of available healthcare options, and fear of deportation. Anti-immigrant policies contribute to psychosocial inaccessibility, deterring women from seeking medical assistance.

Data Analysis

The dataset revealed that the majority of respondents (64.34%) migrated for economic reasons as well as fleeing violence (43.44%). The US and Mexico were the primary destination countries, representing 48.33% and 39.67% of the population respectively.

Contraceptive use among migrant women was high (58.42%), with a preference for LARCs. A total of 3.44% of respondents were pregnant, of which 75.55% have received at least one antenatal care visit. 8.89% of pregnant respondents expressed a desire to terminate their pregnancy. However, this figure may be underreported due to sociocultural stigma and legal barriers.

Violence was a prevalent concern, with 26.5% of respondents experiencing some form of violence. Sexual violence affected 8.06% of respondents, though the actual figure is likely higher due to underreporting. Logistic regression and odds ratio analysis found that women travelling with another person and those with economic or health-related needs were significantly more likely to experience violence.

Recommendations

A dedicated SRH data collection system should be established to improve the granularity and reliability of information. The system should be SRH-specific, sex-disaggregated, standardised, comprehensive, of a wide scope, and quantitative.

In order to have a coordinated, regional response to the SRH needs of mobile women, a Central American and Mexican Agency to spearhead collaboration efforts should be created which ensures intersectoral, transnational, and interagency collaboration.

Lastly, the barriers to healthcare should be addressed through information dissemination, such as distribution of SRHR education materials in person and online where resources are offered and sexual violence can be reported. Healthcare professionals should also be trained to provide trauma-informed, culturally competent, and patient-centred care practices, and SRH resources should always be well stocked, such as LARCs, STI tests, and pregnancy tests.

1.0 Introduction

Background

Migration is an extremely pressing topic in current global discourse, particularly in the Americas. Through Central America and Mexico runs a northward-bound migratory flow, with migrants aiming to reach Mexico and the United States (US) (see Figure 1). In 2022, more than 500,000 migrants from just three countries alone (El Salvador, Honduras and Guatemala) reached the Mexico-US border (McAuliffe and Oucho 2024).

Figure 1. Migratory Flows in Central America and Mexico

(Conant and Chwastyk 2015)

Migrants traverse the terrain by foot, bus, train and hitchhiking, switching routes to evade authorities and gangs. Established routes pass through key hotspots, with significant migrant populations residing along the Mexico-US border, risking deportation and exploitation. Some embark alone, but those with financial means pay coyotes to guide them (Frank-Vitale 2023). Recently, migrant caravans have formed, made up of hundreds of migrants and gaining more as they ascend north, providing limited protection in numbers against human traffickers and police (Amnesty International 2018).

The key drivers of this migration include political unrest, violence, poverty, and climate change (UNHCR n.d.). As these factors intensify, the number of migrants is steadily increasing. At the border between Panama and Colombia, more than 500,000 people passed through the Darien Gap in 2023, a remarkable increase on 248,000 in 2022 (PAHO 2023). With increasing crackdown and political hostility towards migrants, this journey has become increasingly treacherous.

Migration comes at a considerable cost to one's health. Basic needs often go unmet, including shelter, food and water, and infectious diseases are rife on transportation routes. Insecure access to healthcare and low provision means these conditions are unaddressed, exacerbating poor health.

Purpose

Women are a growing proportion of migrants in Central America and Mexico, making up half of all migrants (de Pablo and Aragón 2024). They face distinct challenges while migrating, particularly sexual violence and sex trafficking, with 20% of women reporting GBV in the Darien Gap (Kerf et al. 2023). While there is awareness of gendered vulnerability during migration, it remains an under-researched area. Additionally, the wider SRH of female migrants remains neglected, despite its exceptional need. Migration corridors are low-resource settings, with insufficient access and coverage of SRH healthcare compounding ill health. There is a clear need to investigate the SRH needs of migrant women in Central America and Mexico further.

1.1 Objectives

Assess the current literature on the sexual and reproductive health of women in situations of mobility in Central America and Mexico.

Analyse and **interpret** the results of the ***Regional Diagnostic Study on Health Conditions in Central American Migrants in Route to Mexico and the United States*** to:

(1) Understand the sociodemographic characteristics and migration reasons of female study participants

(2) Describe the conditions and challenges they face during migration, specifically as it relates to sexual and reproductive health conditions and violence.

Develop strategies to address the SRH needs of mobile women in Central America and Mexico.

Location

This report looks at migration in Central America and Mexico, with Central America encompassing Guatemala, Belize, El Salvador, Honduras, Nicaragua, Costa Rica and Panama.

Population

Women are the focus of this report, limited to those identifying as cisgender. While members of the LGBTQI+ community also face additional risks, exploring this with due process is beyond the scope of the report.

The population is confined to women of reproductive age, as the SRH needs of women and girls outside of this age bracket differ significantly. Migrants tend to be younger as they are physically able to complete the journey, with almost half between the ages 26-35 (International Organization for Migration Latina America and the Caribbean n.d.). Reproductive age is defined as 15-49 years inclusive (WHO n.d.), aligned with commonly accepted definitions of the term.

‘Mobile women’ refers to all women in-transit, including refugees, asylum seekers and migrants. The key feature is that they intend to migrate north and are still migrating at the point of study. As the context of internal migration is distinct from international migration, this report only considers women who have crossed international borders. The only deviation from this pattern is the inclusion of migrants in Mexico, as those intending to reach the US will not yet have crossed international borders. The decisive factor is the intention to migrate to the US, with many residing in Mexican cities near the border; thus, they are categorised as ‘in-transit’.

2.0 Methodology

2.1 Scoping Review Methodology

We undertook a scoping review to answer, 'What are the SRH needs of mobile women in Central America and Mexico?'. A scoping review is a systematic method to provide background to a topic and map current literature. We chose the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews protocol (PRISMA-ScR) (Tricco et al. 2018). In instances where we have deviated from this, this is outlined in Appendix B.

The search strategies were derived from the Population Concept Context (PCC) framework, as described by the Joanna Briggs Institute (Peters et al. 2017). Application of this framework to our research question can be seen in Table 1. Variations of these terms were then listed to build a search strategy (Appendix C). Using combinations of Boolean operators, the search strategy was adapted to fit the requirements of each database, an example of which can be seen in Appendix D. The databases used were Ovid Medline, Ovid Global Health, SCOPUS and Global Medicus Index. For grey literature, we searched websites of NGOs and IGOs known to operate in Central America and Mexico, including Ipas LAC, WHO, UNFPA and UNHCR.

Table 1: PCC Framework

Population	**Women aged 15-49 years**
Concept	**Sexual and reproductive health**
Context	**Situations of mobility**
	Central America and Mexico

For screening, articles were uploaded to the software Rayyan (Ouzzani et al. 2016), which three members completed. The first phase involved title and abstract screening using the inclusion and exclusion criteria in Table 2. Conflicts were resolved by discussion and unanimous agreement by all three members. The second phase was full text screening. Conflicts were resolved by the fourth member of the group. Spanish articles were translated by Google Translate (2024). Spanish articles were included with the intention of promoting epistemic justice, as many important contributions on this topic are in Spanish. A flowchart of the screening process is available in Appendix E.

Table 2: Inclusion and Exclusion Criteria for Literature Screening

Inclusion Criteria	Exclusion Criteria
Population included women aged 15-49 years	**Population does not include women, or outside of 15-49 years**
Included substantial portion of SRH	**No SRH – anything less than a paragraph**
Active migration – explicit mention of in-transit, mention intention of destination country	**Published or dataset pre-2010**
Dataset collected from 2010-present (included if majority of study conducted post-2009)	**Sex trafficking**
Central America and Mexico – at least one country in the study includes	
English or Spanish language	

29 articles were included in our scoping review, which were then downloaded onto the reference manager Zotero (Corporation for Digital Scholarship 2024) for data extraction. Three members read the articles and extracted agreed characteristics to create a summary table of the sources: see Appendix F. Spanish articles were used in their original format and data extraction was conducted by the group's native Spanish-speaker.

2.2 Data Analysis Methodology

The data for this study derives from *the Regional Diagnostic Study on Health Conditions in Central American Migrants in Route to Mexico and the United States* (translated from Spanish) disseminated by Pasmo, the Mexican National Institute of Public Health, GORGAS Memorial Institute for Health Studies, and CISIDAT. The study explored socio-demographic background, migration status, migratory experience, and overall health needs. Participants were international or internal Spanish-speaking migrants who began their journey less than one year ago. They were interviewed in shelters and migrant houses along the migration route.
The data was received from Ipas LAC after it had been cleaned. We created a subset of the data which only included participants who indicated they were female at birth. Our sample consisted of 1500 participants, which comprised 38.6% of the total survey respondents (N=3884). We collaborated with Ipas LAC to create a literature review and run descriptive and inferential statistics, focusing on three objectives informed by our research questions:

1. **Understand the sociodemographic characteristics and migration reasons of study participants.**
2. **Describe the conditions and challenges they face during migration, specifically:**
3. **Sexual and reproductive health conditions;**
4. **Violence.**

Three areas of interest were identified by Ipas LAC: contraceptive needs, unwanted pregnancies, and sexual violence. Contraceptive needs were conceptualised in terms of use of contraception. Unwanted pregnancies were measured by the indicator of considering interruption of pregnancy. We additionally looked at factors relating to pregnancy, including pregnancy rates, access to medical check-ups during pregnancy, and pregnancy-related health issues. Sexual violence was discussed in conjunction with broader violence, measuring how rates of sexual violence compared to other forms of violence.

Our statistical analysis focused first on understanding the population by creating descriptive tables (Appendix G) and graphs to understand the experiences of our study population over the duration of their migration. The tables show the most important socio-demographic characteristics of the survey population, outlined in Section 4.0.

We analysed the data through statistical computing software R (v4.4.2, R Core Team 2024), and used Excel to create tables. We created Sankey diagrams to understand relationships within our data (Figures 2 and 3). We used logit regression models converted to odds ratios to understand the relationship between characteristics of migrants and experiences of violence.

2.3 Limitations

Assessing the SRH needs of our population was limited by the makeup of the survey. The survey's questions did not go into depth about SRH needs, as its aim was to look at broad overall health needs. For this reason, there were not enough female SRH-specific questions to provide the granularity of results that we aimed for into our topics of contraceptive use, unwanted pregnancies, and sexual violence. There were also no questions specifically about sex work; thus, we were unable to determine prevalence of sex work among our population, although it was identified as a high need population among the literature. Secondly, the results revealed small sample sizes of some of our sub-populations of interest, such as pregnant women. Due to these small sample sizes, it was not possible to perform statistical regression analyses.

3.0 Scoping Review Findings

3.1 Overview

Table 3: Literature Breakdown by Topic and Location

SRH Topic	*Geographic Location*										
	Mexico	Guatemala	Belize	El Salvador	Honduras	Nicaragua	Costa Rica	Panama	United States *	Regional **	Total
Sexual or gender-based violence	9	2		2	1				1	4	19
HIV/AIDS	2	3						2	1	2	10
STIs	2							2		2	6
Pregnancy	2							3		1	6
Sex work	1	2								1	4
Contraception								2		1	3
Abortion										1	1
Other***		1						2			3
Total	16	8	0	2	1	0	0	11	2	12	

*Where part of the study is based in the US
**LAC; North America; Central America (comprising more than three countries)
***Includes gynaecological disorders and menstrual health

Most of the literature focuses on sexual violence and/or GBV, followed by HIV/AIDS. STIs and pregnancy are similarly represented, as well as sex work and contraception. Abortion receives little attention, particularly in published articles, despite the increased vulnerability to unwanted pregnancy due to sexual violence seen in literature.

Figure 2. Distribution of SRH literature across Central America and Mexico

Image adapted from Intrepid DMC (n.d.)

Literature focusing on Mexico dominates the review, followed by Guatemala and Panama (Table 3 and Figure 2), although Panama only has two articles that cover a wide range of SRH topics. Belize, Nicaragua and Costa Rica have no articles, and El Salvador and Honduras have a few between them. This suggests that most data are concentrated northwards in the migration corridor, and limited data present in the southernmost end in Panama. Significant data voids are present in the midsection of the migration route. Data is concentrated around borders, particularly the Mexico-Guatemala border and Mexico-US border. Examples of locations include Chiapas (Mexico), Ciudad Juarez (Mexico), Tijuana (Mexico) and Quetzaltenango (Guatemala). In Panama, data arises from the Darien Gap. Other hotspots include along migration routes, such as railroads.

There is a heavy skew towards qualitative data, with 18 qualitative studies and an additional five mixed-method studies (Appendix F). 21 studies were in English, while eight were in Spanish. Key populations and contexts studied include sex workers, migrant shelters and migrant reception centres (Panama).

3.2 Sexual Violence

Between 2010 and 2020, migration from Central America going north increased from approximately 1.8 million to 2.5 million (Coppens 2024). The migration process exposes migrants to numerous dangers. Women are particularly vulnerable to violence, especially sexual violence- they experience 4.5 times the rate of sexual violence of male migrants (Leyva-Flores et al. 2019). Several themes emerged in the literature regarding sexual violence among mobile women. These themes organised from most to least prevalent in the literature are as follows: the location in which experiences of sexual violence occur, transactional and survival sex, and the relationship between policy and experiences of violence.

High Risk Locations

La Bestia is a network of railroads that go through Mexico, beginning in Tapachula, Chiapas, and Tenosique, Tabasco. Migrants must make multiple transfers on these trains, and mobile women most frequently experience sexual violence here (Soria-Escalante et al. 2021c). Getting and staying on the train is highly dangerous; women are often raped, and those who resist are thrown off the train. Criminal organisations frequently stop trains. When this happens, mobile women face the highest risk of sexual violence during that stage of the journey, including mass rapes (Brigden 2017). At migrant camps, mobile women experience increased levels of stress, anxiety, and fear due to threats to their safety which include sexual violence, kidnappings, and assaults. This is more common due to the higher concentration of migrants and low availability of resources (Laughon et al. 2022). During active migration, which often traverses through the jungle, women experience sexual violence from coyotes or others within the group they are travelling with (Letona, Felker-Kantor, and Wheeler 2023). While in transit towns, women lack access to safe temporary housing, which leads to resorting to stay with strangers. Mobile women report that these situations often result in forceful performance of sexual acts, transactional sex, or rape (Palacios, De La Rubia, and Rubio 2019). Lastly, mobile women are particularly vulnerable to sexual violence at border crossings, where coyotes and officials force them to engage in sex in exchange for passage. At these locations, they are at an increased risk of being returned, captured, or deported, which increases the risk of experiencing violence, particularly sexual violence (Angulo-Pasel 2019).

Transactional and Survival Sex

Due to gender-based disparities in income distribution, mobile women are at higher risk of experiencing violence, especially sexual violence (Cabieses et al. 2023). In the literature, a distinction was made between survival sex and transactional sex. Transactional sex is very common for mobile women. In a study of the women surveyed, 48.76% of women experienced rape and transactional sex (Infante et al. 2019). Mobile women engage in transactional sex to meet their needs during the migration journey, survival sex, on the other hand, is performed for the sake of protection. Women engage in survival sex when they are in situations of danger; they describe engaging in sex to prevent being raped (Palacios, De La Rubia, and Rubio 2019).

Law and Policy

Mobile women experience violence perpetuated by multiple groups, which include gangs, cartels, coyotes, migrant men, police officers, and other officials (Leyva-Flores et al. 2019). Mobile women internalise and justify their experiences of violence, particularly sexual violence, due to the belief that the illegality of their situation makes them deserve it (Soria-Escalante et al. 2021c). Due to their migrant status, mobile women often are not protected by the laws and policies of the countries through which they travel or are temporarily residing in (Coppens 2024). This makes them particularly vulnerable when encountering violence, including sexual violence, because often the perpetrators are policemen or border officials (Infante et al. 2019). Exclusionary and anti-immigrant policies prevent mobile women from safely reporting violence due to fear of retaliation or deportation (Letona, Felker-Kantor, and Wheeler 2023 2023). Migrants must take furtive pathways to reach their destination because of deportation risk, which makes most of the routes up to 10 kilometres away from any place where mobile women could access services when violence occurs. This isolation is aggravated by the policies that prevent migrants from accessing healthcare services without a valid identification (Kerf et al. 2024). Sexual violence and other forms of violence experienced by mobile women occur in a context of legal impunity for perpetrators of violence (Infante et al. 2019), creating a dynamic in which mobile women are entrapped by the violence they experience without a way out, perpetuating the cycle.

Sex Work

Sex work in the context of migration is often a result of violence or a direct response to the lack of ability to fulfil basic needs, such as housing and nutrition (Palacios, De La Rubia, and Rubio 2019). While not all sex workers are forced into sex work in the context of migration, mobile women experience a higher risk of falling into coerced or forced sex work, as well as sex trafficking as a result of victimisation, sexual violence, and other forms of violence, including kidnapping (Palacios, De La Rubia, and Rubio 2019). Adolescents often travel on their own to reunite with family members who have already migrated, or as a choice of their own, which increases their risk of experiencing violence and early initiation into sex work (Letona, Felker-Kantor, and Wheeler 2023 2023). Thus, adolescent initiation into sex work is unfortunately common- as many as one in five sex workers began sex work before the age of 18 (Boyce et al. 2020). In the context of migration, mobile women sex workers engage in circular migration across borders to increase their income. Circular migration provides them anonymity and prevents judgment from family, church members, and neighbours, allowing them to work without the fear of being exposed (Rocha-Jiménez et al. 2016b). Mobile women sex workers experience higher rates of violence and often lower use of condoms. They report they understand the importance of protection and testing; however, they are afraid a positive STI test would lead to deportation. In addition, it is important to highlight that exclusionary migrant policies increase the risk of sexual violence and other forms of violence for mobile women who are sex workers (Garbett et al. 2022). The illegality of sex work complicates the challenges mobile women already experience in the exercise of SRHR (Angulo-Pasel 2019), further marginalising mobile women who engage in sex work and increasing their risk of experiencing violence.

3.3 Pregnancy

The literature on pregnancy in mobile women is limited. However, findings estimate that 5-15% of mobile women travel while pregnant (Panama National Migration Service 2024) and 10-17% travel while breastfeeding (Coppens 2024). There were also concerns surrounding maternal and infant death (Erausquin et al. 2022b). Women who had symptoms of potential loss of pregnancy were not attended to unless they were bleeding, as it was not deemed urgent; in migrant groups, as high as 20% of women experience pregnancy, which is often unplanned (Erausquin et al. 2022). For pregnant women, violence is the main concern. Migrants reported that mobile women who are pregnant walk through the Darien Gap in large quantities (Panchenko et al. 2023) and experience miscarriages due to violence (Letona, Felker-Kantor, and Wheeler 2023. 2023).

Pregnant mobile women often experience mixed feelings while pregnant during the migration journey; while some were excited about their pregnancy, many reported pregnancies occurred because of sexual violence. In addition, pregnancy can prevent women from keeping up with their migrant group, which prevents them from building community and increases their risk of experiencing violence (Leyva-Flores et al. 2023).

Abortion is also a very crucial topic, as women often become pregnant but do not wish to be. Due to lack of access to abortion services, reports state some pregnant women “throw themselves down hills, hit their stomachs, drink alcohol, and hurt themselves” to induce a miscarriage (Letona, Felker-Kantor, and Wheeler 2023, p.5). Lack of access to abortion, which results in forced pregnancy, increases engagement with transactional sex due to factors like the migration journey taking longer, therefore running out of funds, as well as physical vulnerabilities related to pregnancy including swollen feet, which slows the speed at which the migration journey can be completed, further exposing pregnant mobile women to violence (Letona, Felker-Kantor, and Wheeler 2023).

3.4 STIs and HIV/AIDs

Sexual Behaviour

Sexual experiences and behaviours among mobile women varied across the literature. Some studies reported the predominance of consensual sexual relationships with regular partners (Erausquin et al. 2022), and others emphasised transactional sex between casual partners (Panchenko et al. 2023). Engagement in sexual intercourse varied depending on the time period studied. 20.6% of mobile women engaged in sexual intercourse “during this trip” (Levya-Flores et al. 2019), compared to 36.4% of women in the previous month (Erausquin et al. 2022).

HIV/AIDs

The prevalence of HIV/AIDs ranges between studies. One study found 3.2% of women screened were HIV/AIDs positive, suggesting high frequency in the migrant population (Erausquin et al. 2022). A contrasting study found the HIV/AIDs rate was not higher in the migrant population than the general population, with only 0.47% of HIV/AIDs tests positive (Leyva-Flores et al. 2016). There are several reasons for this discrepancy. Firstly, geographic location impacts HIV/AIDs prevalence, with most studies found in Mexico, Guatemala and Panama (Boyce et al. 2020; Erausquin et al. 2022; Levya et al. 2013; Leyva-Flores et al. 2016; Panchenko et al. 2023). Secondly, the sub-population studied will affect rates. Sex workers face higher risks of HIV/AIDs, with younger female sex workers more likely to be positive (Boyce et al. 2020). Lastly, nearly all articles mentioned the stigma surrounding HIV/AIDs and the perception by the general population that migrants carry the disease (Hernández Ávila 2013). Consequently, women may underreport or refuse consent for health screening. These inconsistencies highlight the need for robust data collection methods with large sample sizes.

STIs

Relative to HIV/AIDs, other STIs are neglected in the literature. Mobile women have higher rates of STIs than the wider population, with 3.2% of migrant women testing positive for syphilis (Erausquin et al. 2022). Herpes simplex virus-2 had similarly high rates, with mobile women 3.2x more likely to have the condition (Sánchez-Alemán et al. 2023). The prevalence of sexual violence within the migration corridor heightens the risk of STI transmission and in cases of transactional and survival sex, women are unable to use barrier methods to protect themselves (Letona, Felker-Kantor, and Wheeler 2023). Furthermore, the lack of access to contraception will inflate the risk further. There is a clear need for comprehensive research investigating STIs further and widen the scope of research to additional STIs.

3.5 Contraception

Patterns of contraceptive use emerged from the literature. Firstly, mobile women prefer long-term methods over short-term methods. Condom use was noted to be low, with only 13.6% of migrant women using condoms during the last instance of sexual intercourse (Leyva-Flores et al. 2016). Oral contraceptives were also less popular due to the impracticality of migration; stress, availability of drinking water and misplacement were cited as key deterrents (Letona, Felker-Kantor, and Wheeler 2023). The most popular contraceptive was long-term injectables, while use of emergency contraception was not reported by migrant women (Letona, Felker-Kantor, and Wheeler 2023).

This phenomenon can be traced to the normalisation of sexual violence, which leads to prophylactic contraception (Angulo-Pasel 2019; Panchenko et al. 2023). Sexual violence is ubiquitous on the migration route; consequently, mobile women prepare for this accepted eventuality with LARCs, such as IUDs and injectables. Availability of contraception on the migration route is low, amplifying the need for long term prevention. Therefore, condoms are less favourable than long term options and nonviable in cases of rape, transactional sex or survival sex, as these transpire spontaneously and violently (Letona, Felker-Kantor, and Wheeler 2023). As the most effective protection against STIs (WHO n.d.), low condom use increases the risk of transmission. Migrant women were shown to be more concerned with unwanted pregnancies than STIs (Letona, Felker-Kantor, and Wheeler 2023), suggesting a lack of knowledge amongst the population and anxiety around sexual violence.

3.6 Other SRH Needs

Gynaecological and reproductive needs of mobile women were neglected throughout the literature. Gynaecological care was briefly mentioned, with one article recounting difficulties in accessing sanitary products and hygiene facilities to manage menstruation during migration, which can be referred to as period violence (Letona, Felker-Kantor, and Wheeler 2023). Other needs include widespread reproductive tract infections, with 58.8% reporting at least one symptom of infection (Erausquin et al. 2022), particularly urinary tract infections (Panchenko et al. 2023). Comprehensive data is necessary to fully understand the breadth of gynaecological and reproductive needs.

3.7 Barriers to SRH

Low availability of services: Migrants are often excluded from the healthcare system, reducing the availability of accessible services. Legislation varies between countries in the region, with some only allowing emergency healthcare for migrants and others allowing healthcare for pregnant women and children (Coppens 2024). For example, in Mexico, migrant access to emergency and regular healthcare including SRH is protected in legislation, whereas Costa Rica denies this right, except for pregnant women and children (Coppens 2024).

NGOs and IGOs attempt to fill this gap in healthcare provision. Healthcare in migrant reception centres after the Darien Gap is provided mainly by NGOs, including MSF and the Panamanian Red Cross (Panchenko et al. 2023). Further north in the migration corridor, faith-based NGOs run migrant shelters, offering basic needs in addition to health services (Infante et al. 2020; Leyva-Flores et al. 2019).

Geographic inaccessibility: The uneven availability of healthcare services for mobile women creates substantial geographic inaccessibility. Hotspots of services, although limited in scope and coverage, are seen after the Darien Gap and near border regions in Mexico and Guatemala. Yet in the countries between, there remains little evidence of service provision. Given that prompt care is crucial in cases of sexual violence, geographic inaccessibility is a significant barrier to the SRH of mobile women. The Darien Gap presents one such case, with only 37% of 172 reported sexual violence incidents managed within 72 hours (Coppens 2024).

Cognitive inaccessibility: Mobile women's knowledge of services and SRH is limited. They often lack the information and resources to manage their SRH and seek healthcare (Letona, Felker-Kantor, and Wheeler 2023), particularly sex workers (Boyce et al. 2020). Conversely, women in migrant shelters, who had access to health promotion, had knowledge of HIV/AIDS transmission and reported previous testing (Leyva-Flores et al. 2016), suggesting disparate cognitive accessibility.

Psychosocial inaccessibility via unclear legal status: Firstly, the categorisation of mobile women in terms of illegality, such as "aliens" or "undocumented", makes their SRH needs invisible (Angulo-Pasel 2019). Women are less likely to access healthcare or report sexual violence for fear of deportation, which aggravates and increases their vulnerability. Thus, the impact of border policy has downstream effects for the SRH of mobile women.

Secondly, anti-immigrant politics stigmatise mobile women and increase discrimination (Coppens 2024; Infante et al. 2020; Leyva-Flores et al. 2019). Perceptions of migrants as disease vectors and stigma surrounding HIV/AIDS coalesce to further ostracise (Hernández Ávila 2013; Leyva-Flores et al. 2016). Mobile women are unlikely to seek healthcare for fear of violence or discrimination.

Lastly, the normalisation and inevitable nature of violence towards migrants compounds the effects above (Infante et al. 2020; Letona, Felker-Kantor, and Wheeler 2023). Mobile women expect sexual violence on the migration route from officials, gangs and other migrants. Subsequently, few mobile women report violence - due to the stigma and mistrust of officials – or seek healthcare (Infante et al. 2020; Leyva-Flores et al. 2019). Fernández-Ortega et al. (2024) found fewer than 50% of women sought medical assistance for sexual assault, suggesting significant impacts on SRH. Some sources suggest the impact may be higher for Central American migrants, relative to Mexican counterparts, due to further discrimination (Leyva-Flores et al. 2019).

4.0 Data Analysis Results

4.1 Sociodemographic Characteristics of Respondents

Table 4: Age of Respondents

Age	Frequency (N)	Percent (%)
<20	99	6.60%
20-29	624	41.63%
30-39	495	33.02%
40-49	254	16.94%
50-59	20	1.33%
>60	7	0.47%
Total	1499	100%

Our population was heavily skewed within the 20-39 age range, which accounted for 74.65% of all respondents.

35.42% of our population are married or in a relationship, while the remaining 64.58% of people are single, divorced, separated, or widowed. While only about a third of our population is currently married or in a relationship, over three-quarters of our population have children (77.71%). The average number of children each person has is between 2 and 3 (2.45). See Table 1 in Appendix G for these breakdowns.

Table 5: Education Levels of Respondents

Highest Level of Education	Frequency (N)	Percent (%)
No Formal Education	57	3.82%
Primary School	411	27.51%
Secondary School	568	38.02%
Preparatory/Post-Secondary School	207	13.86%
University	223	14.93%
Post-Graduate	26	1.74%
Other	2	0.01%
Total	1494	100%

Our population is almost evenly split among educational levels. About one third of our population (31.33%) either had no formal education or only primary school education. Just over one third of our population had secondary education (38.02%), while just under a third (30.53%) had completed preparatory/post-secondary school, university, or post-graduate degrees.

Table 6: Respondents' Reasons for Migration

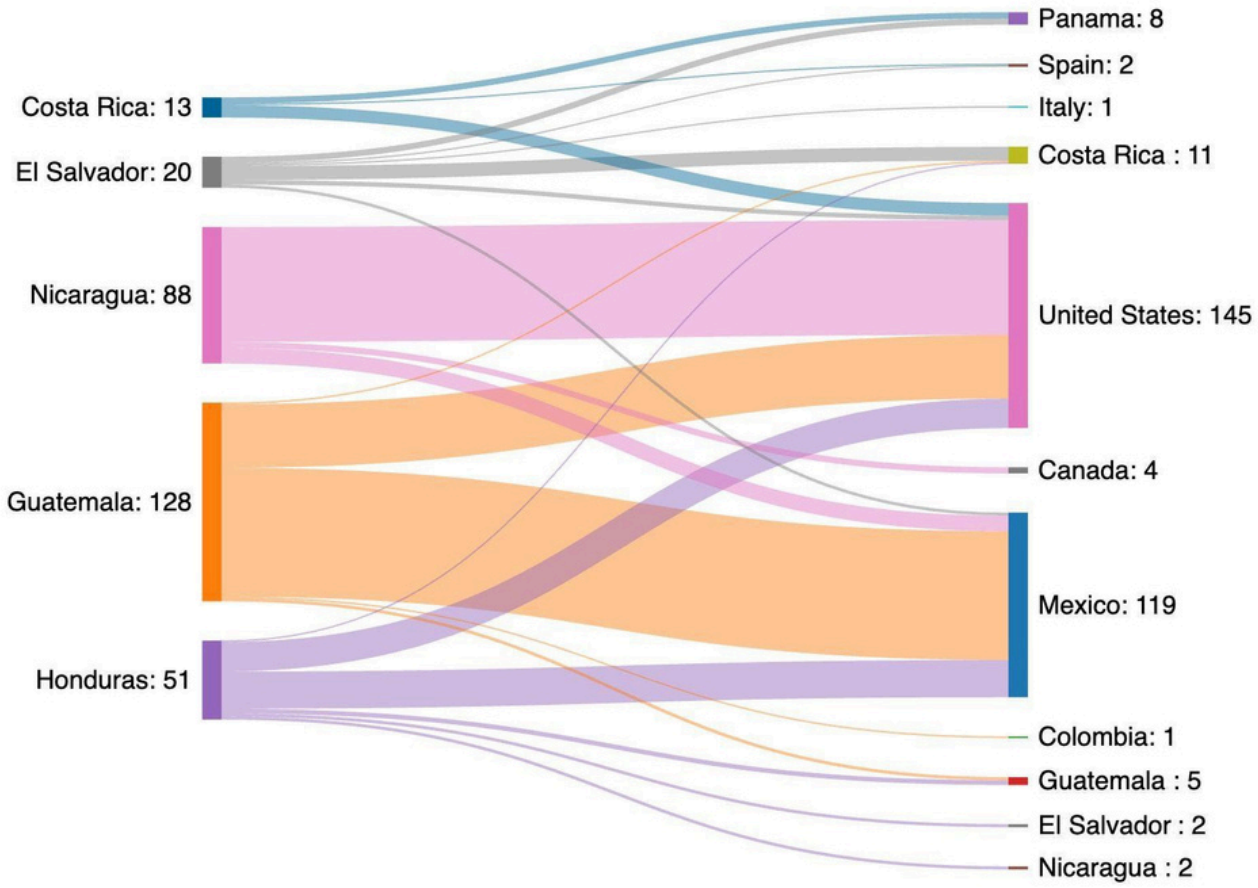
What is your reason for migration?	Frequency (N)	Percent (%)
Labour/Employment	951	64.34%
Violence or Insecurity	642	43.44%
Political/Social Conflict	314	21.24%
Family Reunification	101	6.83%
Health	76	5.14%
Temporal Employment	22	1.49%
Discrimination	7	0.47%
Tourism	7	0.47%
Natural Disaster	6	0.41%
Study	6	0.41%
Other Reason	2	0.14%
Total Responses	2134	

Note: Respondents chose all reasons that applied to their circumstances

There were very apparent trends in rationale for migration among respondents. Labour employment was cited as the most common reason (64.34%), with violence or insecurity coming in second at 43.44%. Political/social conflict was also significant with 21.24% of respondents citing this as a reason.

This aligns with the literature, where other studies have similarly suggested that employment, violence, and conflict are the forefront reasons for migration (Erausquin et al. 2022).

Figure 3: Sankey Diagram of Respondents' Origin Country Versus Final Destination



Note: A total of 300 respondents from Central America responded to this question

Guatemala and Nicaragua were the most common countries of origin, representing 42.67% and 29.33% of our population respectively. Honduras was also a significant country of origin, representing 17% of the population. Costa Rica and El Salvador were less common countries of origin. No participants indicated that they began migration from Belize, Panama, or Mexico.

Regarding intended country of settlement, our results found that the US was the most common location, representing about one half of our population (48.33%). However, many other women in our population sought to settle in Latin American countries, most notably being Mexico (39.67% of respondents), but also Costa Rica, Panama, Guatemala, El Salvador, Nicaragua, and Colombia. Additionally, a small subset of our population (2.33%) sought to resettle in alternate Global North countries (Canada, Spain, Italy) to the United States.

4.2. Conditions and Challenges

4.2.1 Sexual and Reproductive Health

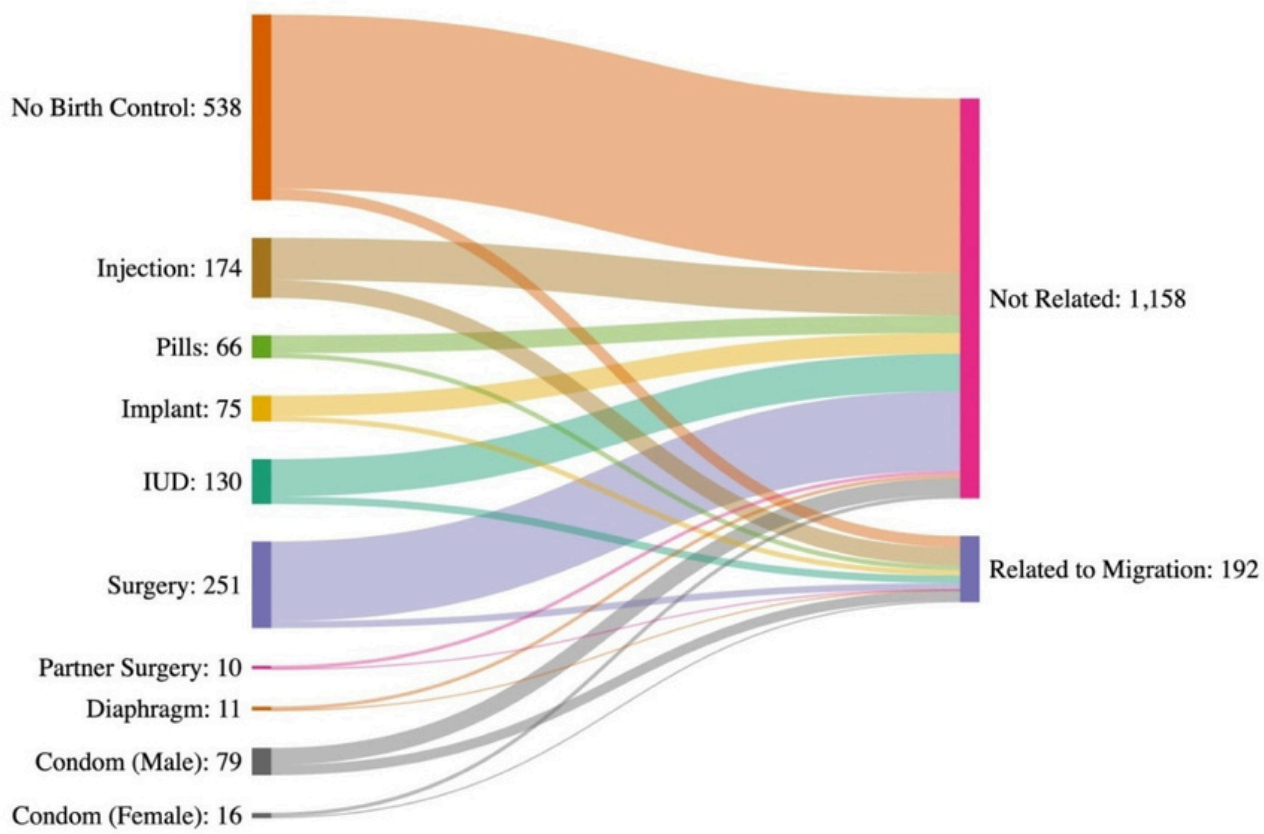
Contraceptive Use

36.72% of respondents indicated that they have had sex since they began their migratory journey, however a significantly higher proportion (58.42%) indicated they are currently using contraceptives. See the breakdown of each type of contraceptive used in Table 7. The most common contraceptive methods were (1) operation, surgery, or tubal ligation, (2) injections, and (3) IUD or copper T. All of these methods are long-lasting, with injections, IUDs, and copper Ts being LARC types (Bahamondes et al. 2019). Operations, surgery, or tubal ligation are permanent sterilisation procedures. This suggests that migrants may prefer contraceptive methods that are long acting and do not require ongoing maintenance or regular access to health care during their migratory journey. This prevalent use of LARCs aligns with the literature, as outlined in Section 3.5.

Table 7: Contraceptive Methods Breakdown Among Respondents

What contraceptive method do you use?	Frequency (N)	Percent (%)
Partner surgery (vasectomy)	10	0.70%
Diaphragms	11	0.78%
Female condoms	17	1.20%
Pills	66	4.65%
Implant	75	5.29%
Male condoms	81	5.71%
IUD or copper T	134	9.44%
Injections	178	12.54%
Operation/surgery/tubal ligation	257	18.11%
Do not use contraception	590	41.58%
Total	1419	100.00%

Figure 4: Sankey Diagram of Respondent's Contraceptive Method Use and its Relation to Migration



Note: Numbers may vary slightly from Table 4; diagram excludes people who did not indicate what method of birth control they used

The survey also looked at how many respondents indicated that their preferred contraceptive method related to their status as migrants. While 1,158 respondents indicated that their method (or lack of) was not related to their status, 192 respondents (12.8%) indicated that it was. Of particular interest is the injection method, which 52 of the total 174 users (29.89%) indicated that use of this method is related to migration status. This indicates that participants may have unique contraceptive needs during their migratory journey. We hypothesise that this is directly related to access to SRH care, as injections are a method which often only requires access to SRH providers every three months (Bahamondes et al. 2019), which may be more reliable while migrating. Thus, length of effectiveness may be an important factor to consider when designing SRH interventions around contraceptives for migrants.

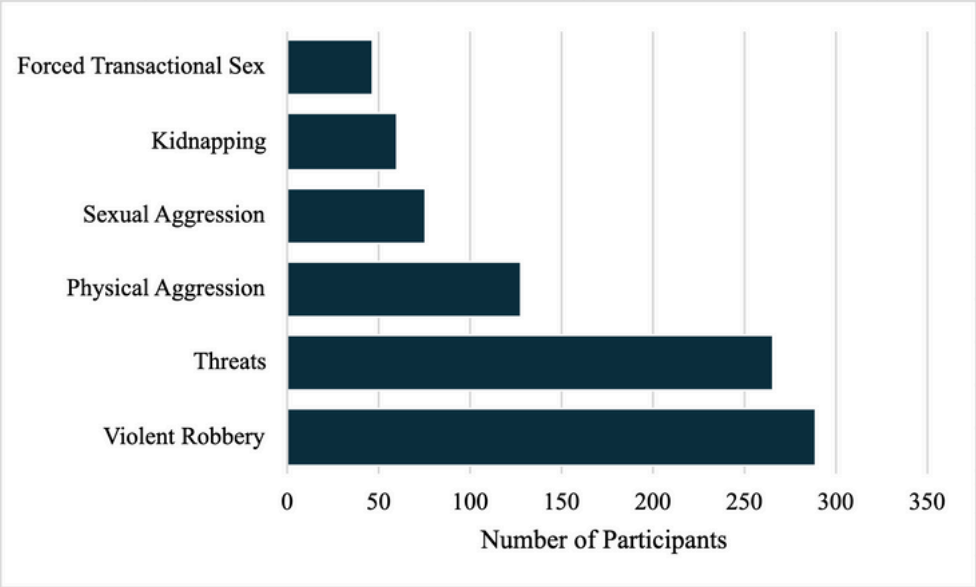
Pregnancy

45 women (3.44% of our population) were currently aware that they were pregnant. 34 of these women had access to a consultation or pregnancy check-up (Appendix G), indicating that over three quarters of the population had at least one antenatal care (ANC) visit during their pregnancy. However, the data does not give us insight to the number of visits, which is significant as pregnant people should receive ANC at least four times during the antenatal period to increase the likelihood of receiving effective maternal care (Moller, n.d.).

Regarding abortion, the group of pregnant women were asked: “Have you thought about interrupting pregnancy if it were possible?”. Four responded yes. While this indicates that only 8.89% of the total pregnant population admittedly would consider having an abortion, this may not paint the entire picture about unwanted pregnancies. This number may be unreliably low due to the sociocultural and legal environment where women may not feel comfortable sharing their views about abortion. For example, Nicaragua, Honduras and El Salvador all have complete abortion bans (Roth and Jones 2024). In addition, only women currently aware that they were pregnant were posed the question, so this finding cannot be generalised for our entire population. If this survey was replicated, we suggest that all women should be questioned about their preferences about abortion.

4.2.2 Violence

Figure 5: Types of Violence Experienced Among Respondents



When participants were asked whether they had experienced violence during their migratory journey, 26.5% responded yes. Included in the definition of violence was forced sex, kidnapping, sexual aggression, physical aggression, threats, and violent robbery. Figure 4 shows the breakdown between these subdivisions, with robbery being the most common type of violence with 289 instances. Being forced to "have sexual relations in exchange for money, food, protection, housing, or any other good" (wording from survey), was the least common form of violence, with 46 participants indicating they had experienced it. There were 75 instances of sexual aggression, which was not defined in the survey. We have interpreted this as encompassing all sexual violence that is not forced transactional sex. Thus, to approximate prevalence of sexual violence given the data we have, we combined instances of forced transactional sex and sexual aggression to estimate that at least 121 participants experienced sexual violence during their migratory journey. This represents 8.06% of our population, which is likely less common than what the literature suggests, as outlined in Section 3.5.

Table 8: Odds Ratios from Logistic Regression Predicting Experiences of Violence (DV: Did Migrant Experience Violence on Journey)

Variable	Odds Ratio	Lower 95% CI	Upper 95% CI	P value
Days spent travelling	0.999	0.999	1.000	0.592
Countries travelled through	0.985	0.908	1.069	0.725
TRAVEL GROUP ***Ref: Travelled alone***				
Travelled with someone	2.129	1.479	3.065	4×10^{-5}***
EXPERIENCE OF 'NEEDS' ***Ref: No 'needs'***				
Had a 'need' (health, economic, migration-related)	3.639	2.342	5.654	9×10^{-9}***
EMPLOYMENT STATUS ***Ref: Other***				
Formal employment	5.964	0.752	47.297	0.091
Informal employment	5.780	0.722	46.262	0.098
Unemployed or unpaid domestic services	4.019	0.502	32.201	0.190
CHILDREN ***Ref: No Children***				
Has children	0.869	0.565	1.336	0.523
AGE GROUPS ***Ref: Younger than 20***				
20 to 39	1.674	0.759	3.694	0.202
40 to 59	1.445	0.587	3.557	0.423
60 and older	1.379	0.123	15.440	0.794

*Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05*

We conducted a logistic regression to test rates of violence (including non-sexual violence, to ensure more robust results with a N=930). The logistic regression tested the hypothesis that women who travelled longer and in more vulnerable situations would experience higher levels of violence. These vulnerable situations included having children, being involved in informal employment or lack of employment altogether, travelling with another person, travelling for longer periods of time and through more countries, and older age. We opted to use a logit model due to the

binary format of our dependent variable ("did you experience violence?" with answer options yes or no). We converted the regression to an odds ratio for easier interpretation. The odds ratio coefficients demonstrate the probability of an event occurring. When the odds ratio is greater than 1, the people within the category are more likely to experience violence than those who do not fit in the category (for example, people with children are less likely to experience violence than those without children – however, this is not statistically significant and therefore cannot be extrapolated beyond our survey population). None of the other demographic features were indicative of higher rates of violence.

The regression found only two areas to be statistically significant. First, migrant women who travelled with another person were more vulnerable to experiences of violence. Second, migrant women who experienced a 'need' during their journey – which the survey conceptualised as economic, health-related, migration-related, or otherwise – were also more vulnerable to experiences of violence. Both results were highly statistically significant. Thus, we can assume similar patterns occur for all migrant women in central America.

Migrant women travelling with another person were more vulnerable to violence. As outlined in Section 3.5, findings in the literature support this concept, suggesting that migrants who travel with coyotes or others are often subjected to higher frequencies of sexual violence (Letona et al. 2023). Additionally, migrant women with a 'need' were more vulnerable to violence. As we discuss in Section 3.2, sex is often exchanged for migrant women to fulfil basic needs (Palacios, De La Rubia, and Rubio 2019). The patterns of 'need' resulting in higher likelihoods corresponds to other studies of migrant women.

5.0 Discussion

The key SRH needs of women in situations of mobility in Central America and Mexico are eradicating sexual violence and increasing access to contraception. Sexual violence is commonplace along the migration route, concentrated in migrant shelters, railroads and border areas. Considering employment was found as the most common reason for migration, it is unsurprising that transactional sex is prevalent. The data analysis supports this as the relationship between needs and violence was statistically significant. Despite this, sexual violence was lower than expected in the data analysis compared to the literature. This could be attributed to underreporting of sexual violence, with mobile women viewing it as normal or unclear legal status discouraging reports.

Migration with others was statistically significant with increased violence. Gender-based and sexual violence are perpetrated by coyotes, gangs, authorities and other migrants, which supports this finding as women may engage in survival sex to ensure passage. Moreover, mobile women travelling with dependents, especially children, are at an increased risk of experiencing violence.

Contraception is the second key SRH need for this population. Mobile women are found to engage in sexual intercourse at similar rates in the literature and data analysis. There is a clear need for LARCs, with many women using injectables and IUDs prophylactically. Use of barrier methods, particularly condoms, is low, which may be linked to the low levels of knowledge and inaccessibility to contraception on the migration route. Contraception is evidently interlinked with sexual violence – the use of LARCs in preparation for sexual violence and the impracticality of barrier methods in migration and violent situations.

Although our findings are indicative of additional SRH needs, including pregnancy, STIs, HIV/AIDS, gynaecological conditions, menstrual health and abortion, it is difficult to draw definitive conclusions. There is a potential vulnerability of mobile women to these needs from increased sexual violence and lack of contraception, such as higher rates of STIs and HIV/AIDS. However, the results were either conflicting or inconclusive, generally due to lack of literature or insufficient sample sizes. Significant data gaps are also present in the midsection of the migration route through Central America, limiting the capacity of our conclusions.

An integrated and comprehensive approach is necessary to research the SRH needs of mobile women further. SRH needs do not occur in isolation – they are

interconnected with other SRH needs and with the wider context of migration. Evidence spanning the migration corridor is necessary to illustrate these mechanisms and support strategies and interventions.

6.0 Strategies

1. Development of an SRH specific data collection system in Central America and Mexico

There is a clear need for robust collection systems to collect reliable data, further informing the SRH needs of mobile women in the region. Key characteristics include:

- **SRH-specific** – collection is targeted at SRH, rather than as an adjunct. This will allow clearer distinctions in definitions of sexual violence, GBV and rape.
- **Sex-disaggregated** – women face distinct challenges during migration, hence sex-disaggregated data is essential to understand gendered experiences in detail.
- **Standardised** – address data gaps in the midsection of the migration corridor, including Belize, Honduras, El Salvador, Nicaragua and Costa Rica.
- **Comprehensive** – address the full range of sexual and reproductive health issues, including neglected topics such as pregnancy, abortion, and maternal healthcare.
- **Wider scope** – focusing on larger populations, especially on questions of SRH, will increase statistical significance.
- **Quantitative** – to get a more granular picture of SRH needs, especially neglected issues, further data analysis is needed.

2. Creation of a Central American and Mexican Agency to Spearhead Collaboration Efforts

There is a clear need for a transnational agency to lead efforts to address the SRH of mobile women, particularly against sexual violence.

a. Intersectoral Collaboration

The impacts of sexual and gender-based violence are crucial SRH needs for mobile women. Transactional and survival sex often stem from a need for shelter, food and income. Through collaboration with schemes that provide these basic needs, it reduces the need for mobile women to engage in coercive sex and the risk of vulnerable situations. This may reduce the likelihood of STI transmission and unwanted pregnancies.

There is also a need for SRH services to be integrated into the healthcare system. For example, women who have suffered sexual violence often require mental health support. Hence, referral systems within healthcare must be robust. Furthermore, the link between legal and healthcare systems must be strengthened. Mobile women must be able to access legal recourse to hold perpetrators of sexual violence accountable.

b. Transnational Collaboration

Collaboration between Central American, Mexican and the US governments is vital. Anti-immigrant rhetoric has permeated south, creating a hostile environment for mobile women and exposing them to sexual violence. Changing these policies requires greater partnership between destination and source countries. Additionally, disparities in the healthcare rights afforded to migrants between countries creates complex healthcare systems for mobile women to navigate. Greater convergence on policy, and rights enshrined in law better protects the SRHR of mobile women, reducing psychosocial accessibility.

c. Interagency Collaboration

The fragmentation of the healthcare system means that inter-agency collaboration is essential. Currently, NGOs provide most healthcare for mobile women. However, coverage is not universal. Collaboration is required to ensure a standardised approach and comprehensive provision of services between NGOs.

Furthermore, collaboration allows a checks and balances approach. Policy change will require civil society actors, IGOs and NGOs to advocate for the realisation of SRHR and government involvement is required to ensure accountability of IGOs and NGOs providing healthcare.

Current frameworks, such as Marco Integral Regional para la Protección y Soluciones (MIRPS), translated to the Comprehensive Regional Protection and Solutions Framework, do not adequately address the specific vulnerabilities that women face and do not include all countries in Central America, limiting their impact.

3. Accessibility to Healthcare

a. Information Dissemination Workshops

Lack of access to information regarding healthcare and SRHR is a significant barrier to health for mobile women. Health promotion is crucial to disseminate knowledge of the benefits of barrier methods of contraception and overcome cognitive accessibility. Workshops can also be used to provide knowledge of legal status and rights to healthcare afforded, thus addressing the psychosocial accessibility and allow mobile women to fully realise their SRHR.

b. Specialised Contraception and Sexual Violence Clinics

The SRH of mobile women should not be an afterthought. Clinics should provide adequate resources of preferred contraception methods, such as LARCs, as well as other needed SRH resources, such as STI and pregnancy tests. It is essential to equip healthcare professionals with trauma-informed, culturally competent, and patient-centred care practices, ensuring that healthcare prioritises not only their safety and dignity, but also full protection of and promotion of their rights, including their right to access equitable and compassionate care.

7.0 Conclusion

The wellbeing of mobile women is inherently complex. Our findings indicate that the hardships of the migratory process are not limited to specific socio-demographic characteristics; instead, violence and health needs affects all mobile women, regardless of their educational background, age, or employment. Through our scoping review of the existing literature, we find that most research discusses the occurrence of violence, which is embedded into every stage of the migration journey. We have identified gaps in the current research, particularly pertaining to pregnant women, reproductive needs, and gynaecological needs. Our data analysis results corroborate these findings, identifying only a small population of actively pregnant migrants. Additionally, our data analysis verifies the literature's assessment of violence, highlighting that violence is perpetuated more frequently against women with vulnerabilities.

The recommendations provided in this report, if implemented, can increase human security for mobile women and provide them with greater access to necessary health care. While much of the international migration we studied occurs beyond the scope of the law, there is still much that can be done to protect travellers in search of better lives. Governments play an essential role in the migration experience by facilitating attitudes toward migrants and accessibility of basic needs. We emphasise the importance that mobile women be treated in accordance to their humanity. Their human rights are not provisional to their transitional state.

Appendices

Appendix A: Terms of Reference

LSE/International Development Project Proposal Template	
Organisation and Department:	Ipas LAC, Knowledge management
Project Working Title:	Sexual and Reproductive Health Needs of Women in Situations of Mobility in Mexico and Central America
Background:	Ipas Latin America and the Caribbean (Ipas LAC) is a regional organization that is part of an international non-profit network operating across four continents. Our mission is to ensure that all women and individuals with gestational capacity can make choices about their reproduction freely and with dignity. We collaborate with organizations, institutions, and individuals to prevent unintended pregnancies and ensure access to safe abortion. The sexual and reproductive health needs of women in situations of mobility are critically important due to the unique vulnerabilities and challenges they face. Women who are migrants, refugees, or asylum seekers often encounter significant barriers to accessing healthcare, including sexual and reproductive health services. These barriers can include legal restrictions, lack of financial resources, language barriers, and the transient nature of their journeys. In Ipas LAC, we are developing a strategy to address the reproductive health needs of this population. However, in recent years, the profile of migrants and their health situations have changed. Understanding these evolving needs is crucial for creating effective programs.
Question:	In recent years, Latin America has experienced significant changes in migration patterns. The causes of migration and the profiles of those who decide to leave their countries have evolved. Factors such as violence, climate change, and economic instability have led to an increase in the number of women and minors in situations of mobility. According to the International Organization for Migration (IOM), women and children now make up nearly half of the migrant population in this region. At Ipas LAC, we have identified an opportunity to address the reproductive health needs of this vulnerable group. By developing and implementing strategic interventions, we aim to provide comprehensive care and support to women and minors in transit, ensuring their health and safety as they navigate through Mexico and Central America.
Objective:	In 2024 the National Institute of Public Health in Mexico conducted a survey in Central America and Mexico focusing on men and women in migration situations to understand their health and sexual and reproductive health needs, the main places and services addressing these needs, and some risky behaviours or situations during the migration process. Due to a lack of funding, we have not been able to analyse the information on women in mobility situations to explore their health needs. The objective of this collaboration is to analyse and interpret the survey results to develop strategies for addressing the reproductive health needs of women in migration situations.
Methodology:	1. Literature Review Data Cleaning and Analysis. 3. Generation of Tabulations 4. Hypothesis Testing. 5. Interpretation of Results. 6. Report Writing with Recommendations.
Critical skills:	Data management skills, analytic skills, skills to present complex information in an easy-to-understand manner. Although the survey questionnaires are in Spanish, we will translate them into English to ensure they are accessible to the students.
Contact:	Biani Saavedra Research area saavedrab@ipas.org

Appendix B: PRISMA Protocol

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED IN SECTION#
TITLE			
Title	1	Identify the report as a scoping review.	2.1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	N/A
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	1.0; 2.1
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	2.1
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	N/A
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	2.1
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	2.1; Appendix C; Appendix D
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Appendix D
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	2.1
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	2.1
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	N/A
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	N/A
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	N/A

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED IN SECTION#
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	Appendix E
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Appendix F
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	N/A
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	Appendix F
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	3.0
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	3.0; 5.0
Limitations	20	Discuss the limitations of the scoping review process.	2.3
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	7.0
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	N/A

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

Source: Tricco et al. 2018

We have adapted the PRISMA-ScR protocol to fit the purposes of this report. As the scoping review has been designed in conjunction with the data analysis, not all sections of the checklist were relevant. These items have been reported as N/A (not applicable).

Appendix C: Search Terms

All searches were conducted in February 2025. Each search was adapted from the below search terms.

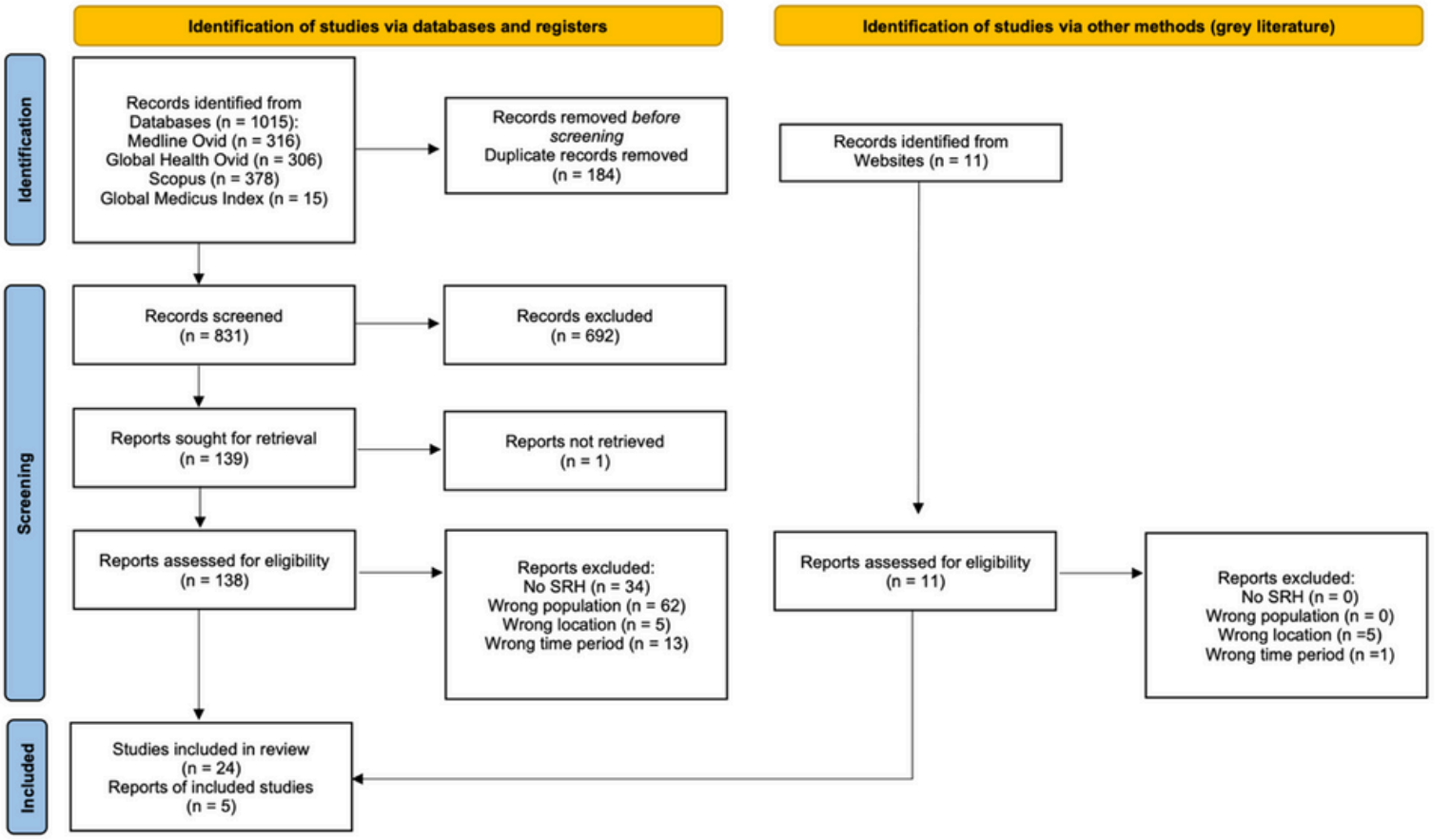
Population	Women or Girl or Female or Young female or Young girl or Young women or Adolescent or Teen or Youth or Juvenile or Underage girls
Concept	Sexual health or Reproductive Health or SRHR or SRH or Family planning or Contraception or Birth control or Condom or Sex or Safe sex or Sexual abstinence or Sexual harassment or Sexual activity or Sexual experience or Sexual initiation or Sexual intercourse or Sexual debut or Unsafe sex or Unprotected sex or Forced sex or Pregnancy or Adolescent pregnancy or Teenage pregnancy or High-risk pregnancy or Unplanned pregnancy or Unwanted pregnancy or Sexual violence or Sexual abuse or Gender-based violence or Intimate Partner Violence or Domestic violence or Domestic abuse or Rape or Sex trafficking or Transactional sex or Sex work or Prostitution or Sexually Transmitted Disease or Sexually transmitted Infection or STD or STI or Syphilis or Chlamydia or Gonorrhoea or Human Papillomavirus or HPV or Herpes or Hepatitis B or Hepatitis C or Papillomavirus Infection or Papillomavirus Vaccine or HIV infection or Human Immunodeficiency Virus or HIV or Acquired immunodeficiency syndrome or AIDS or HIV seropositivity or Antiretroviral therapy or ART or Female circumcision or Female Genital Mutilation or Female cutting or Puberty or Menstruation or Menstrual hygiene or Menstrual health or Legal abortion or Induced abortion or Unsafe abortion or Illegal abortion or Child Marriage or Forced marriage or Antenatal or Ante-natal or Postnatal or Post-natal or Perinatal or Peri-natal or Sexual wellbeing or Sexuality education or Sex education or Physical relationship or Fertility or Infertility or Fecundity or Infecundity or Fertility clinic or Miscarriage or Childbirth or Sexual dysfunction or Reproductive cancer or Women Health or Maternal Health or Adolescent Health
Context	Situations of Mobility or Mobility or Refugee or Displaced or Displaced person or Displaced people or Migrant or Asylum Seeker or Transient or Immigrant or Undocumented or Border
	Central America or Guatemala or Honduras or El Salvador or Nicaragua or Panama or Costa Rica or Belize or Colombia or Mexico or Haiti or Latin America

Appendix D: Database Search

Ovid Medline; Searched February 11, 2025

1.	((sexual* or reproduct* or family planning) adj2 (services or health)).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
2.	(women health or women's health or maternal health).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
3.	(pregnanc* or abortion or contracept* or sexually transmitted diseases or sexually transmitted infections).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
4.	(sexual violence or sexual abuse or sexual assault or gender-based violence or domestic violence or domestic abuse or sexual harassment or sexual trauma or rape or intimate-partner violence).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
5.	(sex work or transactional sex or sex workers or unsafe sex or risky sex or unprotected sex or forced sex or prostitut* or human trafficking or sex trafficking).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
6.	2 or 3 or 4 or 5
7.	(migratory or migration or asylum seeker or displaced or displacement or displaced person or refugee* or undocumented or mobile or transient or transit).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
8.	6 and 7
9.	("36568827" or "34096387" or "39763495").mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
10.	8 and 9
11.	(Central America or Guatemala or Honduras or El Salvador or Nicaragua or Panama or Costa Rica or Belize or Colombia or Mexico or Haiti or Latin America).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
12.	6 and 7 and 11
13.	limit 12 to yr="2010 -Current"

Appendix E: PRISMA Screening Flowchart



Appendix F: Full Literature Review Table

Title	Author(s)	Year Published	Language	Research Questions	SRH Topic(s)	Population	Sample Size	Location	Study Design	Independent Variable(s)	Dependent Variable(s)	Key Findings
Healthcare for migrants in transit cost estimation for the health system in Mexico/Alta seroprevalencia de sífilis y herpes genital en migrantes en tránsito en Chiapas, México	Bojórquez et al.	2024	Spanish	What is the cost of providing migrants healthcare for Mexico's healthcare system?	Pregnancy	migrants in transit	N/A	Mexico	Quantitative, cumulative and residual	Number of migrants migrating through Mexico	Number of cases of the top five most frequent healthcare needs	The article has a theoretical approach of health as a human right. They argue that healthcare systems should be prepared to provide migrants with healthcare in case they seek attention. The study analysex data from 2015-2021 from multiple sources, primarily from American Community Survey, Department of Homeland Security, Customs and Border Protection os US and Mexico. According to the study the number of migrants was the highest in 2019 with 642.673 people. The top healthcare need was acute respiratory infections with an average across all six years of 29,114. The healthcare need with less demand were pregnancies (referring to need of healthcare related to pregnancy) with an average of 1,369 across all six years. The article detemined that the cost of migrant healthcare would not be a substantial burden on Mexico's healthcare system.
Movilidad poblacional y VIH	Mauricio Hernández Ávila	2013	Spanish	N/A	HIV/AIDS	General migrant populations and populations in mobility in LATAM	N/A	Latin America in general, Mexico, US and Canada	N/A	N/A	N/A	The article discusses the stigmatisation of migrant populations, the exclusionary public policies that affect the wellbeing and health as well as access to healthcare particularly for HIV treatment of migrants populations in LATAM challenging the false narratives surrounding migrants as carriers of disease providing the evidence that migrants belong to healthy populations.The articles focuses on the relationship of Mexico and Mexico's public health departments to migrants in need of healthcare. The article discusses several interventions and collaborations with civil society, academia, local and international organizations and the goverment of other nations to increase the access to healthcare particularly for HIV treatment for migrant populations.
Movilidad poblacional y ViH: una experiencia de cooperación regional en centroamérica y México	Leyva et al.	2013	Spanish	N/A	HIV/AIDS	Migrants in LATAM in relation to HIV	N/A	Multiple states in Mexico, Guatemala, and US	N/A	N/A	N/A	The article is a reflection and report on migration and its relationship to HIV. Focusing on challenging migration narratives, explaining how migration itself is not the cause of illness and spread of disease but rather the conditions behind it. The article discusses the creation of “Proyecto regional sobre migración y sida en Centroamérica, México y Estados Unidos” that ran from 2001-2004. The project was an extensive collaboration with multiple stakeholders from NGOs, academia, governmental agencies, law enforcement among others to understand the causes of migration and the main challenges experienced by migrants. From this, 21 different programmes and initiatives were developed and el Instituto Nacional de Salud Publica de Mexico participated in 71% of these.
High seroprevalence of syphilis and genital herpes in migrants in transit in Chiapas, Mexico/Alta seroprevalencia de sífilis y herpes genital en migrantes en tránsito en Chiapas, México	Sánchez-Alemán et al.	2023	Spanish	What is the prevalence of antibodies against Treponema pallidum and virus simple herpes type 2 (VHS-2) among migrants in transit in Chiapas, Mexico?	STIs	Migrants in migrant shelter in Tapachula, Chiapas, Mexico.	462	Tapachula, Chiapas, Mexico	Mixed-methods; Transversal	Seroprevalence of antibodies against Treponema pallidum and VHS-2	Associated factors/Characteristics of subjects	The study found men to be 4.2 times more likely to have syphilis, people who reported having previous skin lesions were 3.7 times more likely to have syphilis. The highest risk of having syphilis was found in people who had sex with the same gender 4.9x more likely. Women were 3.2 times more likely to have herpes. Age was a significant factor as the people in the group 30-39 and over 40 years old were 2.4x more likely to have herpes.
Central American migrants' sexual experiences and rights in their transit to the USA/Sexualidad del migrante: experiencias y derechos sexuales de centroamericanos en tránsito a los Estados Unidos	Infante et al.	2013	Spanish	What are the circumstances surrounding migrants sexual experiences and how does this affect their ability to exercise their sexual rights?	Sexual violence	Migrants in migrant shelters actively migrating	22	Chiapas, Oaxaca, San Luis Potosí, Tamaulipas	Qualitative; interviews	Circumstances around sexual experiences in reltionship to migration	Ability to exercise sexual rights	Both women and men talked about the dangers of getting to Mexico and the social dangers of being a migrant. Men mention physical violence while women mentioned rape as the main experiences reported to them from other migrants before beginning the journey. However, while migrating men also described situations of sexual exploitation and need to exchange sex for goods. Experiences of violence within the family at home were causes of early migration which increases chances of sexual abuse.
Migration, violence, and safety among migrant sex workers: a qualitative study in two Guatemalan communities	Rocha-Jiménez et al.	2016	English	What are the migration-related determinants of susceptibility to violence experienced by migrant sex workers across different phases of migration?	Sex work	Migrants sex workers	52	Tecún, Umán, Quetzaltenango, Guatemala	Qualitative; interviews, focus groups	Migration factors	Suceptability to violence	The study found experiences of violence being a significant factor for migration. Financial need was identified as a significant factor for engaging in sex work while shame related to sex work was a significant factor for migration. Lack of knowledge about immigration and sex work laws negatively impacts the circumstances and safety of migrant sex workers, increasing their vulnerability to experience violence.

Appendix F: Full Literature Review Table

Title	Author(s)	Year Published	Language	Research Questions	SRH Topic(s)	Population	Sample Size	Location	Study Design	Independent Variable(s)	Dependent Variable(s)	Key Findings
Intersections between gender approaches, migration and health in Latin America and the Caribbean: a discussion based on a scoping review	Cabieses et al.	2023	English	N/A	GBV	Migrants	52	LAC	Qualitative; Scoping review	N/A	N/A	The article focused on different understandings of migrants health based on gender. They included all forms of gender theory without excluding LGBTQ+ theory. They found themes of violence and gender-based violence to be highly prominent in the literature.
Health and safety concerns of female asylum seekers living in an informal migrant camp in Matamoros, Mexico	Laughon et al.	2022	English	What are the health and safety concerns of asylum seeking migrant women?	GBV	Women who were asylum seekers in an informal tent encampment	43	Matamoros, Mexico	Qualitative; interviews	Living situation of asylum seekers	Health and safety concearns, particularly violence	The study focused on women, children, and women with children. There were major experiences and fears of violence experienced particularly by women who also travelled with children, among them kidnapping, molestation and rape of their children. The study found severe impacts on the health of migrants and their children as a result of the situation in the encampment particularly the lack of safety and access to basic necessities. Some women experienced the kidnapping of their kids, or attempted kidnapping and despite these experiences US immigration courts said that was not enough for them to receive asylum status.
Migrant women victims of sexual slavery, involuntary prostitution and non-forced prostitution/Mujeres migrantes víctimas de esclavitud sexual, prostitución involuntaria y prostitución no forzada	S.P Izcara Palacios, J Moral de la Rubia, and K.L Andrade Rubio	2019	Spanish	N/A	Sex work	Migrant women victims of sex trafficking or sex worker	136	Chiapas, Veracruz, Ciudad de México, San Luis Potosí, Ta-maulipas, Nuevo León Coahuila, Tabasco	Qualitative; Interviews	Country of origin and destination country	Prevalence of four forms of sex trafficking	The article discusses sex trafficking, sexual slavery, involuntary prostitution, voluntary prostitution with freedom to choose their own clients, and voluntary prostitution without freedom to choose their own clients. The women in this study experienced extreme and severe forms of violence that ranged from physical abuse, to witnessing murders and torture with the purpose of coercion and the killing of family members as a consequence of attempting to escape. Financial hardship was identified as one of the most significant factors for engaging in sex work and falling victim to sex trafficking.
"We All Get Raped": Sexual Violence Against Latin American Women in Migratory Transit in Mexico	Soria-Escalante et al.	2022	English	What sexual violence do migrating women encounter? How are such experiences related to their migratory transit?	Sexual violence	Undocumented Latin American transmigrant women over the age of 18 in migrant shelters	10	Veracruz, Tabasco, Nuevo Léon, Tamaulipas, Mexico	Qualitative; interviews	Migration	Sexual violence	Sexual violence during migration is ubiquitous. Five specific themes were identified: '(a) The migration dimension of "being a woman"; (b) Recognition of contextual factors associated with the migratory process: "Intermediaries, road, shelters and sisterhood"; (c) The costs of migration: Abuse, discrimination, and persecution: "Criminal groups, physical violence, and "La Bestia"; (d) Triggers and supports: "Escape and future expectations"; and (e) God as a support.'
Sexual and reproductive health of migrant women and girls from the Northern Triangle of Central America	P Letona, E Felker-Kantor, and J Wheeler	2023	English	What are the SRH experiences of migrant women and girls of reproductive age (15–49 years) from El Salvador, Guatemala and Honduras during their journey to the United States?	Sexual violence; Other	Guatemalan, Honduran and Salvadoran migrant women and girls, 15-46 years old	39	Guatemala City, Huehuetenango, and San Marcos departments, Guatemala	Qualitative; interviews	Migration	SRH experiences	The SRH of migrant women and girls, especially those traveling with smugglers, is compromised by the precarious conditions of travel. They lack the information and resources needed to manage their SRH appropriately and the capacity to adapt to unpredictable situations that affect their SRH. Highlighted topics include menstrual health, transactional sex, and sexual violence.
Seeking Sanctuary: Violence Against Women in El Salvador, Honduras, and Guatemala	D.N. Obinna	2021	English	How do spaces of violence operate within gendered hierarchies in the Northern Triangle of Central America?	GBV	Migrant women from the Northern Triangle	N/A	El Salvador; Guatemala; Honduras	Mixed method; analyses qualitative and quantitative primary data			Violence in the Northern Triangle of Central America is one of the primary factors forcing women and young girls to flee. An embedded machista culture endangers women in their home countries as well as during their migration, exposing them to gender based violence, especially femicide.

Appendix F: Full Literature Review Table

Title	Author(s)	Year Published	Language	Research Questions	SRH Topic(s)	Population	Sample Size	Location	Study Design	Independent Variable(s)	Dependent Variable(s)	Key Findings
HIV Infection and Risk Heightened Among Female Sex Workers Who Entered the Sex Trade as Adolescents in Guatemala	Boyce et al.	2020	English	What is the prevalence of adolescent sex trade among adult FSW in urban settings of Guatemala? What is the HIV prevalence and HIV-related health risks in this sample, including condom use, lack of HIV education, and violence to force sex work immediately following entry into the sex industry? Additionally, how do these vulnerabilities relate to migrant status?	Sex work; HIV/AIDS	Female sex workers over 18 years old	1216	Guatemala City, Escuintla, and San Marcos, Guatemala	Mixed method; interviews and questionnaires	Age of entry into sex work; migrant status	HIV prevalence and HIV-related health risks	Female sex workers who entered the sex trade under age 16 years were more likely to be HIV positive, have not received HIV education in their first year of sex trade, have experienced violence to force commercial sex and have not used condoms in their first month, relative to those who entered as adults. An interaction between age at entry and foreign migration at entry was found for HIV risk.
Ten-year hospitalization trends in Mexico: Examining the profile of national and transient and migrants	Leyva-Flores et al.	2023	English	What are the factors associated with the distribution and trends of Mexican and foreign resident hopitalizations in Mexican public hospitals from 2010-2020?	Pregnancy	Users of public hospitals	133,904 hospitalizations	Mexico	Quantitative	Nationality	Rates of hospitalization	Between 2010 and 2020, 0.05% of hospitalizations in Mexican public hospitals (n = 26,780,808) were of foreign residents. Obstetric discharges were the most common reason for hospitalization among Central and South American residents (42.24%) and residents from Other Continents (13.73%). Poisson modeling also showed that trauma injury was the leading cause of discharge for foreign residents after obstetric causes.
Mexicans vs Central Americans: Violented Migrants Crossing Mexico	Fernández-Ortega et al.	2023	English	What are the factors associated with the types of violence suffered by migrants in transit through Mexico to the USA? Are there disparities between Central Americans and Mexicans?	Sexual violence	Mexican and Central American migrants	612	Tijuana City, Mexico	Quantitative; Observation	Nationality of migrant and characteristics of migration	Violence	Central American migrants are more vulnerable than Mexican migrants, especially among women, who were found to be the most negatively affected victims of violence. One in four Central American women migrants were violently sexually assaulted and among them, only 50% sought medical assistance. The duration of the trip and the type of transport are most associated with likelihood of violence.
The paradox of choice in the sexual and reproductive health and rights challenges of south-south migrant girls and women in Central America and Mexico: A scoping review of the literature	Garbett et al.	2022	English	What sexual and reproductive health and rights risks, challenges, and needs do women and girls face before and during displacement? How do these issues influence women and girls' coping mechanisms and decisions in displacement?	STIs; sex work	Migrant girls and women	N/A	Central America and Mexico	Qualitative; Scoping review	Migration	SRHR experiences	Central American and Mexican women and girls fleeing their home countries face deprivation and suffering from the denial of health and rights during migration. They face considerable barriers to accessing services of sexual and reproductive health, are vulnerable to sexually transmitted infections, and face many violations of sexual and reproductive rights. Young migrants and sex workers, who are often connected with irregular migration in border areas, appear to be particularly vulnerable.
Improving Migrant's Care in Mexico: A statement by the Mexican Federation of Colleges of Obstetricians and Gynecologists	Negrin et al.	2023	English	N/A	Sexual violence; STIs	Central and South American migrant women	N/A	Mexico	N/A	N/A	N/A	The Mexican Federation of Colleges of Obstetricians and Gynecologists pledges to support the health needs of migrant women in Mexico, especially as it regards to sexual violence and STDs. Free contraception, proper antenatal control, and birthing supports by skilled attendants should also be focused on.

Appendix F: Full Literature Review Table

Title	Author(s)	Year Published	Language	Research Questions	SRH Topic(s)	Population	Sample Size	Location	Study Design	Independent Variable(s)	Dependent Variable(s)	Key Findings
HIV Prevalence Among Central American Migrants in Transit Through Mexico to the USA, 2009–2013	Levya-Flores et al.	2015	English	What is the HIV prevalence among Central American migrants in transit through Mexico to the USA?	HIV/AIDS	Central American migrants in migrant shelters	4075	Mexico and Guatemala	Quantitative; questionnaire, clinical screening	Sociodemographic characteristics, migratory background, health-related risk behaviours	HIV infection status	HIV rates were no higher than the general population, suggesting that attributing the HIV epidemic to migratory flows is unfounded. The rate of HIV positive tests was 0.47% rate among women. However there is a high risk of sexual violence, with 5.84% of women experiencing, and low use of condoms during last sexual intercourse at 13.6%, presenting potential risk factors for HIV transmission. Additionally participant did display knowledge of HIV and its transmission, with 66.1% of women reporting a previous HIV test, showing that health promotion may be a viable route for healthcare. Participants also reported stigma around HIV and migration.
Gender mobility: survival plays and performing Central American migration in passage	Brigden	2018	English	What 'survival plays' do migrants employ during transit through Central America and Mexico?	Sexual violence	Male and female transnational migrants	197	El Salvador; Mexico; US	Qualitative; Ethnography, interviews, observations	Transnational migration	Experience of sexual violence	Woman face a serious threat of sexual violence from 'coyotes' (human smugglers), officals, gangs and drug cartels. This includes sexual favours as a bribe for passage, Mexican officials checking genitalia for drugs, people trying to sell Central American migrants to brothels. Women employ certain tactics to gain passage along the migration route, mainly involving playing into traditional gender roles. - acting as a pious or religious women so perpetrators will leave them alone or to enact the help of men in the group - relying on Mexican men to conceal identity by pretending to be their partners - playing into gender stereotypes of "innocent young woman or the caretaking mother" to gain help from locals eg hitchhiking, food
Rape, transactional sex and related factors among migrants in transit through Mexico to the USA	Infante et al.	2019	English	What is the prevalence of sexual violence towards migrants in transit in Central America and Mexico?	Sexual violence	Users of migrant shelters (18+)	3539 questionnaire responses; 58 interviews	Mexico	Mixed methods; questionnaire, interviews	Migration	Rape and transactional sex	Female migrants experience significant sexual violence in transit. 48.76% of women experienced rape and transactional sex and 17.35% experienced any violence. Female migrants experience 4.5x higher rates of sexual violence than male migrants. Rape and transactional sex 10.8% higher for cisgender women than men. There is a high risk of sex trafficking by "Mara gangs" and the unmet basic needs increase vulnerability to transactional sex. Women often underreport sexual violence due to normalisation. Better protection of human rights and improved policy is required to address this.
Sexual and reproductive health and access: Results of a rapid epidemiological assessment among migrant peoples in transit through Darién, Panamá	Toller Erausquin et al.	2022	English	What is the status of sexual and reproductive health of migrants in transit through the Darién Forest, Panamá?	Contraception; Pregnancy; HIV/AIDS; STIs; Other	Migrants at Migrant Reception Stations (18+)	55 women in questionnaire; 51 women clinical screening; 63 women blood collection	Darién Forest, Panamá	Quantitative; questionnaire, clinical screening	Migration in Darién Forest, Panama	Sexual behavior, Contraception use, Condom use, STI symptoms and testing, Sexual assault, Safety, Transactional sex, Sexual partnerships, Pregnancy	The article found that many women had been sexually active recently, many without condoms - 80% without with casual partners. There were unknown HIV and STIs, and the majority of women had evidence of reproductive tract infections. Pregnancy rates are high amongst women in this group, with majority unplanned. There is a clear need for SRH services in Migrant Reception Stations, with testing for STIs and contraception access high needs. Sociodemographic Characteristics: Most women had no formal education, were married or cohabiting. Most migrated for work, followed by other violence then war or conflict.
Migrants in transit through Mexico to the US: Experiences with violence and related factors, 2009-2015	Levya-Flores et al.	2019	English	What is the prevalence of violence exerienced by migrants transiting through Mexico to the US? What factors increase risk of violence in this population?	Sexual violence	Users of migrant shelters (18+)	~ 2600 questionnaire responses; 58 in-depth interviews (28 women)	Mexico	Mixed methods; Interviews, Questionnaire	Gender, schooling, country of origin, migration experience, having children, experience of discrimination, year of survey	Experience of violence	Women in transit experience high rates of violence, 23.5% of women experiencing violence. Sexual violence higher among women than men, with 14.1% reporting rape and 4.07% transactional sex. Trains were noted as hotspots of violence, with rape by criminal gangs prevalent, and transactional sex for passage. Access to healthcare is low and few report violence to authorities due to mistrust, normalisation and stigma.

Appendix F: Full Literature Review Table

Title	Author(s)	Year Published	Language	Research Questions	SRH Topic(s)	Population	Sample Size	Location	Study Design	Independent Variable(s)	Dependent Variable(s)	Key Findings
The categorized and invisible: The effects of the 'border' on women migrant transit flows in Mexico	Angulo-Pasel	2019	English	How do borders create vulnerability for Central American women crossing international borders?	Sexual violence	Central American female migrants	27 interviews	Mexico	Qualitative; Policy analysis, Observation, interviews	N/A	N/A	This article explains how border policy contributes to the invisibilisation of female Central American migrants in Mexico, thus increasing the risk of violence. By categorising migrants with terms such as "undocumented", "unauthorized" or "illegal", the border extends beyond physical lines. Women are then less likely to access healthcare and are at increased risk of sexual violence from coyotes, officials, gangs and other migrants. Employment is precarious as women often work in informal environments, particularly domestic and sex work - rife for exploitation. They are even less likely to report as they are afforded few protections. There is also evidence of normalisation of violence - women use contraception as a precaution pre-migration. Border policy in Mexico closely mirrors that of the US, where migration is framed through security terms. The author talks about certain programmes and policies eg Programa Frontera Sur and Tarjeta de Visitante Regional forced migrants into even more clandestine routes ir from 'La Bestia' to jungles.
"You are the first person to ask me how I'm doing sexually": sexual and reproductive health needs and sexual behaviours among migrant people in transit through Panama	Panchenko et al.	2023	English	What are the SRH needs and sexual behaviours among migrant people in transit through Panama?	Contraception; Pregnancy; HIV/AIDS; STIs; Other	Migrants (18+)	26 (16 men, 10 women)	Panama	Qualitative; interviews	Migration	SRH needs	SRH needs are pronounced in the Darien Gap while SRH services are virtually nil, creating unmet need. Key SRH needs include gynaecological care, especially UTI treatment, HIV and STI prevention and treatment, contraception and pregnancy care. Participants highlighted the need for health promotion around HIV and STIs and the prevalence of misinformation of transmission generating stigma. Birth control was used by many participants, but mostly in preparation for migration, rather than receiving on the journey itself. There was no access to contraception and condoms themselves were confiscated by officials on arrival into Panama. Sexual experiences and behaviours were varied across the interviewees, with some reporting consensual relationships with partners and others mentionind transactional sex. Sexual violence was prevalent, with all participants aware and fearful of it and migrants were less likely to report incidents. Healthcare in MRS just after the gap are provided mainly by NGOs - MSF and Panamanian Red Cross - and access varies, with some pregnant women receiving care and others not. Recommendations include implementing MISP, due to the low emergency obstetric care and emergency contraception, as well as healthcare provision by governments sources and intersectoral collaboration. This study also highlighted a need to prioritise comprehensive SRH, including preventative care, to ensure SRHR of mgirants are met.

Appendix F: Full Literature Review Table

Grey Literature

Title	Author(s)	Year Published	Language	Research Questions	SRH Topic(s)	Population	Sample Size	Location	Study Design	Independent Variable(s)	Dependent Variable(s)	Key Findings
Access to safe abortion on major migration routes/Acceso al aborto seguro en las pricipales rutas migratorias	Ipas LAC	2024	Spanish	N/A	Abortion	Migrant women and other people with ability to become pregnant	N/A	LAC	N/A	N/A	N/A	Ipas with the goal of expanding access to safe abortion to migrant women and people who have the ability to become pregnant, has partnered with organizations and federal agencies to provide training for the provision of information regarding safe abortion, sexual and reproductive health, SRH rights and resources creating a chatbot names Te acompano that has been very important as it has 9,712 interactions (Sept, 2024). The information provided by the chatbot has been important in providing a sense of safety and belonging for new migrant women who know are more vulnerable and find the chatbot a valuable resources for accurate and helpful information easily available.
Creciente número de mujeres, adolescentes y niñas refugiadas y migrantes en riesgo de sufrir violencia de género en las Américas	Trancozo et al.	2023	Spanish	N/A	GBV	Migrant women and girls	N/A	North America and LAC	N/A	N/A	N/A	Gender-based violence is a major concern for women, adolescents and girls who migrate. 62% reported feeling unsafe or very unsafe in the migration routes and 1 in 3 reported feeling unsafe at the destination place. Because of structural violence and inequality women experience compunding effects that both places them at higher risk for forced migration and increases their risk of experiencing different forms of violence during the journey and at the destination.
Migrant women and girls in Central America risk their lives in search of a better future	Kerf et al.	2023	English	N/A	GBV	Migrant women and girls	N/A	Central America	N/A	N/A	N/A	Gender-based violence is common among women and girl migrants crossing the Darien Gap. There are also minimal care services to address this violence during the journey. These challenges must be addressed with both humanitarian responses and long term sustainable solutions.
MIGRATION AND HEALTH IN THE AMERICAS: Needs and Services Assessment 2021-2023	Leila Coppens	2024	English	What is the status of needs and services for migrants and refugees in the Americas and Caribbean? What are the factors facilitate and hinder healthcare for the migrant population?	Contraception; HIV/AIDS; STIs; Sexual violence; Pregnancy	Migrants	N/A	Americas and Caribbean	Literature review	Migration	Health status and services	Highlights the health needs of in-transit migrants and healthcare services available. High rates of violence and abuse (sexual, psychological and physical) reported - 10% travelling with a survivor of violence in Panama and 18% experienced violence in Guatemala, Mexico, Costa Rica and Panama. Varying rates of pregnancy and breastfeeding of in-transit women were found, between 10-17% in Central America and Mexico. Genereal SRH needs were between 6-41%, including contraception, STI prevention and management and maternal healthcare. Needs for intervention for GBV were significantly higher for in-transit populations than host populations, particularly in Panama and Costa Rica. Barriers to healthcare include: undocumented status, discrimination, language, low coverage and lack of knowledge of healthcare provision. Legislation and policy for healthcare varies between countries, with some only allowing emergency healthcare and others only for pregnant women and children. Coordination mechanisms exist across Central America and Mexico, including MIRPS, El Proceso de Quito and R4V.
Darien Border Protection Monitoring Factsheet	UNHCR Multi Country Office for Belize, Cuba, Panama, Nicaragua and Southern Caribbean	2023	English		Pregnancy	Migrants		Darien Province, Panama-Colombia Border		Migration		The UN Agency for Refugees (UNHCR) collects monthly information on the characteristics, vulnerabilities and protection needs of refugees and migrants who enter Panama through the province of Darien at the southern border with Colombia. Key findings include that at least 5% of respondents reported traveling with pregnant and/or lactating women, at least 14% reported traveling with someone with a critical or chronic medical condition, and 20% reported traveling with a survivor of violence in their group (which is noted to likely be an underestimate).

Appendix G: Descriptive Tables

Table 1: Socio-demographic Characteristics

Category	Frequency (N)	Percent (%)
Employment		
Agricultural Work	116	9.06
Industrial Sector	82	6.40
Service Sector	136	10.62
Self-Employed	266	20.77
Unpaid Domestic Work	274	21.39
Student	127	9.91
Sex Work	9	0.70
Not Working (Looking for Work)	26	2.03
Not Working (Not Looking for Work)	19	1.50
Arts, Entertainment, Sports	7	0.55
Artisans, Factory Workers, Maintenance	16	1.26
Administrative Support	13	1.03
Merchants, Commercial Sales	51	4.03
Street Vendors	2	0.16
Personal Service Workers	38	3.00
Domestic Services	20	1.58
Protection, Surveillance, Armed Forces	6	0.47
Other Professionals	57	4.51
Other	16	1.25
Total	1281	100
Civil Status		
Single/Divorced/Separated/Widowed	817	64.58
Married/Free Union	448	35.42
Total	1265	100
Family Status		
Has Children*	983	77.71
No Children	282	22.29
Total	1265	100

Highest Level of Education		
No Formal Education	57	3.82
Primary School	411	27.51
Secondary School	568	38.02
Preparatory/Post-Secondary School	207	13.86
University	223	14.93
Post-Graduate	26	1.74
Other	2	0.13
Total	1494	100
Age		
Younger than 20	99	6.60
20-29	624	41.63
30-39	495	33.02
40-49	254	16.94
50-59	20	1.33
Older than 60	7	0.47
Total	1499	100
Country of Origin		
Colombia	119	7.96
Costa Rica	1	0.07
Cuba	40	2.68
Dominican Republic	2	0.13
Ecuador	42	2.81
El Salvador	187	12.51
Guatemala	194	12.98
Haiti	8	0.54
Honduras	403	26.96
Mexico	2	0.13
Nicaragua	107	7.16
Panama	3	0.20
Peru	3	0.20
Spain	1	0.07
Venezuela	383	25.62
Total	1495	100

*The average number of children is 2.45.

Table 2: Migration

Category	Frequency (N)	Percent (%)
What is your reason for migration?		
Labor/Employment	951	64.34
Family Reunification	101	6.83
Political/Social Conflict	314	21.24
Health	76	5.14
Violence or Insecurity	642	43.44
Natural Disaster	6	0.41
Temporal Employment	22	1.49
Discrimination	7	0.47
Study	6	0.41
Tourism	7	0.47
Other Reason	2	0.14
Total Responses	2134	
*What is your final destination country?**		
Australia	1	0.10
Canada	14	1.33
Chile	1	0.10
Colombia	1	0.10
Costa Rica	35	3.34
El Salvador	8	0.76
Germany	1	0.10
Guatemala	10	0.95
Honduras	5	0.48
Italia	4	0.38
Mexico	312	29.74
Nicaragua	5	0.48
Panama	69	6.58
Poland	1	0.10
Spain	5	0.48
United States	577	55.00
Total	1049	100

Travelled through another country**	672	69.06
If yes:		
Travelled through 1 country	226	33.83
Travelled through 2 countries	32	4.79
Travelled through 3 countries	46	6.89
Travelled through 4 countries	227	33.98
Travelled through 5 countries	87	13.02
Travelled through 6 countries	37	5.54
Travelled through 7 countries	9	1.35
Travelled through 8 countries	4	0.60
No response	4	
Total	672	100
When you began your journey, were you travelling with someone?		
Yes	654	44.01
No	832	55.99
Total	1486	100
How many people have you been travelling with since your journey began?		
1	394	47.36
2	224	26.92
3	101	12.14
4	72	8.65
5+	41	4.92
Total	832	100
Have you had needs (economic, health, other) since you began your journey?		
Yes	1003	68.32
No	465	31.68
Total	1468	100

What type of needs did you have?		
Support to obtain identification documents	50	3.41
Support to regularise immigration status	193	13.16
Health needs	364	24.81
Loan of money to cover needs	306	20.86
Food	725	49.32
Transportation	356	24.27
Lodging	545	37.15
Total Responses	2539	
Did you receive support for any of the needs you had during this journey?		
No	300	37.45
Yes, for some	115	14.36
Yes, for all	386	48.19
Total	801	100
Who provided you with support for the needs you had during this journey?		
Local migrant/pro-migrant organisations	359	44.88
Friends and family	57	7.12
International agencies	63	7.88
People with whom you migrated	17	2.12
Churches	25	3.12
Health centres	27	3.38
Inhabitants of cities/towns passed through	120	15.00
The government	33	4.12
Total Responses	701	

**There were 451 'NA's'.*

***Median days spent travelling: 40*

Table 3: Violence and Health

Category	Frequency (N)	Percent (%)
Have you experienced violence during travel?		
Yes	393	26.50
No	1090	73.50
Total	1483	100
If you have experienced violence, what kind?		
Sexual Aggression	75	19.08
Kidnapping	60	15.27
(Violently) Robbery	289	73.54
Threats	265	67.43
Physical Aggression	127	32.32
Forced Transactional Sex	46	11.70
Total Responses	862	
Have you experienced health problems during travel?		
Yes	317	21.40
No	1164	78.60
Total	1481	100
Which health issue has been most urgent during this journey?		
Wound	53	17.10
Accident	11	3.55
Fracture	16	5.16
Respiratory disease (flu, asthma)	52	16.77
Gastrointestinal disease (vomiting, diarrhoea)	39	12.58
Bumps	15	4.84
Chronic illness	18	5.81
Dehydration	12	3.87
Malnutrition/hunger	3	0.97
Mental health conditions	17	5.48
COVID-19	4	1.29
Foot fungus	2	0.65
Malaria, chikungunya, dengue fever	1	0.32
Pregnancy or childbirth	44	14.19
Other	23	7.42
Total	310	100
Where did you receive health care for your most important health issue?		
Migrant house	61	34.60
Private office and/or hospital	5	2.84
Pharmacy	13	7.39
Health centre	28	15.91
Government hospital	31	17.61
Doctors without Borders Clinic or International Red Cross	40	27.84
Total Responses	178	

Table 4: SRH Needs

Category	Frequency (N)	Percent (%)
Have you had sex since you began this journey?		
Yes	542	36.72%
No	934	63.28%
Total	1476	100.00
What contraceptive method do you use?		
Does not use contraception	590	41.58
IUD or copper T	134	9.44
Pills	66	4.65
Injections	178	12.54
Male condoms	81	5.71
Female condoms	17	1.20
Diaphragms	11	0.78
Operation/surgery/tubal ligation	257	18.11
Partner surgery (vasectomy)	10	0.70
Implant	75	5.29
Total	1419	100
Are you using this method for reasons related to migration?		
Yes	183	13.52
No	1171	86.48
Total	1354	100
Have you experienced health problems during travel?		
Yes	317	21.40
No	1164	78.60
Total	1481	100
Have you ever contracted a sexually transmitted infection (STI)?		
Yes	4	1.26
No	313	98.74
Total	317	100
Do you know if you are pregnant?		
Yes, I am pregnant	45	3.44
No, I am not pregnant	1265	96.56
Total	1310	100
Have you had access to a consultation or pregnancy check-up?		
Yes	34	77.27
No	10	22.73
Total	44	100
Have you experienced pregnancy-related health issues?		
Yes	48	14.68
No	279	85.32
Total	327	100
Have you thought about interrupting pregnancy if it were possible?		
Yes	4	9.30
No	39	90.70
Total	43	100

Appendix H: Ethics

The data we analysed for the project was filtered by multiple organisations before Ipas received it. However, all identifying information was removed from the data before we received it. Thus, we avoided compromising the respondents' anonymity. Throughout the project, we were mindful of ethical implications. We did not find any actions taken by ourselves or within the scope of the project to be unethical.

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