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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

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ABSTRACT

The last decade has seen high levels of displacement in Central America and Mexico, with women and girls representing a growing share of this flow. Women and girls face a unique set of sexual and reproductive health risks, both as a direct result of the migration process, and as a consequence of violence, conflict and oppressive gender norms in the region.

This scoping review adopts a five-stage process to search for, identify, and review selected literature to answer two questions: (1) what sexual and reproductive health and rights risks, challenges, and needs do women and girls face before and during displacement; and (2) how do issues of sexual and reproductive health and rights influence women and girls' coping mechanisms and decisions in displacement in the region? Extracted data from intersecting literature on migration, gender, and health in the corridors of migration in Central America and Mexico are mapped and analyzed against a framework adapted from the Guttmacher-Lancet Commission on components of sexual and reproductive health and rights.

Many Central American and Mexican women and girls flee conditions of gang-related conflict, gender-based violence, poverty, and other situations of extreme disadvantage. Findings from this study demonstrate they face further deprivation and suffering from the denial of health and rights throughout the migratory cycle. This review finds that migrant women and girls encounter 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. Findings also reveal that the literature tends to focus on sexual health and rights, with a relative paucity of evidence on wider reproductive health issues. Of critical importance is how women and girls must constantly balance risk and opportunity in situations of constrained choice, and how their coping strategies and decisions define and influence their migration trajectories and broader wellbeing. This review identifies a gap in the literature around comprehensive studies that define sexual and reproductive health and rights beyond the confines of disease and sexual behavior, as well as a need for greater focus on under-represented migrant groups such as adolescent girls.

1. Introduction

Mexico and Central American countries have long experienced an impressive flow of migrants, but the last decade seems to mark a shift in migratory trajectories and motivations (United Nations High Commissioner for Refugees UNHCR, 2019). Furthermore, the new phenomenon of large caravans – where mixed groups of migrants and refugees (including entire families), often several thousand strong, travel together as a collective – has increasingly captured the attention of global media and expanded international awareness of the crisis of instability in the region (Gandini, 2020; Marchand, 2021).

In looking at migration trajectories, the United States remains the intended destination for the majority when they first set out, but many never make it across Mexico's northern border (Barrantes and Aragón, 2019; López Recinos, 2013; Organización Internacional para las Migraciones OIM, 2019). Indeed, migratory flows in the region are seeing south-to-south trajectories of protracted displacement where individuals face prolonged periods of movement and transitory settlement

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Table 1
Definitions and components of Sexual and Reproductive Health and Rights.

Sexual Health: A state of physical, emotional, mental and social wellbeing in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled. **Components:** • Psychosexual and sexual dysfunction and disorders • Sexually transmitted infections and other diseases of the genitourinary system • Cancers of the reproductive system • Mental and emotional health in relation to sexual health	**Reproductive Health:** A state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. **Components:** • Menstruation • Contraception • Pregnancy, miscarriage, childbirth and postnatal matters • Abortion and post-abortion matters • Infertility • Menopause • Mental and emotional health in relation to reproductive health
Sexual Rights: Sexual rights are human rights and include the right of all persons, free of discrimination, coercion, and violence in the realization of their sexual health. **Components:** • Access to sexual health services • Information related to sexuality • Comprehensive, evidence-based, sexuality education • Bodily integrity • Whether or not to be sexually active • Sexual relations • Intimate partner violence and other forms of gender-based violence • Sexual partnerships • Marriage and unions • Satisfying, safe and pleasurable sexual life, free from stigma and discrimination • Equitable and respectful gender relations • Sexual orientation and gender identity	**Reproductive Rights:** Reproductive rights rest on the recognition of the human rights of all couples and individuals to decide freely and responsibly the number, spacing, and timing of their children, to have the information and means to do so, and the right to attain the highest standard of reproductive health. **Components:** • Access to reproductive health services • Information related to reproductive health • Reproductive decisions that are free of discrimination, coercion, and violence • The right to privacy, confidentiality, respect and informed consent

Note: Definitions are direct quotes from the Guttmacher-Lancet framework while the components are slight adaptations (Starrs et al., 2018).

between and within Mexico and its Central American neighbors (Gil Everaert, 2020). To be specific, United Nations estimates indicate that in 2010 and 2020, the global migrant stock from Mexico and Central American origin remained almost unchanged (at about 16.2 million individuals), but the share of that stock located in Central America and Mexico increased by 30 percent, from 573,000 to 743,000 over the same period (United Nations Department of Economic and Social Affairs, 2020).

Not only do trajectories appear to be shifting, but the drivers of migration appear to be increasingly defined by violence, not just poverty (Olmedo and Sampó, 2021). While it is true that political unrest and civil conflict in many Central American countries – and their concomitant migratory flows – have a long history, the numbers of asylum-seekers and refugees from the region has grown exponentially in recent years (Chomsky, 2021; IOM). From 2016 to 2021, the numbers listed by The United Nations Refugee Agency of persons of concern (including, refugees, asylum seekers, internally displaced persons, and others) with origin in Central America and Mexico more than quintupled, growing from 362,000 to 1.95 million (United Nations Refugee Agency UNHCR, 2022). In Mexico alone, over the same period, the numbers of refugee and asylum seekers from Central America grew from 7,000 to 116,000, and Central Americans consistently accounted for the majority of refugee and asylum seekers in the country (Olmedo and Sampó, 2021; United Nations Refugee Agency UNHCR, 2022).

In recent years, women and girls have comprised a growing share of this outflow of migrants, with females accounting for an estimated 45 percent of emigrant flows from 1995 to 2005 and 50 percent from 2005 to 2015 (Abel, 2018). United States border statistics give additional indication of the demographic shift. From 2011 to 2019, the share of women apprehended at the country's southern border increased from 13 to 38 percent of all apprehensions, and the share of minors aged 0–17 years increased from 6 to 35 percent (United States Border Patrol, 2019; United States Border Patrol, 2011). Importantly, evidence suggests that violence – including rape, assault, extortion and threats to life – is a particularly prominent cause of displacement for females in the region (United Nations Refugee Agency UNHCR, 2015). Most of this violence is perpetrated by intimate partners and criminal groups (United Nations Refugee Agency UNHCR, 2015).

Research finds that displaced women and girls in the region face significant health challenges. Some health risks are directly related to protracted displacement but many others have links to the broader situation of violence, poverty, instability and misogyny; and all can be exacerbated by inadequate access to healthcare services at border sites, in transit and in settlement (United Nations High Commissioner for Refugees UNHCR, 2019; Rivillas-García et al., 2021; Temin et al., 2013; Valdez et al., 2015; Barot, 2017). While all displaced individuals face health challenges, women and girls face a unique set of sexual and reproductive health risks, which have been insufficiently explored in the migration research in the region.

This scoping review explores and synthesizes the challenges of displaced women and girls in achieving their sexual and reproductive health and rights in the Central America and Mexico south-south corridor of migration. We seek to consider sexual and reproductive health and rights in their most comprehensive sense, and as such structure our analysis of the reviewed literature around a framework adapted from the Guttmacher-Lancet Commission to conceptualize sexual rights, sexual health, reproductive health, and reproductive rights (Starrs et al., 2018).

Although research on risks and adverse conditions surrounding the migration process affecting female migrants is gaining attention amongst researchers and policy analysts, this review highlights the need for more evidence on the sexual and reproductive health and rights risks, challenges, needs and choices of women and girls in displacement. Ultimately, this review provides impetus to the research and policy communities to better identify ways to address the health and rights of women and girls in protracted displacement in Mexico and Central America.

2. Materials and methods

We adopted a scoping review methodology as the aim was to identify and map the available evidence, provide a broad overview of the literature's focus, and establish gaps in the research (Munn et al., 2018). We drew on the five stages of established scoping review methodology: identifying the research question; identifying relevant studies; study selection; charting the data; and collating, summarizing and reporting the results (Arksey and O'Malley, 2005). Our reporting structure reflects the Preferred Reporting Items for Systematic review and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist (see Appendix Table A2) (Tricco et al., 2018).

2.1. Identification of the research question and definition of terms and parameters

This review asked the following two questions: (1) what sexual and reproductive health and rights risks, challenges, and needs do women

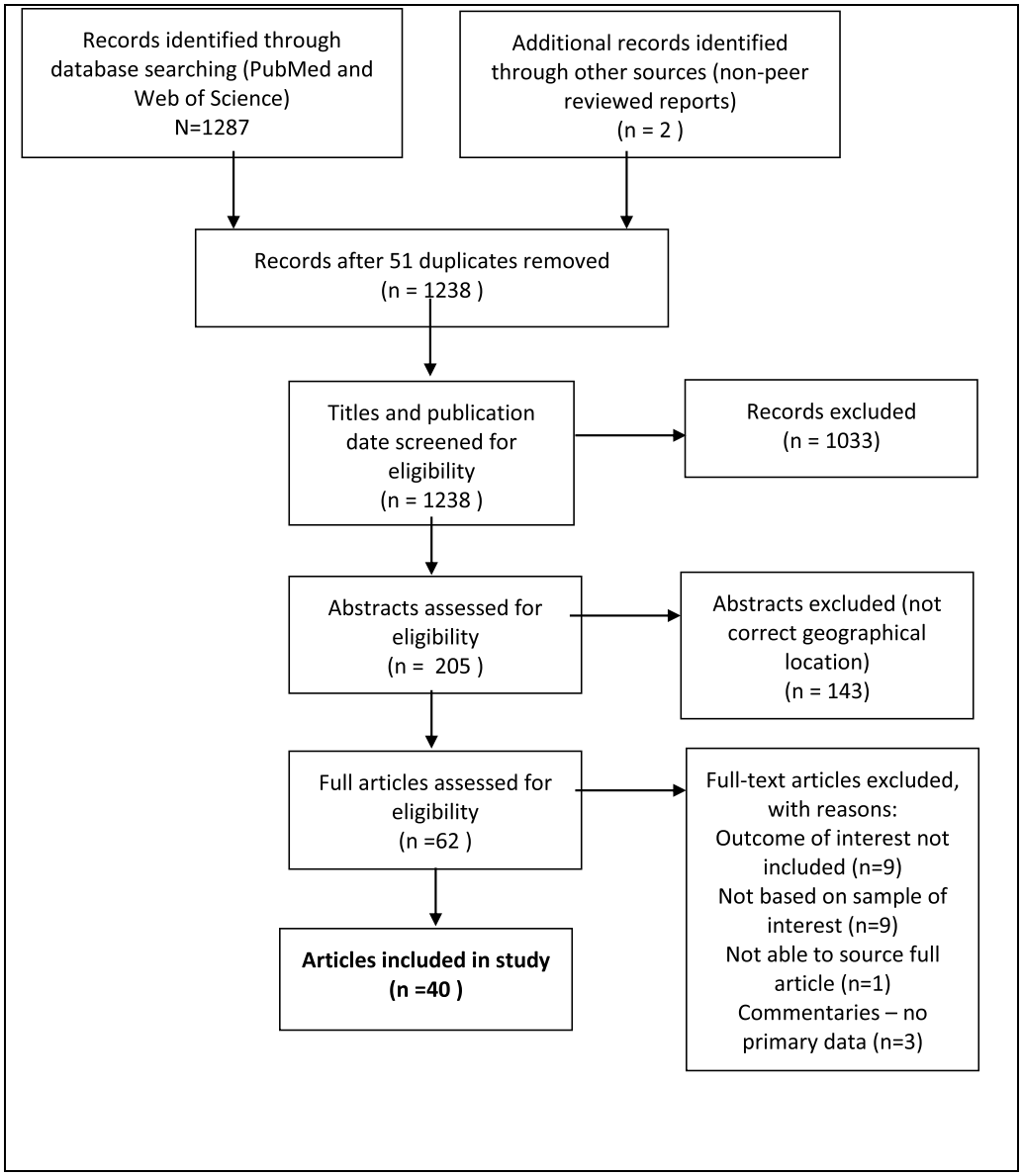

Fig. 1. Study selection flowchart.

and girls face before and during displacement; and (2) how do these issues influence women and girls' coping mechanisms and decisions in displacement? The first question also reflects how sexual and reproductive health and rights are conceptualized in the literature and the second question relates to how sexual and reproductive health interacts with displaced women and girls' broader wellbeing and autonomy. Importantly, the second question is not simply concerned with how sexual and reproductive health and rights might influence migration trajectories, for example, as a driver of migration, but how health and rights issues influence coping strategies and decisions in displacement. For example, in how women respond to economic needs or legal barriers.

We used the Guttmacher-Lancet framework to define four intersecting facets and identify specific components of each facet. The four facets are sexual rights, sexual health, reproductive health, and reproductive rights. Table 1 presents an adaptation of the original framework reorganizing some of the components within the four domains. In operationalizing the framework, we added components found in the literature but not listed in the Guttmacher-Lancet framework and mapped similar components under a single domain when they were listed under multiple domains in the original framework.

Specifically, we found that the component of sexuality, sexual identity, and sexual relationships intersected strongly with the exercise of rights and the (constrained) choices of migrant women and adolescents, and thus included that component under sexual rights, even though the Guttmacher-Lancet framework identifies it as sexual health. Likewise, we included components related to intimate partner violence, gender-based violence, and equitable and respectful gender relations under sexual rights, as we found it was difficult to separate these components in the literature from the right of bodily autonomy. The Guttmacher-Lancet framework does not identify mental or emotional health as specific components of sexual or reproductive health, but they were included in the definition on which the framework was based[1] and were discussed in the literature so we included them as components. We included informal unions under the component of marriage due to the high prevalence and historical significance of cohabitation in Latin America. We also moved the components of access to reproductive healthcare and reproductive information from the reproductive health domain to reproductive rights domain to align with how parallel components are considered under sexual rights. Finally, we added miscarriage and menopause to reproductive health though they are not named in the Guttmacher-Lancet framework.

We considered the entire migration trajectory, including predeparture, transit, settlement and return in acknowledgement that, for many women and girls, migratory stages are quite fluid and nonlinear. We use in this paper the term migrant as an umbrella term for a person who moves away from her usual residence, whether within a country or across an international border, temporarily or permanently and for a variety of reasons. Within the context of mixed migrant flows in the region, we considered economic migrants and migrant workers, refugees and asylum seekers, forcibly displaced persons and trafficked women and girls.

In terms of geographical scope, we selected literature exploring sexual and reproductive health and rights for migrant women and girls within Mexico and Central American countries (i.e. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama). Again, we were interested in the whole migration cycle, which means we included experiences of women at their place of origin when those experiences were directly related to migration. For example, when sexual and reproductive health and rights factors were a driver of migration or were related to repatriation or return. Papers that included both migrant and non-migrant populations were reviewed if the study included differentiated outcomes between the two groups.

2.2. Identifying relevant studies

A search on PubMed and Web of Science was carried out in February 2020. Appendix Table A1 details the Boolean search strategy used. Note that because of time constraints, the review did not include an additional search of gray literature except for two reports from Médecins sans Frontières, as detailed below in the study selection Table 1. We excluded papers with publication dates prior to 2010. Of the 40 studies that fit the inclusion criteria, only seven were in Spanish, which suggests that Spanish language literature is not well represented in the PubMed and Web of Science databases. The SciELO, WHO and LILACS databases for Spanish language scholarship did not support our Boolean search strategy and were therefore not included.

2.3. Study selection

Fig. 1 depicts the process leading to the final selection of the 40 articles included in this scoping review. Two authors reviewed all 62 identified articles and agreed upon the inclusion of the 40 final articles. Any differences in opinion between the two reviewers were resolved by discussion, including other authors where necessary. Articles selected for inclusion were those that examined issues of sexual and reproductive health and rights of south-south migrant females in Central America and Mexico.

2.4. Charting the data

Our thematic mapping used the Guttmacher-Lancet framework as described previously in Section 2.1 and Table 1 to look at (1) what sexual and reproductive health and rights risks, challenges and needs women and girls face in displacement, and (2) how issues of sexual and reproductive health and rights women and girls' coping mechanisms and decisions in displacement.

2.5. Collating, summarizing, and reporting the results

Our findings present the consolidated results of the thematic mapping exercise, which we carried out before organizing findings under the four facets of the Guttmacher-Lancet framework to produce a narrative. Search results were exported to Mendeley Reference Manager where title and abstract screening was conducted. Data extraction was done in Excel and gathered the following about each study: bibliographic information, design, setting, population, objectives, and main findings. One author conducted the data extraction and thematic mapping, which was reviewed by the second author involved in determining the 40 final articles. The findings were collated using narrative synthesis which sought to both describe the results and highlight links and relationships between the different papers.

3. Findings

The articles offered a mix of qualitative and quantitative research, with 25 qualitative studies, 12 quantitative studies and three mixed methods studies. A large portion of quantitative research focused on epidemiological measurement of sexually transmitted infections, particularly Human Immunodeficiency Virus (HIV). Research on migrant sex work was very prominent in both quantitative and

[1] The Lancet-Guttmacher Commission created an integrated definition of sexual and reproductive health: "Sexual and reproductive health is a state of physical, emotional, mental, and social wellbeing in relation to all aspects of sexuality and reproduction, not merely the absence of disease, dysfunction, or infirmity. Therefore, a positive approach to sexuality and reproduction should recognise the part played by pleasurable sexual relationships, trust, and communication in the promotion of self-esteem and overall wellbeing. All individuals have a right to make decisions governing their bodies and to access services that support that right" (Starrs et al., 2018).

Table 2
Mapping components of sexual and reproductive health and rights in included studies.

	Article reference ID}																																							
	1	2	3	4	5	6	7	**8**	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Sexual Health																																								
Sexually transmitted infections, other diseases of the genitourinary system	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x																				
Psychosexual and sexual dysfunction and disorders	x																																							
Cancers of the reproductive system		x																																						
Mental or emotional health				x					x						x					x		x	x	x	x	x														
Sexual Rights																																								
Bodily integrity; whether or not to be sexually active; sexual relations; intimate partner violence and other forms of gender-based violence	x			x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x							
Access to sexual health services	x	x	x	x						x	x	x		x	x		x	x	x	x	x	x	x						x	x				x						
Sexual partnerships; marriage, unions					x		x	x	x			x		x		x		x											x	x				x	x	x	x	x		
Information related to sexuality	x	x	x	x								x				x	x	x	x	x																				
Comprehensive, evidence-based, sexuality education		x																																						
Satisfying, safe and pleasurable sexual life, free from stigma and discrimination	x	x	x		x				x			x				x														x									
Equitable and respectful gender relations	x				x							x				x										x			x			x							
Sexual orientation, gender identity																										x			x										
Reproductive Health																																								
Pregnancy, miscarriage, childbirth and postnatal matters	x	x																x				x	x			x			x	x				x	x	x	x	x	x	x
Contraception																x	x	x				x												x	x	x				
Abortion and post-abortion matters	x																																	x						
Menstruation	x																																							
Infertility																																								
Menopause																																								
Mental or emotional health	x																					x		x		x									x		x	x		
Reproductive Rights																																								
Reproductive health services access	x	x															x					x							x					x	x	x		x	x	x
Reproductive decisions that are free of discrimination, coercion, and violence; right to privacy, confidentiality, respect and informed consent	x	x																x				x	x			x									x		x	x	x
Reproductive health information																																								

Table 3
Characteristics of included studies.

ID	Reference	Method	Location	Population	Objective
1	Acharya (2010)	Qualitative	Mexico	60 female internally trafficked sex workers, exact age range unspecified but below age 18 to over age 24	Extreme violence and health risks of victims of sex trafficking
2	Camarena Ojinaga et al. (2017)	Qualitative	Mexico northern border	60 indigenous female internal migrants aged 17–60, 4 key informants from medical staff	Indigenous migrant women's experiences with health services and their understanding of their sexual and reproductive rights
3	Serván-Mori et al. (2013)	Quantitative	Central America and Mexico	3128 females aged 10–60+ presenting to clinics with sexually transmitted infections, includes internal and international migrants	Analyze the profile of care for sexually transmitted infections (STIs) in health centers in border areas
4	Medecins Sans Frontieres (2017)	Mixed methods	Mexico	56 women of 467 total participants, mostly Central American migrants in migrant shelters, exact age range unspecified but less than 18 to over 35 years	Measure exposure to violence and impact on health, barriers to health care, and limited access to protection of migrants
5	Goldenberg et al. (2012)	Literature Review	Central America and Mexico	Numbers and ages unspecified (was a literature review) but includes internal and international migrants	Critically review the epidemiology and social and structural context of HIV/STI risk among mobile populations
6	Gandhi et al. (2015)	Quantitative	Honduras	465 women of 800 total participants age 18 years and older in representative survey of nonmigrants compared to internal and international migrants or family members of migrants	Assess whether temporary migration was associated with multiple sexual partnerships and sexual concurrency among Garifuna men and women
7	Conners et al. (2017)	Quantitative	Mexico-Guatemala border region	85 women of 392 total deportees and internal and international migrant illicit substance users aged 18 years and older	Assess correlates of inconsistent condom use with casual partners and the prevalence of sexual risk behaviors and STIs in border region
8	Ojeda et al. (2012)	Quantitative	Mexico northern border	258 female sex worker internal migrants who inject with drugs, exact age range unspecified	Describe female sex workers who are injection drug users' circular migration and drug use behaviors
9	Morris et al. (2013)	Quantitative	Mexico northern border	557 female sex worker internal and non-migrants who inject with drugs, aged 18 years and older	Identify factors associated with time to initiation of sex work prior to injecting drugs initiation, injection drug use prior to sex work initiation, and concurrent sex work and injection drug use among female sex workers who currently inject drugs
10	Goldenberg et al. (2016)	Qualitative	Guatemala northern border	33 female sex worker internal and international migrants aged 18 years and older	Identify key challenges and opportunities related to the responsible conduct of HIV research with migrant sex workers
11	Rocha-Jiménez et al. (2017)	Qualitative	Guatemala northern border	33 individual interviews and 20 focus groups with female sex worker internal and international migrants aged 18 years and older	Explore the implementation of sex work regulations and related consequences for HIV prevention and care among migrant sex workers
12	Pintin-Perez et al. (2018)	Qualitative	Mexico southern border	10 female international migrant sex workers, exact age range not specified. Also 32 health staff, civil society actors and workers in tolerance zones	Illustrate how the discourse of tolerance zones becomes a vehicle for symbolic violence, naturalizing unequal social relations of power in the lives of migrant sex workers
13	Rocha-Jiménez et al. (2020)	Quantitative	Mexico-Guatemala border region	226 female sex worker using illicit substances aged 18 years and older, compares international migrants to internal migrants and local residents	Explore the association of international migration with substance use and HIV/STI risk factors among female sex workers
14	Rangel et al. (2012)	Quantitative	Mexico northern border	51 females of 693 total respondent deportees, age range unspecified	Estimate levels of HIV infection and behavioral risk factors among deported migrants
15	Rodriguez-Montejano et al. (2015)	Qualitative	Mexico northern border	12 female deportees with injection drug use aged 29–53 years	Describes adaptation to the post-deportation environment among Mexican-born injection drug-using women
16	Kendall and Pelcastre (2010)	Qualitative	Mexico central region	26 female internal migrant factory workers, aged 15–49 years	Explore perceptions of HIV and condom use among Mexican migrant female factory workers
17	Leyva-Flores et al. (2013)	Quantitative	Central America and Mexico	558 female sex workers aged 18–55 years, includes migrants and non-migrants	Analyze access to STI and HIV prevention services for female sex workers in border communities
18	Rocha-Jiménez et al. (2018)	Qualitative	Mexico-Guatemala border region	31 female international migrant sex workers aged 18 years and older	Explore international migrant sex workers' experiences and narratives pertaining to the unmet need for and access to sexual and reproductive health at the border
19	Febres-Cordero et al. (2018)	Qualitative	Mexico-Guatemala border region	31 female internal and international migrant sex workers aged 18 years and older	Analyze the role of peer support in shaping vulnerability and resilience related to HIV/STI prevention and violence among international migrant sex workers at the border
20	Goldenberg et al. (2018)	Qualitative	Guatemala northern border	39 female internal and international migrant sex workers aged 18 years and older	Investigate migrant sex workers' narratives regarding the ways in which structural features of work environments shape vulnerability and agency related to HIV/STI prevention and violence at the border
21	Servin et al. (2018)	Qualitative	Mexico-Guatemala border region	30 female international migrant domestic and agricultural workers aged 18 years and older	Assess the prevalence of sexual violence in the context of labor exploitation and subsequent health outcomes among migrant women
22	Medecins Sans Frontieres (2020)	Qualitative	Mexico, El Salvador	37 women of 480 total participants, mostly Central American migrants in migrant shelters, age range of all participants 15–66 years	Explore drivers of migration, migration routes, exposure to violence and principal health problems and barriers migrants face in accessing health services

(*continued on next page*)

Table 3 (*continued*)

ID	Reference	Method	Location	Population	Objective
23	Cardenas-Rodriguez and Vázquez Delgado (2014)	Qualitative	Mexico northern border	Number of interviews not stated but done with personnel from 6 migrant shelters one police task force	Evaluate the resources of public policy related to the risks and vulnerability female migrants face in transit
24	Acharya (2019)	Qualitative	Mexico northern region	68 female internally trafficked sex workers and laborers, exact age range unspecified but below age 15 to over age 25	Explore the prevalence of violence against trafficked sex workers and implications for physical injuries and disabilities
25	Stephen (2019)	Qualitative	Guatemala	3 young female victims of sexual violence that led first to internal migration then international migration	Illustrate historical and contemporary structures and processes of violence that center on the normalization of multiple forms of implied or actual physical and sexual violence against women
26	Wang et al. (2019)	Qualitative	USA (asylum seekers from Central America)	70 female asylum seekers fleeing gender-based violence, first internal migration then international, aged 18–55 years	Elucidate the forms of persecution experienced by asylum seekers fleeing gender-based violence, and the physical and psychological sequelae of this violence
27	Zarco-Ortiz (2018)	Qualitative	Mexico southern border	2 transgender women international migrants ages not specified	Analyze the migratory process of transgender women and their displacements from body, space-territory, and transborder categories
28	Estrada-Tanck (2017)	Qualitative	Mexico	Numbers and ages unspecified (was a commentary) but includes international migrant women and girls	Addresses strategies of protection carried out by human rights bodies and organizations in Mexico for women at risk of or suffering violence
29	Gustafsson (2018)	Mixed methods	Nicaragua	12 women of 17 total internal and international migrants or family members of migrants aged 22–60 years in qualitative analysis; in quantitative analysis 1383 surveyed individuals aged 17 years and older without separate analysis by gender compares migrants and non-migrants	Analyze migration-health relations within a broader context of socioeconomic transformations
30	Angulo-Pasel (2018)	Qualitative	Mexico	27 international migrants in migrant shelters and government officials with unspecified number of females and unspecified ages	Outline the survival strategies that migrant women use and reflect on what this means for the scholarly understanding of the 'mobile commons'
31	Rocha-Jimenez et al. (2016)	Qualitative	Guatemala northern border	52 female sex worker internal and international migrants aged 18 years and older	Explore migration-related determinants of susceptibility to violence experienced by migrant sex workers across different phases of migration
32	Maldonado Macedo (2020)	Qualitative	Mexico southern border	5 female sex worker internal and international migrants aged 17–50	Demonstrate the tensions and contradictions between punitive justice and criminality and the effects the anti-trafficking apparatus has on lives and bodies at the border
33	Lopez et al. (2015)	Quantitative	Mexico northern border	68 female migrant agricultural laborers, ages not specified	Examine the prevalence of four leading risk factors associated with intimate partner violence in a migrant farmworker community
34	Ramirez-Lopez et al. (2012)	Quantitative	Mexico southern border	276 international migrant women aged 12–59 years	Explore the problems facing women resident immigrants, with special attention to sexual and reproductive health and rights
35	Arriaga-Romero et al. (2010)	Quantitative	Mexico northern border	324 pregnant adolescent females aged 10–19 years of whom 105 were migrants	Identify and correlate characteristics of adolescent mothers in a border city with their migratory status
36	Goldade (2011)	Qualitative	Costa Rica	43 female international migrants aged 21–50, 10 health providers	Explore how undocumented migrant women parlayed reproductive capacities in a host country increasingly limited in its capacity to fulfill longstanding national ideals of universal health coverage
37	Sintonen et al. (2013)	Quantitative	Costa Rica	318,279 adolescent females ages 12–19 years, international and non-migrant population	Explore dynamics of adolescent childbearing of migrant and non-migrant adolescents and examine associations between socio-demographic factors and adolescent childbearing
38	Carte (2014)	Qualitative	Mexico southern border	25 female international migrants aged 20–60+	Examine immigrant women's everyday interactions with low- to mid-level government representatives and health personnel and the impacts of these interactions on the women's livelihoods
39	dos Santos (2015)	Qualitative	Costa Rica	10 health providers (gender and ages not specified)	Present discourses of health professionals that reveal a contradiction between merit and prejudice in prenatal and delivery care for migrants
40	Gamlin (2013)	Qualitative	Mexico central region	25 internal indigenous migrants (number of women not specified), ages not specified	Explore how indigenous migrant laborers experience structural, everyday and symbolic violence while away working, and in their home communities that have impact upon indigenous conceptions of health and health-seeking behavior

qualitative studies and seven published articles on sex work arose from a single research project that queried slightly different themes. Thirty studies looked at migrant populations in Mexico, often at the country's northern or southern borders, with nine of these also looking at migrant populations in Guatemala ($n = 4$) and El Salvador ($n = 1$) specifically and any Central American populations generally ($n = 4$). Five studies focused on populations in Guatemala, usually at the country's northern border, three in Costa Rica, one in Nicaragua and one in Honduras. Most studies looked only at female migrants ($n = 27$), and though most studies included both adolescents and adults, few provided disaggregated results or differentiated findings by age. See Table 2 for a mapping of the components of sexual and reproductive health and rights in the 40 included studies, and Table 3 for a summary of the research characteristics of the 40 included studies.

3.1. Sexual health

Sexual health is "a state of physical, emotional, mental and social well-being and not merely the absence of disease, dysfunction or infirmity in all matters relating to sexuality. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence" (Starrs et al., 2018). The components of sexual health analyzed here are: (1) psychosexual and sexual dysfunction and disorders, (2) sexually transmitted infections and other diseases of the genitourinary system, (3) cancers of the reproductive system, and (4) mental and emotional health related to sexual health.

3.1.1. The types of sexual health risks, challenges and needs faced by displaced women and girls

A total of 25 papers looked at the four components of sexual health. There were 20 that looked at issues of sexually transmitted infections and other diseases of the genitourinary system. Only one paper also mentioned issues possibly indicative of psychosexual dysfunction and another mentioned cancers (Acharya, 2010; Camarena Ojinaga et al., 2017), while 9 studies included mental and emotional health (Medecins Sans Frontieres, 2017; Morris et al., 2013; Rodriguez-Montejano et al., 2015; Goldenberg et al., 2018; Medecins Sans Frontieres, 2020; Cardenas-Rodriguez and Vázquez Delgado, 2014; Acharya, 2019; Stephen, 2019; Wang et al., 2019). To be more specific, the study of risk factors, prevention interventions and detection of prevalence of sexually transmitted infections (often HIV) dominated, with only rare mention of other genitourinary problems such as urinary tract infections, abnormal vaginal discharge and other issues of gynecological illness and pain (Acharya, 2010; Serván-Mori et al., 2013; Medecins Sans Frontieres, 2017). The mention of cancers was in a study of internal migrants in Mexico who confirmed that they knew about and undertook screening for cervical and breast cancer (Camarena Ojinaga et al., 2017).

In the studies, migration was generally associated with a higher incidence of sexually transmitted infections insofar as it was linked to risk behaviors such as unprotected and nonconsensual sex, multiple successive or concurrent sexual partners, sex work and drug use (Camarena Ojinaga et al., 2017; Medecins Sans Frontieres, 2017; Goldenberg et al., 2012; Gandhi et al., 2015; Conners et al., 2017; Ojeda et al., 2012; Morris et al., 2013; Goldenberg et al., 2016; Rocha-Jiménez et al., 2017, 2020; Pintin-Perez et al., 2018; Rangel et al., 2012; Rodriguez-Montejano et al., 2015; Kendall and Pelcastre, 2010). Adolescents and women in the early stages of their arrival who engaged in sex work were particularly vulnerable because of their limited knowledge of sexually transmitted infections and prevention measures (Gandhi et al., 2015; Leyva-Flores et al., 2013; Rocha-Jiménez et al., 2018; Febres-Cordero et al., 2018; Goldenberg et al., 2018). Victims of sex trafficking had a very high incidence of infection (Acharya, 2010). Additionally, HIV prevalence was more concentrated in migration and transit hubs, particularly among vulnerable groups such as sex workers, indigenous populations, and women (Goldenberg et al., 2012; Conners et al., 2017). One study emphasized that migrants require treatment approaches that do not depend on repeat visits and found evidence of gender bias in treatment wherein women were less likely than men to receive a full package of care (Servin et al., 2018). There was also a high incidence of self-treatment on the one hand, and, on the other hand, unawareness of infection (Ojeda et al., 2012; Servin et al., 2018).

However, migrants did not always have a higher incidence of sexually transmitted infections (Conners et al., 2017). For example, among a sample of female sex workers in northern Mexico, those who migrated had lower risk and acquisition compared to non-migrant sex workers, though the protective effect diminished for every year lived in the area (Morris et al., 2013). In another instance, migration was associated with more consistent condom use (Goldenberg et al., 2012).

Issues of emotional distress and mental ill health, such as depression, anxiety, trauma and suicidality, attributable to sexual violations, gender-based violence and sex work, pervaded many papers. One study asserted that, compared to men, displaced women and minors appeared to be particularly vulnerable to mental ill health (Medecins Sans Frontieres, 2017). However, mental and emotional ill health also had roots in other displacement factors not directly related to sexual health, such as political instability, gang violence, social isolation, and more (Medecins Sans Frontieres, 2017; Medecins Sans Frontieres, 2020).

3.1.2. How issues of sexual health influence women and girls' coping mechanisms and decisions in displacement

Many of the decisions and coping strategies women and girls used to respond to difficult aspects of displacement increased their risk of sexual health problems. In looking at sexually transmitted infections for example, several studies articulated that sex workers acknowledged the importance of avoiding and detecting infections, but they resented, and were negatively impacted by, the punitive nature of testing regulations and feared a positive test result would lead to deportation. As such, they would forgo testing in some instances (Goldenberg et al., 2016; Rocha-Jiménez et al., 2017; Febres-Cordero et al., 2018). Coping with loneliness and isolation contributed to risk behaviors for infection, such as drug use, or multiple and concurrent sexual partnerships (Rodriguez-Montejano et al., 2015). However, there was limited evidence as to how sexual health affected migratory decisions or trajectories. Ultimately, the reviewed literature put relatively little attention on how the components of sexual health considered here influenced decisions and coping strategies in displacement that are not covered more directly under sexual rights (such as access to sexual health services for testing and treating infections).

3.2. Sexual rights

"Sexual rights are human rights and include the right of all persons, free of discrimination, coercion, and violence" in the realization of their sexual health. We considered the following components under sexual rights: (1) access to sexual health services, (2) information related to sexuality, (3) comprehensive, evidence-based sexuality education, (4) bodily integrity, (5) whether or not to be sexually active, (6) sexual relations, (7) intimate partner violence and other forms of gender-based violence, (8) sexual partnerships, (9) marriage and unions, (10) satisfying, safe and pleasurable sexual life, free from stigma and discrimination, (11) equitable and respectful gender relations, and (12) sexual orientation and gender identity.

3.2.1. The types of sexual rights challenges and needs faced by displaced women and girls

All but two papers addressed aspects of sexual rights. Quite often, specific components of sexual rights were difficult to differentiate in practice. For example, intimate partner and gender-based violence as well as nonconsensual sexual relations violate the right of bodily integrity and the ability to choose whether to be sexually active or not. If taken together, 30 articles touched on issues rooted in these varied

aspects of bodily integrity and sexual relations (components four through seven) (Acharya, 2010; Medecins Sans Frontieres, 2017; Goldenberg et al., 2012; Gandhi et al., 2015; Conners et al., 2017; Ojeda et al., 2012; Morris et al., 2013; Goldenberg et al., 2016; Rocha-Jiménez et al., 2017; Pintin-Perez et al., 2018; Rocha-Jiménez et al., 2020; Rangel et al., 2012; Rodriguez-Montejano et al., 2015; Kendall and Pelcastre, 2010; Rocha-Jiménez et al., 2018; Febres-Cordero et al., 2018; Goldenberg et al., 2018; Servin et al., 2018; Medecins Sans Frontieres, 2020; Cardenas-Rodriguez and Vázquez Delgado, 2014; Acharya, 2019; Stephen, 2019; Wang et al., 2019; Zarco-Ortiz, 2018; Estrada-Tanck, 2017; Gustafsson, 2018; Angulo-Pasel, 2018; Rocha-Jimenez et al., 2016; Lopez et al., 2015). A total of 19 articles described aspects of access to sexual health services – largely for testing for sexually transmitted infections (Acharya, 2010; Camarena Ojinaga et al., 2017; Serván-Mori et al., 2013; Medecins Sans Frontieres, 2017; Goldenberg et al., 2016; Rocha-Jiménez et al., 2017; Pintin-Perez et al., 2018; Rangel et al., 2012; Rodriguez-Montejano et al., 2015; Leyva-Flores et al., 2013; Rocha-Jiménez et al., 2018; Febres-Cordero et al., 2018; Goldenberg et al., 2018; Servin et al., 2018; Medecins Sans Frontieres, 2020; Cardenas-Rodriguez and Vázquez Delgado, 2014; Gustafsson, 2018; Angulo-Pasel, 2018; Ramirez-Lopez et al., 2012). And 15 articles touched on themes of marriage, unions and sexual partnerships (components eight and nine) (Goldenberg et al., 2012; Conners et al., 2017; Ojeda et al., 2012; Morris et al., 2013; Pintin-Perez et al., 2018; Rangel et al., 2012; Kendall and Pelcastre, 2010; Rocha-Jiménez et al., 2018; Gustafsson, 2018; Angulo-Pasel, 2018; Ramirez-Lopez et al., 2012; Arriaga-Romero et al., 2010; Goldade, 2011; Sintonen et al., 2013; Carte, 2014). However, the Guttmacher-Lancet framework's original focus is on whether unions are consensual and equitable, but the studies rarely discussed unions within this context. Ten papers included themes of information, or lack thereof, on sexual health (Acharya, 2010; Camarena Ojinaga et al., 2017; Serván-Mori et al., 2013; Medecins Sans Frontieres, 2017; Pintin-Perez et al., 2018; Kendall and Pelcastre, 2010; Leyva-Flores et al., 2013; Rocha-Jiménez et al., 2018; Febres-Cordero et al., 2018; Goldenberg et al., 2018). The type of information considered was usually siloed (focusing on preventing sexually transmitted infections) with only one mention of school-based sexuality education, which internal Mexican migrants said was insufficiently informative (Camarena Ojinaga et al., 2017). Eight articles mentioned issues related to stigma and discrimination (usually in relation to sex work or indigenous identity) (Acharya, 2010; Camarena Ojinaga et al., 2017; Serván-Mori et al., 2013; Goldenberg et al., 2012; Morris et al., 2013; Pintin-Perez et al., 2018; Kendall and Pelcastre, 2010; Rocha-Jimenez et al., 2016), but only one study mentioned issues of satisfaction and pleasure (only to note that these themes were absent in women's discussions of their sexuality) (Camarena Ojinaga et al., 2017). Recall that themes of stigma and pleasure are considered under the same component in the Guttmacher-Lancet framework. Seven studies brought out issues relevant for equitable and respectful gender relations (Acharya, 2010; Goldenberg et al., 2012; Pintin-Perez et al., 2018; Kendall and Pelcastre, 2010; Zarco-Ortiz, 2018; Angulo-Pasel, 2018; Lopez et al., 2015), two of which touched on issues of sexual orientation and gender identity (Zarco-Ortiz, 2018; Angulo-Pasel, 2018).

Migrant women and girls experienced many kinds of sexual rights challenges and abuses. Sexual violence seemed particularly concentrated at Mexico's southern border where migrants traveled on foot to avoid border controls (Medecins Sans Frontieres, 2020). Police and gangs, often in collaboration with one another, were perpetrators of violations to such a degree that the literature emphasized it can be difficult to distinguish between state and non-state actors as perpetrators (Angulo-Pasel, 2018). Other migrants were also perpetrators of violations, and there was some indication that sexual violence is increasing over time (Medecins Sans Frontieres, 2017).

Research on sex work took a predominant place in the literature – fourteen papers focused on the topic (Goldenberg et al., 2012; Ojeda et al., 2012; Morris et al., 2013; Goldenberg et al., 2016; Rocha-Jiménez et al., 2017; Pintin-Perez et al., 2018; Rocha-Jiménez et al., 2020; Rodriguez-Montejano et al., 2015; Rocha-Jiménez et al., 2018; Febres-Cordero et al., 2018; Goldenberg et al., 2018; Zarco-Ortiz, 2018; Rocha-Jimenez et al., 2016; Maldonado Macedo, 2020) and two others measured the prevalence of sex work among their populations of interest (Conners et al., 2017; Rangel et al., 2012). In border areas, migrants represented a large share of sex workers (estimates range between 30 and 60 percent of female sex workers), but it was never clear what share of all female migrants participated in sex work (Leyva-Flores et al., 2013; Febres-Cordero et al., 2018; Goldenberg et al., 2018).

Research on trafficking emphasized that adolescents were particularly vulnerable to sex trafficking because the sex industry favors youth (Acharya, 2010, 2019; Medecins Sans Frontieres, 2020). Young girls in situations of poverty, family dysfunction and single parenthood were vulnerable to traffickers' promises of employment or passage to the United States. They experienced intense rates of violence of all forms from their traffickers, managers and clients.

The literature exploring sexual health information noted that many migrants, particularly young girls, those just starting sex work or those who have been sexually violated en route, were not aware of their sexual health risks (Acharya, 2010; Pintin-Perez et al., 2018; Kendall and Pelcastre, 2010; Rocha-Jiménez et al., 2018). Clinic providers, charities, nongovernmental organizations, and social networks (especially other sex workers) were described as important sources of sexual health information (Camarena Ojinaga et al., 2017; Medecins Sans Frontieres, 2017; Leyva-Flores et al., 2013; Febres-Cordero et al., 2018; Goldenberg et al., 2018).

3.2.2. *How issues of sexual rights influence women and girls' coping mechanisms and decisions in displacement*

Violations of bodily integrity as well as intimate partner and gender-based violence affected displaced women and girls at all stages of migration – and their journeys were markedly shaped by those violations and risks. For instance, sexual rights challenges were a strong driver of migration. Among a sample of female asylum seekers, sexual violence was the most frequent form of assault and was experienced by nearly all refugees (Wang et al., 2019). Gang-related violence, which for women often manifested as sexual violence, as well as family and childhood abuse and intimate partner and gender-based violence, was found to be a driver of migration and risk factor for trafficking in many papers (Medecins Sans Frontieres, 2017; Pintin-Perez et al., 2018; Febres-Cordero et al., 2018; Goldenberg et al., 2018; Medecins Sans Frontieres, 2020; Acharya, 2019; Gustafsson, 2018; Rocha-Jimenez et al., 2016). Women often experienced internal displacement before crossing international borders (Medecins Sans Frontieres, 2020; Stephen, 2019). Often, women's attempts to flee perpetrators of sexual abuse while remaining in their birth country were unsuccessful, and the women faced considerable barriers to ensuring that their cases reached and remained in the courts, which were prone to corruption (Stephen, 2019).

Sexual rights challenges pervaded migration journeys as well. Paradoxically, many women used migration to flee sexual rights abuses but were then exposed to intense sexual rights risks during their displacement. One victim of sexual assault said she never would have left if she had known the journey would be so bad (Medecins Sans Frontieres, 2020). Migration strategies that were less cost intensive – for example, those that took remote routes (to avoid border patrols) or used migrant shelters (which provided sleeping quarters free of charge) – seemed particularly prone to sexual rights violations. For example, the infamous cargo train, known colloquially as *La Bestia* or The Beast, that runs from Mexico's southern border to its northern border along various routes, was heavily targeted by organized crime for migrant extortion and exploitation (Medecins Sans Frontieres, 2017). While the literature noted that women tended to avoid freighthopping and other well-known migration strategies, which were still commonly employed by men, no studies detailed how women managed alternative migration journeys

that otherwise might have reduced sexual rights risks (Medecins Sans Frontieres, 2017, 2020; Angulo-Pasel, 2018). As for accommodation en route, although many migration statistics suggested that women comprised an equal share of the migrant population, women were a minority in migrant shelters (Medecins Sans Frontieres, 2017, 2020). Accommodation type, just like transportation modality, was related to differentiated risks for female migrants. For instance, between a third and a half of migrant women in nongovernmental shelters reported having experienced sexual violations on their journeys while four percent of a sample of deportees reported past sexual violations (Medecins Sans Frontieres, 2017, 2020; Rangel et al., 2012).

Sexual rights violations produced forced immobility along the migration journey as well. On the one hand, women feared reporting violations or exploitation to police and migration officials because the women were not certain the officials were not part of crime networks or would not also take advantage of them (Goldenberg et al., 2018; Cardenas-Rodriguez and Vázquez Delgado, 2014). On the other hand, women who did report violations often waited weeks in detention centers for their case to be considered (if the case was accepted in the first place), and their inability to earn income and send money home during this time was problematic (Angulo-Pasel, 2018). Access to healthcare and other facilities while in migration or deportation centers was also limited, and while some women ultimately gained humanitarian visas and the right to stay in Mexico, others experienced deportation (Angulo-Pasel, 2018).

Transactional sex was often described as both a survival strategy and a migration strategy – both a risk and a coping mechanism. Transactional sex, or survival sex, described exchanging sex for goods, services, shelter, or protection (Medecins Sans Frontieres, 2017, 2020; Goldenberg et al., 2012; Conners et al., 2017; Angulo-Pasel, 2018). In extreme cases, sex was used to avoid extortion, apprehension, or detention, or was used in the place of bribes, and in such cases the boundary between transactional sex and forced sex was difficult to distinguish in the literature. Colloquially, the term *cuerpomático*, which plays on the words for body and ATM machine, was commonly used (Angulo-Pasel, 2018). In a sample of migrants who used illicit substances or alcohol at the Mexico-Guatemala border, nearly half of women reported exchanging sex for goods or services in the past six months (Conners et al., 2017). In another example, a trafficked woman described using sex and seduction as a way to avoid death and gain power and control over her captor (Pintin-Perez et al., 2018).

Sexual rights were affected by situations where displaced women would forgo care because they faced barriers in accessing health services. Barriers included costs, fear of deportation, danger of retaliation from perpetrators, and issues of control or violence (for example, where sex work managers or brothel keepers restricted access to healthcare facilities) (Acharya, 2010; Camarena Ojinaga et al., 2017; Goldenberg et al., 2016; Rocha-Jiménez et al., 2017, 2018; Cardenas-Rodriguez and Vázquez Delgado, 2014; Gustafsson, 2018; Angulo-Pasel, 2018; Ramirez-Lopez et al., 2012; Goldade, 2011). Many of the studies on sex work discussed access to testing and how the regulations designed to ensure regular testing for infections were problematic because they were enforced inconsistently and punitively (Goldenberg et al., 2016; Rocha-Jiménez et al., 2017, 2018). Often, sex workers were required to register their testing with police and/or carry a health card showing their testing history, but this led to privacy issues and exploitation by police (Rocha-Jiménez et al., 2017). In some cases, testing compliance was seen as providing protection against deportation while in other cases, sex workers did not comply with testing regulations out of fear of deportation (Rocha-Jiménez et al., 2017; Goldenberg et al., 2018). Testing regulations were also reported to either overlook adolescents altogether or legitimize underage girls' participation in sex work (Rocha-Jiménez et al., 2017; Goldenberg et al., 2018). In many accounts, public clinics were problematic because they were too far away (located in areas where they would be out of the public eye), clinic hours were incompatible with women's work schedules (morning openings when women would be sleeping after late work nights), providers treated women disrespectfully, or treatment was not offered free of cost though testing was (Pintin-Perez et al., 2018; Rocha-Jiménez et al., 2018). Additionally, services provided by religious organizations, charities and private practitioners were seen as more trustworthy, more private, and more respectful than public services (Rocha-Jiménez et al., 2018; Cardenas-Rodriguez and Vázquez Delgado, 2014). As such, many women used private clinics or urgent care facilities when problems arose, or waited until a return visit to their origin country, meaning that services were commonly accessed for emergency care rather than preventive care (Rocha-Jiménez et al., 2017, 2018; Pintin-Perez et al., 2018).

Occasional mention of marriage, unions and sexual partnerships arose in the literature as important to migration decisions and coping strategies. Partnership dissolution was a driver of migration, and, alternatively, migration contributed to union dissolution (Gustafsson, 2018). Having an existing relationship in a place of origin contributed to circular migration (Ojeda et al., 2012). Women often traveled with male relatives or formed temporary sexual partnerships (with smugglers or other migrants) to obtain protection from the sexual advances of other men (Medecins Sans Frontieres, 2020; Angulo-Pasel, 2018). In other research, more migrant adolescent mothers lived with partners than did non-migrant adolescent mothers (Arriaga-Romero et al., 2010). Some migrant women were encouraged into sex work or drug use by their male partners (Morris et al., 2013). Finally, there were stark contrasts in the healthcare access of migrant women compared to their non-migrant partners and children (Ramirez-Lopez et al., 2012; Goldade, 2011; Carte, 2014).

Displaced women and girls often faced stigma and discrimination. Often, it was a barrier to healthcare access and a determinant of health seeking behavior and decisions. Stigma was particularly endemic in the testing and treatment of sexually transmitted infections. As already mentioned, many sex workers felt stigmatized and poorly treated in government clinics and preferred private practitioners for less judgmental service and greater privacy even though the care was not free (Goldenberg et al., 2012; Rocha-Jiménez et al., 2018). However, stigma and discrimination were an issue for all migrants, not just sex workers. Women who suffered from sexual violence along their migration journey often cited stigma and fear of being judged as a leading reason for not seeking care (Medecins Sans Frontieres, 2017). Because of stigma, many migrants self-medicated or hesitated to seek care for possible sexually transmitted infections (Serván-Mori et al., 2013). Some internal migrants in Mexico noted that negotiating condom use was problematic for several reasons, one of which was that women who use them are stigmatized as promiscuous. Other internal migrants faced discrimination based on their indigenous identity, which limited their access to services; otherwise, it was possible for rural-to-urban internal migrants to experience improved access to health services (Camarena Ojinaga et al., 2017; Gustafsson, 2018). Finally, many migrants did not return to their origin countries when undergoing difficult experiences because they were ashamed of their deportation, sex work or drug use (Rodriguez-Montejano et al., 2015).

Cultural norms of misogyny, often cited as *machismo*, contributed to power imbalances that placed women in subordinate positions and at greater risk of sexual rights violations. In sex work for example, an article looking at tolerance zones in Mexico's southern border where sex work was permitted, described how the zone naturalized unequal social relations such as verbal harassment by males toward females (Pintin--Perez et al., 2018). Issues of gender equity arose in one study of transgender women. One woman migrated after being fired from work when her employer discovered her trans identity (she had performed at work as a male) (Zarco-Ortiz, 2018). Interestingly, the article on transgender women noted that all three migrants in the study had consciously carried out their journeys as males to reduce risk. There were also reports of women dressing and performing as men and lesbians to reduce risk (Angulo-Pasel, 2018).

3.3. Reproductive health

Reproductive health is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes" (Starrs et al., 2018). The components of reproductive health are: (1) menstruation, (2) contraception, (3) pregnancy, miscarriage, childbirth and postnatal matters, (4) abortion and post-abortion matters, (5) infertility, (6) menopause, and (7) mental and emotional health.

3.3.1. The types of reproductive health risks, challenges and needs faced by displaced women and girls

A total of 18 papers explored components of reproductive health (Acharya, 2010, 2019; Camarena Ojinaga et al., 2017; Kendall and Pelcastre, 2010; Leyva-Flores et al., 2013; Rocha-Jiménez et al., 2018; Medecins Sans Frontieres, 2020; Cardenas-Rodriguez and Vázquez Delgado, 2014; ; Wang et al., 2019; Gustafsson, 2018;Angulo-Pasel, 2018 Ramirez-Lopez et al., 2012; Arriaga-Romero et al., 2010; Goldade, 2011; Sintonen et al., 2013; Carte, 2014; dos Santos, 2015; Gamlin, 2013). All but three of these papers addressed pregnancy, miscarriage, childbirth and postnatal matters (Kendall and Pelcastre, 2010; Leyva--Flores et al., 2013; Cardenas-Rodriguez and Vázquez Delgado, 2014); seven touched on contraception (Kendall and Pelcastre, 2010; Leyva--Flores et al., 2013; Rocha-Jiménez et al., 2018; Medecins Sans Frontieres, 2020; Ramirez-Lopez et al., 2012; Arriaga-Romero et al., 2010; Goldade, 2011); seven touched on mental and emotional health (Acharya, 2010, 2019; Medecins Sans Frontieres, 2020; Wang et al., 2019; Goldade, 2011; Carte, 2014; dos Santos, 2015); two touched on abortion (Acharya, 2010; Ramirez-Lopez et al., 2012); one mentioned menstruation (Acharya, 2010); and none mentioned infertility or menopause.

In the studies, migrants faced risks and challenges related to pregnancy, childbirth and postnatal matters. Rape along migration routes resulted in pregnancies as well as miscarriages (Cardenas-Rodriguez and Vázquez Delgado, 2014; Wang et al., 2019). Migrants received much less care than non-migrants, particularly pre- and postnatal care (Ramirez-Lopez et al., 2012). Migrant adolescents also saw a higher incidence of adolescent pregnancies, even when compared against non-migrants with similar levels of poverty, educational attainment, and urbanization (Sintonen et al., 2013). A study of victims of sex trafficking found a high incidence of unwanted pregnancies, which were all terminated. Brothel keepers would administer abortion pills, or, in cases where the pregnancy was not discovered early enough, would take the woman or girl to a clinic where an abortion was carried out (Acharya, 2010). The same sex trafficking study also had the only mention of menstruation, finding a high prevalence of menstrual irregularities (Acharya, 2010). The second mention of abortion was a study that found that migrant women received no medical care after miscarriage or abortion even when they had experienced adverse symptoms such as pain and fever, whereas all non-migrants had received care in rural border communities in southern Mexico (Ramirez-Lopez et al., 2012).

Displaced women and girls also had contraceptive needs and challenges. Due to the high risk of rape, migrants often took contraceptives before starting their journey as well as en route to preemptively prevent pregnancy (Medecins Sans Frontieres, 2020). However, settled migrant adolescents had lower contraception use rates than their non-migrant peers (Arriaga-Romero et al., 2010). It is important to note than when condom use was studied, it almost exclusively was done so in the context of protection from sexually transmitted infections, not pregnancy prevention. The relatively limited coverage of contraception in the reviewed literature contrasted with its importance for displaced women. In the only study where women were invited to identify their most pressing sexual and reproductive health needs themselves (rather than speak to pre-determined research topics), they gave contraception highest priority (Rocha-Jiménez et al., 2018). In the study, sex workers described how they needed alternatives to condoms for pregnancy prevention because condoms inadequately addressed their broader contraception needs – for example in contexts of nonpaying sexual partnerships and unprotected sex (Rocha-Jiménez et al., 2018).

Issues of emotional distress and mental ill health attributable to reproductive health matters such as unwanted pregnancies, pregnancy complications, discriminatory healthcare providers and unmet need for contraception pervaded many of the reproductive health papers. There was no mention in the reviewed literature of issues of post-partum depression or post-abortion distress.

3.3.2. How issues of reproductive health influence women and girls' coping mechanisms and decisions in displacement

Many of the coping strategies and decisions displaced women and girls used to respond to reproductive health challenges impacted their migration trajectories and vice versa. However, most of the difficulties were related to their limited access to reproductive health services, which are reviewed under reproductive rights. No reviewed study examined in depth experiences of women migrating or travelling while pregnant, only the experiences of more settled migrants who faced considerable challenges in accessing healthcare. However, one brief mention of pregnancy en route indicated that pregnant women were afraid to go to hospitals because organized crime targeted migrants at those locations for trafficking and extortion (Medecins Sans Frontieres, 2020).

While motherhood is not necessarily a component of reproductive health, it is worth mentioning that several papers described how motherhood impacted women's decisions in displacement. Many women began their journey to provide financially for their children after separation from a partner, often facing difficult decisions of how to take children with them or with whom to leave their children (Gustafsson, 2018; Angulo-Pasel, 2018). Others migrated to escape violence and threats of harm to their children (Wang et al., 2019). The financial pressure to provide often drove mothers to sex work, which was described as the only well-paid work available to undocumented migrants, though sex work came with substantial risk to the women's health and wellbeing (Goldenberg et al., 2018; Rocha-Jimenez et al., 2016; Maldonado Macedo, 2020).

3.4. Reproductive rights

"Reproductive rights rest on the recognition of the human rights of all couples and individuals to decide freely and responsibly the number, spacing, and timing of their children, to have the information and means to do so, and the right to attain the highest standard of reproductive health" (Starrs et al., 2018). The components of reproductive rights are: (1) access to reproductive health services, (2) information related to reproductive health, (3) reproductive decisions that are free of discrimination, coercion, and violence, and (4) the right to privacy, confidentiality, respect and informed consent.

3.4.1. The types of reproductive rights challenges and needs faced by displaced women and girls

A total of 13 papers touched on the facet of reproductive rights, and these were studies that also had reproductive health themes (Acharya, 2010; Camarena Ojinaga et al., 2017; Leyva-Flores et al., 2013; Medecins Sans Frontieres, 2020; Cardenas-Rodriguez and Vázquez Delgado, 2014; Wang et al., 2019; Gustafsson, 2018; Ramirez-Lopez et al., 2012; Arriaga-Romero et al., 2010; Goldade, 2011; Carte, 2014; dos Santos, 2015; Gamlin, 2013). All but two of these papers addressed the component of access to reproductive health services (Cardenas-Rodriguez and Vázquez Delgado, 2014; Wang et al., 2019). In practice, it was difficult to distinguish between the component of reproductive decisions that are free of discrimination, coercion, and violence and the component of the right to privacy, confidentiality, respect and informed consent. The presence of discrimination reflects an absence of respect while the occurrence of coercion and violence reflects and absence of

informed consent. As such, all but four of the 13 reproductive rights papers included issues related to these two components (Leyva-Flores et al., 2013; Gustafsson, 2018; Ramirez-Lopez et al., 2012; Arriaga-Romero et al., 2010). One paper mentioned issues related to privacy and confidentiality (Acharya, 2010), while no papers touched on reproductive health information.

In the studies, displaced women and girls faced considerable challenges in accessing reproductive health services, particularly without being confronted by discrimination. In origin countries, gang territories often determined and restricted what health services and hospitals women accessed (Medecins Sans Frontieres, 2017). The literature noted that in Mexico, admission to emergency and obstetric services were, by law, free and open to undocumented migrants, but displaced women often had to negotiate their way into care (Goldade, 2011; Carte, 2014; dos Santos, 2015). Many healthcare providers thought migrant women presented to emergency services with fabricated reports of bleeding, falls or pains to obtain the prenatal care that they could not otherwise access without paying (Carte, 2014). Likewise, the literature noted that in Costa Rica, both prenatal and obstetric care was free and open to all women, no matter her residence status, but migrant women faced unfriendly providers (dos Santos, 2015). Providers often justified their efforts to make care access difficult for migrants to protect the country's health system from being overrun, as well as because they saw migrants as difficult, demanding and rude (dos Santos, 2015). Indeed, both subtle and overt discrimination was described in many studies, and it manifested as pervasive extra-official regulation and disrespect from providers (Medecins Sans Frontieres, 2017; Ramirez-Lopez et al., 2012; Carte, 2014). Ultimately, migrant women, often even internal migrants, received much less reproductive healthcare than non-migrants (Ramirez-Lopez et al., 2012; Arriaga-Romero et al., 2010; Gamlin, 2013).

Issues of coercion, violence, and informed consent in reproductive rights were mentioned in studies on asylum seekers and victims of sex trafficking. Victims of gang violence and control reported forced sterilization as well as proscription from using any contraception out of the belief it would promote promiscuity (Medecins Sans Frontieres, 2020; Wang et al., 2019). Decisions about preventing or terminating pregnancies were totally outside the purview of victims of sex trafficking (Acharya, 2010). Principles of privacy and confidentiality were also violated among victims of sex trafficking who were only allowed access to abortion services indirectly. That is, brothel keepers would take the woman or girl to a clinic where an abortion would be carried out, without giving the victim's name or identification or without allowing the victim to be alone with or speak to providers (Acharya, 2010).

3.4.2. How issues of reproductive rights influence women and girls' coping mechanisms and decisions in displacement

Several aspects of displacement increased women and girls' risk of reproductive health problems. Their coping strategies for managing risk also influenced their migration trajectories. Without access to public services or affordable care, many women would forgo care, especially for preventive measures and even in situations of extreme risk such as complications from induced or spontaneous abortions (Medecins Sans Frontieres, 2020; Ramirez-Lopez et al., 2012; Goldade, 2011; dos Santos, 2015). In other instances, circular migrants delayed care until a return visit to their country of origin where they accessed prenatal care and gave birth (Pintin-Perez et al., 2018; Gustafsson, 2018; Ramirez-Lopez et al., 2012; Goldade, 2011). In one representative study of rural communities at Mexico's southern border, migrants either returned to their origin country to give birth or had a midwife attend the birth (none had a hospital birth), whereas the majority of non-migrants had a hospital birth (Ramirez-Lopez et al., 2012). Because low-cost pharmacies and poorly-equipped rural health posts did not keep records or require identification, migrants, even internal migrants, used them more heavily than did non-migrants to address health needs (Ramirez-Lopez et al., 2012; Gamlin, 2013). In severe emergencies, migrants often accessed private clinics where costs were high, which produced financial burdens that had far-reaching implications (Carte, 2014).

Access to services also influenced how migrants addressed their contraceptive needs. The representative study in rural Mexico found most non-migrants used sterilization and intrauterine devices while migrants used injections because they could be obtained at pharmacies (Ramirez-Lopez et al., 2012). In Costa Rica, undocumented migrants' only access to free contraception was sterilization immediately after delivery, and while there were no reports of women feeling pressured into sterilization, migrant women reported using pregnancy to access sterilization (Goldade, 2011). In one case, pregnancy had been contraindicated by a physician for health reasons, but the woman could not afford contraception and used a pregnancy to access sterilization (Goldade, 2011).

While sexual health and rights were often discussed as drivers of migration for women and girls, reproductive rights were named as a driver of migration only by healthcare providers in Costa Rica (Goldade, 2011). The migrant women themselves asserted this was not the case. Providers believed that migrants came to take advantage of free prenatal and obstetric care or to use their children's births to acquire legal residency. However, few migrants had the time and financial resources to navigate the complicated legal process. Many women in Costa Rica routinely returned to their origin countries to access affordable or free care provided by charitable organizations, which did not exist in Costa Rica's context of widespread public healthcare coverage (Goldade, 2011).

4. Discussion

This scoping review has probed how existing literature explores issues of sexual and reproductive health and rights that affect displaced women and girls in the migration corridors between Central America and Mexico. We have sought to take a comprehensive view and have thus structured our analysis around the Guttmacher-Lancet framework of sexual and reproductive health and rights, highlighting what components are (or are not) found in the literature and how they influence the decisions and coping mechanisms of women and girls in displacement.

There is a heavy focus in the reviewed literature on the epidemiology of sexually transmitted infections (a component of sexual health) and violations of bodily integrity, sexual autonomy and gender-based violence (a component of sexual rights). Relatively less attention is given to reproductive health and rights and other aspects of sexual health and rights. Given the extreme situations of intense risk that women and girls can face in displacement, it is perhaps not surprising that there is an overemphasis on sexual behavior and sexual risk in the literature. However, the absence of a more holistic view of health and rights and the lack of consideration of issues of proactive agency and autonomy, unwittingly perpetuate unproductive narratives of victimhood and disempowerment. This has important implications for policy, where a lack of a broader understanding of migrant sexual and reproductive health and agency is likely to limit responses from governments and NGOs, as well as fail to look at approaches which place women as partners in identifying and implementing solutions. Ultimately, the positive, respectful, and empowering approach of the Guttmacher-Lancet framework contrasts sharply with the grim picture of severe

health and rights risks and violations pervading the reviewed literature, highlighting a pressing need for action.

This review adds to existing literature that explores connections between displacement and negative wellbeing and health outcomes for women (Starrs et al., 2018; Wickramage and Annunziata, 2018). Much of recent literature focuses on conflict-related displacement in Afghanistan, Yemen, Syria, South Sudan, and Colombia and identifies that forced migration exposes females to heightened risks of exploitation, sexual violence, and risky sexual behavior for (economic) survival (Freedman, 2016; Ivanova et al., 2018; Tastsoglou et al., 2021). We offer new insight into the sexual and reproductive health and rights of women and girls in Central America and Mexico, where protracted displacement is linked to (gendered) violence and poverty (Stahl, 2021).

The discussion that follows further develops the place of sexual and reproductive health and rights in the migration and health literature. We argue that the literature in this scoping review reveals that women and girls' health risks and rights violations intersect inextricably with their migration decisions and coping mechanisms in situations of constrained choice. As such, we call attention to the paradox of choice migrant women and girls face in navigating their wellbeing and autonomy. We do so with a note of caution, recognizing that it is incorrect to say women and girls in situations of extreme vulnerability and violation are making decisions, when so little is within their power, as is the case, for instance, with victims of sex trafficking. As such, we recognize there is complexity and nuance in our conceptualization, and we intend for our discussion to represent a broad continuum, encompassing, for example, survival responses, coping mechanisms and decision-making. We suggest that this highlights the importance of adopting a multisectoral approach to migrant sexual and reproductive health and rights and the critical role played by effective social protection policies in protecting women and girls from risk.

In effect, many of the sexual and reproductive health and rights challenges migrant women and girls face are both a risk and a coping mechanism simultaneously. We conceptualize this as a paradox of agency. That is, many of the decisions migrant women make are both a response to restrictions on their power or choice (often highly gendered barriers) and an exercise of the limited power and choice available to them. In other words, coping strategies to ameliorate one risk often open new risks, and strategies to ameliorate short term risks often jeopardize long term agency. For example, if women seek medical attention, they can face deportation. Again, this has important implications in the way that broader migration policies are developed and implemented to ensure women are not discouraged from seeking the care they need. In other instances, women prevent unwanted sexual advances by forming short-term sexual partnerships, though both alternatives carry risks.

In balancing risks and opportunities, women repeatedly face the paradox of agency. They face it in deciding whether to migrate, how to migrate, and in making decisions and coping with difficulties throughout the many migration stages – no matter if that migration is forced or voluntary, especially considering differences between forced and voluntary migration are often very blurred. With little knowledge, there is also limited agency, and little preparation for what lies ahead.

What is missing from the literature is an understanding of how displaced women and girls assess and manage situations of known risk versus unknown risk, of greater risk versus lesser risk, as well as trade-offs in protecting their own health and rights while advancing other migration objectives (often for the benefit of others). Women's coping strategies need to be better understood to support, with dignity and respect, their agency, autonomy, and decision-making in situations of constrained choice, as well as inform policies that promote these approaches.

The paradox of agency is particularly relevant to approaches to migrant sex work. Undocumented migrants have limited choice of employment, and sex work often offers better pay and thus greater economic empowerment than other alternatives. However, their sex work comes with a host of health risks and a fair degree of exploitation. Nevertheless, the paradox of agency is not exclusive to sex work, yet the prominence of sex work and sexually transmitted infections in the literature reflects, to some extent, a problematic emphasis on disease and behaviors in migrants, which unintentionally reinforces widespread stigma and potentially encourages regressive and harmful policies.

This paradox also highlights another important but missing inquiry, which is how sexual and reproductive health and rights in displacement are related to more positive themes of desire, bonding, closeness, and pleasure, and whether these offer space for empowered choice among women for shaping their health behaviors and outcomes despite their limited options. For example, there is mention of forming new relationships in displacement, but only in the accounts of transactional sex, with no discussion about how women perceive the relationships or how women's emotional wellbeing is affected. Furthermore, sexuality and reproduction are most often treated independently in the reviewed literature, with sexuality studies largely focusing on infections and sex work and reproduction studies generally focusing on pregnancy. Unfortunately, this mirrors cultural factors that both problematize female sexuality – unless it is associated with motherhood – and make it difficult for women to be active agents in their sexual and reproductive health and rights, particularly on terms of respect, equality, satisfaction and reciprocity in relationships and interactions (Camarena Ojinaga et al., 2017).

In another vein, what is missing are studies that provide a more representative picture, as well as more studies that allow female migrants to speak for themselves about what their health and rights priorities are. Greater visibility for less represented groups will lead to a better understanding of the nuances and complexities of gendered health inequalities, which in turn will better inform the responses that are needed to redress inequalities and respond to needs. We already noted that only one reviewed study invited female migrants to speak to their own concerns (Rocha-Jiménez et al., 2018). The women prioritized contraception, yet contraception receives no attention in the reviewed studies otherwise. Similarly, menstruation is almost entirely absent from the literature, but it seems probable that migrant women in situations of financial need or on dangerous and remote travel routes face considerable challenges in managing menstruation in a hygienic way, in privacy and with dignity.

Few studies queried the differences of adults and minors, even though there are indications that girls face distinct and intense risks to their health and rights. For example, young girls are particularly targeted for sex trafficking, know less about safe sex, and often face more dangerous and remote migration routes (because they cannot transit through Central American borders legally without accompaniment, while adult women can take advantage of free transit agreements) (Acharya, 2010; Rocha-Jimenez et al., 2016). Additionally, we reviewed no information on whether and how experiences of displacement expose young women to their sexual debut. Ultimately, adolescent pregnancy is examined but the unique sexual health needs of adolescents are otherwise overlooked. We believe the experiences of adolescent migrants and how they cope with sexual health challenges in contexts of displacement, is a fertile terrain for research.

Finally, there is a need to study how institutional responses measure up against international, regional and national guidelines regarding the

health and protection of migrants and refugees, as well as what the absence of these protections means for the broader context of violence, instability and poverty in the region. One article insightfully noted that Mexico's institutional response, which is to manage the flow of migrants rather than safeguard their rights, leaves a vacuum open to organized crime (and the complicity of some state actors) to target migrants, thereby increasing the general situation of violence and instability for all residents along migration corridors (Cardenas-Rodriguez and Vázquez Delgado, 2014).

Our study offers compelling evidence of the sexual and reproductive health and rights risks faced by female migrants in Central America, as well as the often limited and skewed focus of research in this area. However, we acknowledge a number of limitations. Due to time constraints, we did not comprehensively include gray literature, and our search strategy meant we were unable to draw on a few of the less sophisticated search engines that may have contained further Spanish literature. In addition, the timing of our study meant the searches took place before the COVID-19 pandemic hit Latin America, which severely disrupted both migration trajectories and access to care and will have presented further challenges to migrant women and girls.

5. Conclusion

This scoping review highlights the many intersecting and considerable challenges that female migrants face in realizing their sexual and reproductive health and rights in situations of displacement in the south-south migration corridor between Central America and Mexico. We have sought to re-center existing literature around the Guttmacher-Lancet framework of sexual and reproductive health and rights and our comprehensive approach has uncovered gaps in the literature as well as highlighted the critical role displacement plays in gendered health challenges.

In effect, these findings reveal that future research and policy can better identify ways to address health and rights challenges by grounding their efforts in rights-centered work. Sexual and reproductive health and rights are integral to the right to health of all, and displacement is a powerful determinant of gendered health challenges. Both policy and research should give place for migrants to speak for themselves about their needs, explore age-related risks and barriers more deeply, and consider how the failure to uphold the health and rights of migrants intensifies exposure to violations and augments broader instability. More can be done to enhance accessibility to prevention and treatment services, reduce stigma and fear, as well as ensure providers treat all women with equal dignity and respect. Finally, this scoping review calls attention to the need for understanding how women and girls exercise their agency in situations of constrained choice. Their decisions and coping strategies, which are bounded by a paradox of agency – wherein efforts to avoid one risk open the door to other risks – affect their migration experiences and broader wellbeing in profound ways.

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CRediT authorship contribution statement

Ann Garbett: Conceptualization, Data curation, Formal analysis, Investigation, Writing – original draft, Writing – review & editing. **Natalia Cintra de Oliveira Tavares:** Writing – review & editing. **Pia Riggirozzi:** Funding acquisition, Conceptualization, Writing – review & editing. **Sarah Neal:** Conceptualization, Methodology, Validation, Writing – review & editing.

Declaration of Competing Interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A

Appendix Table A1
Search terms used in PubMed and web of science.

Category	Search Terms Combined with AND
Age Group	youth OR teenager OR teen OR girl OR young female OR adolescent OR woman OR young woman OR women OR young person OR adolescence OR female OR reproductive age
Status	refugee OR migrant OR displaced OR displaced person OR foreigner OR immigrant OR internally displaced OR asylum OR protracted displacement OR displacement OR migration
SRH topics	sexual OR sexual health OR reproductive health OR early marriage OR child marriage OR sexual behavior OR sexual experience OR sexual activity OR early sexual debut OR sexual initiation OR menstruation OR menstrual hygiene OR contraception OR family planning OR pregnancy OR antenatal OR birth OR postnatal OR sexually transmitted infection OR STI OR sexual intercourse OR HIV OR violence OR sexuality education OR reproduction OR sexual well-being OR condom OR human immunodeficiency virus OR aids OR sex education OR sex OR relationship OR physical relationship OR sexual coercion OR rape OR sexual violence OR sexual abuse OR abortion OR maternal health OR fistula OR motherhood OR gender OR forced sex OR intimate partner violence OR gender based violence OR transactional sex OR sex work OR HPV OR cervical cancer OR trauma OR coerced sex OR trafficking OR unprotected sex
Outcome	need OR unmet need OR access OR knowledge OR availability OR experience OR awareness OR perception OR driver OR cope OR coping OR risks OR community OR social networks OR networks OR protection OR protecting OR services OR provision OR providers OR barriers
Countries/ regions	latin america OR central america OR south america OR argentina OR bolivia OR brazil OR chile OR colombia OR costa rica OR dominican republic OR ecuador OR el salvador OR french guiana OR guadeloupe OR guatemala OR haiti OR honduras OR martinique OR mexico OR nicaragua OR panama OR paraguay OR peru OR puerto rico OR saint barthelemy OR saint martin OR uruguay OR venezuela, NOT (europe OR EU OR european union OR united states OR USA OR US OR canada OR australia OR spain OR Portugal)

Note: The South American and Caribbean countries included in the search were identified for a separate review.

Appendix Table A2

Preferred reporting items for systematic reviews and meta-analyses extension for scoping reviews (PRISMA-ScR) checklist.

SECTION TITLE	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Title	1	Identify the report as a scoping review.	
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.	
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.	
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.	
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.	
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.	Section 2.2
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.	Section 2.2
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Appendix 1
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	Section 2.3
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.	Section 2.4
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	Section 2.1
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).	Not done
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	Sections 2.4 and 2.5
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.	Fig. 1
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Tables 2 and 3
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	Not done
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.	Table 3
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	Section 3
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.	Discussion
Limitations	20	Discuss the limitations of the scoping review process.	Discussion
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.	Conclusion
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.	At end of paper

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).

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References

Abel, G.J., 2018. Estimates of global bilateral migration flows by gender between 1960 and 2015. Int. Migr. Rev. 52 (3), 809–852. https://doi.org/10.1111/imre.12327.

Acharya, A.K., 2010. Feminization of migration and trafficking of women in Mexico. Rev. Cercet. Interv. Soc. 30, 19–38. https://www.proquest.com/scholarly-journals/feminization-migration-trafficking-women-mexico/docview/1665199946/se-2?accountid=13963 (accessed June 14, 2021).

Acharya, A.K., 2019. Prevalence of violence against indigenous women victims of human trafficking and its implications on physical injuries and disabilities in Monterrey city, Mexico. Health Care Women Int. 40, 829–846. https://doi.org/10.1080/07399332.2018.1564612.

Angulo-Pasel, C., 2018. The journey of Central American women migrants: engendering the mobile commons. Mobilities 13, 894–909. https://doi.org/10.1080/17450101.2018.1498225.
Arksey, H., O'Malley, L., 2005. Scoping studies: towards a methodological framework. Int. J. Soc. Res. Methodol. 8 https://doi.org/10.1080/1364557032000119616.
Arriaga-Romero, C., Valles-Medina, A.M., Zonana-Nacach, A., Menchaca-Díaz, R., 2010. Embarazo en adolescentes migrantes: características sociodemográficas, ginecoobstétricas y neonatales. Gac. Méd. México 146, 169–174. https://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=26757 (accessed June 14, 2021).
Barot, S., 2017. In a state of crisis: meeting the sexual and reproductive health needs of women in humanitarian situations. Guttmacher Policy Rev. 17, 24–30. https://www.guttmacher.org/sites/default/files/article_files/gpr2002417_1.pdf (accessed June 15, 2021).
Barrantes, M., Aragón, E., 2019. Hallazgos del Estudio de Línea Base Sobre Migración y Desplazamiento en la Región del SICA: informe Regional. https://kmhub.iom.int/sites/default/files/estudio_sica_-_actualizado_al_25._sept_2019_-_digital_compressed.pdf (accessed June 15, 2021).
Camarena Ojinaga, L., von Glascoe, C.A., Arellano García, E., Martínez Valdés, C., 2017. Sexual and reproductive health: perceptions of indigenous migrant women in northwestern Mexico. Health Sociol. Rev. 26, 239–253. https://doi.org/10.1080/14461242.2017.1370386.
Cardenas-Rodriguez, R., Vázquez Delgado, B.D., 2014. Recursos disponibles para la protección de mujeres migrantes en tránsito por Tamaulipas. Papeles Poblac. 20, 169–207. http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-74252014000100007&lng=es&tlng=es (accessed June 14, 2021).
Carte, L., 2014. Everyday restriction: Central American women and the state in the Mexico-Guatemala border city of Tapachula. Int. Migr. Rev. 48, 113–143. https://doi.org/10.1111/imre.12072.
Chomsky, A., 2021. Central America's Forgotten History: Revolution, Violence, and the Roots of Migration. Beacon Press, Boston.
Conners, E.E., Swanson, K., Morales-Miranda, S., Fernández Casanueva, C., Mercer, V.J., Brouwer, K.C., 2017. HIV risk behaviors and correlates of inconsistent condom use among substance using migrants at the Mexico/Guatemala border. AIDS Behav. 21, 2033–2045. https://doi.org/10.1007/s10461-017-1726-5.
dos Santos, S.L.S., 2015. Undeserving mothers? Shifting rationalities in the maternal healthcare of undocumented Nicaraguan migrants in Costa Rica. Anthropol. Med. 22, 191–201. https://doi.org/10.1080/13648470.2015.1004503.
Estrada-Tanck, D., 2017. Violencia de género y vulnerabilidad: estrategias locales para reclamar los derechos de la mujer en México. Cienc. Juríd. 6, 7–27. https://doi.org/10.15174/cj.v6i1.221.
Febres-Cordero, B., Brouwer, K.C., Rocha-Jimenez, T., Fernandez-Casanueva, C., Morales-Miranda, S., Goldenberg, S.M., 2018. Influence of peer support on HIV/STI prevention and safety amongst international migrant sex workers: a qualitative study at the Mexico-Guatemala border. PLOS ONE 13, 1–20. https://doi.org/10.1371/journal.pone.0190787.
Freedman, J., 2016. Sexual and gender-based violence against refugee women: a hidden aspect of the refugee 'crisis. Reprod. Health Matters 24 (7), 18–26.
Gamlin, J.B., 2013. Shame as a barrier to health seeking among indigenous Huichol migrant labourers: an interpretive approach of the "violence continuum" and "authoritative knowledge". Soc. Sci. Med. 97, 75–81. https://doi.org/10.1016/j.socscimed.2013.08.012.
Gandhi, A.D., Pettifor, A., Barrington, C., Marshall, S.W., Behets, F., Guardado, M.E., Farach, N., Ardón, E., Paz-Bailey, G., 2015. Migration, multiple sexual partnerships, and sexual concurrency in the Garífuna population of Honduras. AIDS Behav. 19, 1559–1570. https://doi.org/10.1007/s10461-015-1139-2.
Gandini, L., 2020. Caravanas migrantes: de respuestas institucionales diferenciadas a la reorientación de la política migratoria. Revista Interdisciplinar Da Mobilidade Humana (REMHU) 28 (60), 51–69. https://doi.org/10.1590/1980-85852503880006004.
Gil Everaert, I., 2020. Inhabiting the meanwhile: rebuilding home and restoring predictability in a space of waiting. J. Ethn. Migr. Stud. https://doi.org/10.1080/1369183X.2020.1798747.
Goldade, K., 2011. Babies and belonging: reproduction, citizenship, and undocumented nicaraguan labor migrant women in Costa Rica. Med. Anthropol. 30, 545–568. https://doi.org/10.1080/01459740.2011.577043.
Goldenberg, S.M., Strathdee, S.A., Perez-Rosales, M.D., Sued, O., 2012. Mobility and HIV in Central America and Mexico: a critical review. J. Immigr. Minority Health 14, 48–64. https://doi.org/10.1007/s10903-011-9505-2.
Goldenberg, S.M., Brouwer, K.C., Jimenez, T.R., Miranda, S.M., Mindt, M.R., 2016. Enhancing the ethical conduct of HIV research with migrant sex workers: human rights, policy, and social contextual influences. PLOS ONE 11, 1–21. https://doi.org/10.1371/journal.pone.0155048.
Goldenberg, S.M., Jimenez, T.R., Brouwer, K.C., Miranda, S.M., Silverman, J.G., 2018. Influence of indoor work environments on health, safety, and human rights among migrant sex workers at the Guatemala-Mexico Border: a call for occupational health and safety interventions. BMC Int. Health Hum. Rights 18. https://doi.org/10.1186/s12914-018-0149-3.
Gustafsson, C., 2018. "'For a better life ...'' A study on migration and health in Nicaragua'. Glob. Health Action 11, 1–14. https://doi.org/10.1080/16549716.2018.1428467.
International Organisation for Migration (IOM), n.d.. 2020. Central America, North America and the Caribbean ... Regional Strategy 2020-2024. https://publications.iom.int/books/central-america-north-america-and-caribbean-regional-strategy-2020-2024.
Ivanova, O., Rai, M., Kemigisha, E.A., 2018. Systematic review of sexual and reproductive health knowledge, experiences and access to services among refugee, migrant and displaced girls and young women in Africa. Int. J. Environ. Res. Public Health 15 (8), 1583.
Kendall, T., Pelcastre, B.E., 2010. HIV vulnerability and condom use among migrant women factory workers in Puebla, Mexico. Health Care Women Int. 31, 515–532. https://doi.org/10.1080/07399331003650267.
López Recinos, V., 2013. Desarrollo, migración y seguridad: el caso de la migración hondureña hacia Estados Unidos. Migr. Desarro. 11, 65–105. http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1870-75992013000200004&lng=es&tlng=es (accessed June 15, 2021).
Leyva-Flores, R., Quintino-Pérez, F., Figueroa-Lara, A., Cuadra, M., Smith, D., Garcia, C., 2013. Acceso a servicios de prevención de its y vih en trabajadoras sexuales en zonas fronterizas de Centroamérica. Salud Pública México 55, S31–S38. http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0036-36342013000300006&lng=es (accessed June 14, 2021).
Lopez, M.J., Mintle, R.A., Smith, S., Garcia, A., Torres, V.N., Keough, A., Salgado, H., 2015. Risk factors for intimate partner violence in a migrant farmworker community in Baja California, Mexico. J. Immigr. Minority Health 17, 1819–1825. https://doi.org/10.1007/s10903-014-9988-8.
Maldonado Macedo, J.V., 2020. Being a sex worker and migrant in times of trafficking: experiences from the Mexico (Chiapas)–Guatemala Border. Vict. Offender 15. https://doi.org/10.1080/15564886.2019.1697979.
Marchand, M.H., 2021. The caravanas de migrantes making their way north: problematising the biopolitics of mobilities in Mexico. Third World Q. 42, 141–161. https://doi.org/10.1080/01436597.2020.1824579.
Medecins Sans Frontieres, 2017. Forced to flee Central America's Northern Triangle: a neglected humanitarian crisis. https://doctorswithoutborders.org/sites/default/files/2018-08/msf_forced-to-flee-central-americas-northern-triangle_E.pdf (accessed June 14, 2021).
Medecins Sans Frontieres, 2020. No Way Out: the humanitarian crisis for migrants and asylum seekers trapped between the United States, Mexico and the Northern Triangle of Central America. https://www.doctorswithoutborders.org/sites/default/files/documents/Doctors%20Without%20Borders_No%20Way%20Out%20Report.pdf (accessed June 14, 2021).
Morris, M.D., Lemus, H., Wagner, K.D., Martinez, G., Lozada, R., Gudelia Gomez, R.M., Strathdee, S.A., 2013. Factors associated with pathways toward concurrent sex work and injection drug use among female sex workers who inject drugs in northern Mexico. Addiction 108, 161–170. https://doi.org/10.1111/j.1360-0443.2012.04016.x.
Munn, Z., Peters, M.D.J., Stern, C., Tufanaru, C., McArthur, A., Aromataris, E., 2018. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. BMC Med. Res. Methodol. 18 https://doi.org/10.1186/s12874-018-0611-x.
Ojeda, V.D., Burgos, J.L., Hiller, S.P., Lozada, R., Rangel, G., Vera, A., Artamonova, I., Magis-Rodriguez, C., 2012. Circular migration by mexican female sex workers who are injection drug users: implications for HIV in Mexican sending communities. J. Immigr. Minority Health 14, 107–115. https://doi.org/10.1007/s10903-011-9512-3.
Olmedo, C., Sampó, C., 2021. The case of migrant women from the Central American Northern Triangle: how to prevent exploitation and violence during the crossing. Rev. Bras. Polít. Int. 64 (2) https://doi.org/10.1590/0034-7329202100205.
Organización Internacional para las Migraciones (OIM), 2019. Tendencias Migratorias en Centroamérica. Norteamérica, y el Caribe., San José, Costa Rica. https://rosanjose.iom.int/site/sites/default/files/Reportes/sitrep_p11_compr.pdf (accessed June 15, 2021).
Pintin-Perez, M., Rojas Wiesner, M.L., Bhuyan, R., 2018. The symbolic violence of tolerance zones: constructing the spatial marginalization of female Central American migrant sex workers in Mexico. Womens Stud. Int. Forum 68, 75–84. https://doi.org/10.1016/j.wsif.2018.02.005.
Ramirez-Lopez, D.K., Nazar-Beutelspacher, A., Zapata-Martelo, E., Estrada-Lugo, E., Salvatierra-Izaba, B., 2012. Vulnerabilidad, derechos sexuales y reproductivos de mujeres centroamericanas residentes en dos comunidades de la zona rural de Tapachula, Chiapas, México. Papeles de Población. 18, 113–146. http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-74252012000200006&lng=es&tlng= (accessed June 14, 2021).
Rangel, M.G., Martinez-Donate, A.P., Hovell, M.F., Sipan, C.L., Zellner, J.A., Gonzalez-Fagoaga, E., Kelley, N.J., Asadi-Gonzalez, A., Amuedo-Dorantes, C., Magis-Rodriguez, C., 2012. A two-way road: rates of HIV infection and behavioral risk factors among deported Mexican labor migrants. AIDS Behav. 16, 1630–1640. https://doi.org/10.1007/s10461-012-0196-z.
Rivillas-García, J.C., Cifuentes-Avellaneda, Á., Ariza-Abril, J.S., Sánchez-Molano, M., Rivera-Montero, D., 2021. Venezuelan migrants and access to contraception in Colombia: a mixed research approach towards understanding patterns of inequality. J. Migr. Health 3. https://doi.org/10.1016/j.jmh.2020.100027.
Rocha-Jiménez, T., Brouwer, K.C., Silverman, J.G., Morales-Miranda, S., Goldenberg, S. M., 2017. Exploring the context and implementation of public health regulations governing sex work: a qualitative study with migrant sex workers in Guatemala. J. Immigr. Minority Health 19, 1235–1244. https://doi.org/10.1007/s10903-016-0399-x.
Rocha-Jiménez, T., Morales-Miranda, S., Fernández-Casanueva, C., Brouwer, K.C., Goldenberg, S.M., 2018. Stigma and unmet sexual and reproductive health needs among international migrant sex workers at the Mexico-Guatemala border. Int. J. Gynecol. Obstet. 143, 37–43. https://doi.org/10.1002/ijgo.12441.
Rocha-Jiménez, T., Morales-Miranda, S., Fernández-Casanueva, C., Brouwer, K.C., 2020. The influence of migration in substance use practices and HIV/STI–related risks of

female sex workers at a dynamic border crossing. J. Ethn. Subst. Abuse 19. https://doi.org/10.1080/15332640.2018.1556763.
Rocha-Jimenez, T., Brouwer, K.C., Silverman, J.G., Morales-Miranda Goldenberg, S. M., S., 2016. Migration, violence, and safety among migrant sex workers: a qualitative study in two Guatemalan communities. Cult. Heath Sex. 18, 965–979. https://doi.org/10.1080/13691058.2015.1122229.
Rodriguez-Montejano, S., Ojeda, V.D., Valles-Medina, A.M., Vargas-Ojeda, A., 2015. Acculturative trajectories descriptions and implications for health among 12 Mexican deported women who inject drugs. Salud Ment. 38, 409–416. https://doi.org/10.17711/SM.0185-3325.2015.055.
Serván-Mori, E., Leyva-Flores, R., Heredia-Pi, I., García-Cerde, R., 2013. Infecciones de transmisión sexual: Perfil de atención en zonas fronterizas de Centroamérica (2007-2010). Salud Pública México 55, S47–S57. http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0036-36342013000300008&lng=es (accessed June 14, 2021).
Servin, A., Rocha-Jimenez, T., Munoz, R., Brouwer, K., 2018. Labor exploitation and sexual violence in Latin America: the experience of Central American migrant women. Eur. J. Public Health 28 (suppl_1), 72. https://doi.org/10.1093/eurpub/cky047.156.
Sintonen, H., Bonilla-Carrión, R.E., Ashorn, P., 2013. Nicaraguan migration and the prevalence of adolescent childbearing in Costa Rica. J. Immigr. Minority Health 15, 111–118. https://doi.org/10.1007/s10903-011-9570-6.
Stahl, D., 2021. Confronting US imperialism with international law. Central America and the arms trade of the inter-war period. J. Mod. Eur. Hist. 19(4), 489–509. https://doi.org/10.1177/16118944211051861.
Starrs, A.M., Ezeh, A.C., Barker, G., Basu, A., Bertrand, J.T., Blum, R., Coll-Seck, A.M., Grover, A., Laski, L., Roa, M., Sathar, Z.A., Say, L., Serour, G.I., Singh, S., Stenberg, K., Temmerman, M., Biddlecom, A., Popinchalk, A., Summers, C., Ashford, L.S., 2018. Accelerate progress—sexual and reproductive health and rights for all: report of the Guttmacher–Lancet Commission. Lancet 391. https://doi.org/10.1016/S0140-6736(18)30293-9.
Stephen, L., 2019. Fleeing rural violence: mam women seeking gendered justice in Guatemala and the U.S. J. Peasant Stud. 46, 229–257. https://doi.org/10.1080/03066150.2018.1534836.
Tastsoglou, E., Petrinioti, X., Karagiannopoulou, C., 2021. The gender-based violence and precarity nexus: asylum-seeking women in the Eastern Mediterranean. Front. Hum. Dyn. 3, 660–682.
Temin, M., Montgomery, M.R., Engebretsen, S., Barker, K.M., 2013. Girls on the Move: Adolescent Girls & Migration in the Developing World. https://www.popcouncil.org/uploads/pdfs/2013PGY_GirlsOnTheMove.pdf (accessed June 15, 2021).
Tricco, A.C., Lillie, E., Zarin, W., O'Brien, K.K., Colquhoun, H., Levac, D., Moher, D., Peters, M.D.J., Horsley, T., Weeks, L., Hempel, S., Akl, E.A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M.G., Garritty, C., Lewin, S., Godfrey, C.M., Macdonald, M.T., Langlois, E.v., Soares-Weiser, K., Moriarty, J., Clifford, T., Tunçalp, Ö., Straus, S.E., 2018. PRISMA Extension for Scoping Reviews (PRISMA-ScR): checklist and explanation. Ann. Intern. Med. 169 https://doi.org/10.7326/M18-0850.
United Nations Department of Economic and Social Affairs, Population Division (2020). International Migrant Stock 2020. https://www.un.org/development/desa/pd/content/international-migrant-stock.
United Nations High Commissioner for Refugees (UNHCR), 2019. Expanding Operations in Central America, Geneva, 2019. https://reporting.unhcr.org/sites/default/files/2019%20Expanding%20Operations%20in%20Central%20America%20%28February%202019%29.pdf (accessed June 15, 2021).
United Nations Refugee Agency UNHCR (2015). Women on the Run: First-Hand Accounts of Refugees Fleeing El Salvador, Guatemala, Honduras, and Mexico. https://www.unhcr.org/publications/operations/5630f24c6/women-run.html.
United Nations Refugee Agency UNHCR (2022). Refugee Data Finder. www.unhcr.org/refugee-statistics/download/.
United States Border Patrol, 2011. Juvenile and Adult Apprehensions - Fiscal Year 2011 (Oct. 1st through Sept. 30th). https://www.cbp.gov/sites/default/files/documents/U.S.%20Border%20Patrol%20Fiscal%20Year%202011%20Sector%20Profile.pdf (accessed June 15, 2021).
United States Border Patrol, 2019. Juvenile (0-17 Years Old) and Adult Apprehensions - Fiscal Year 2019 (Oct. 1st Through Sept. 30th). https://www.cbp.gov/sites/default/files/assets/documents/2020-Jan/U.S.%20Border%20Patrol%20Fiscal%20Year%202019%20Sector%20Profile_0.pdf (accessed June 15, 2021).
Valdez, E.S., Valdez, L.A., Sabo, S., 2015. Structural vulnerability among migrating women and children fleeing Central America and Mexico: the public health impact of "Humanitarian Parole. Front. Public Health 3, 1–8. https://doi.org/10.3389/fpubh.2015.00163.
Wang, E., D'Andrea, M., Baranowski, K., Singer, E., 2019. Experiences of gender-based violence in women asylum seekers from El Salvador, Honduras, and Guatemala: a retrospective, qualitative study. Lancet Glob. Health 7. https://doi.org/10.1016/S2214-109X(19)30129-9. S44–S44.
Wickramage, K., Annunziata, G., 2018. Advancing health in migration governance, and migration in health governance. Lancet 391 (10140), 2642–2692.
Zarco-Ortiz, E.A., 2018. Mujeres migrantes transgénero centroamericanas en Tapachula, Chiapas. Apuntes sobre transfrontera y territorialidad. Rev. Eleuthera 19, 95–114. https://doi.org/10.17151/eleu.2018.19.6.