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Barriers and facilitators for the sexual and reproductive health and rights of displaced Venezuelan adolescent girls in Brazil

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ABSTRACT

Background: The crisis in Venezuela has forced almost eight million people to flee to mainly neighbouring countries, including Brazil. Half of the displaced Venezuelans are women and girls, with adolescent girls facing distinctive challenges to their sexual and reproductive health during displacement and settlement. The aim of this study is to understand the barriers and facilitators for the sexual and reproductive health of adolescent Venezuelan girls residing in Brazil.

Methods: The study used qualitative methods, including semi-structured interviews with 19 Venezuelan migrant adolescent girls conducted in Boa Vista and Manaus. We analysed transcripts using thematic analysis, and mapped findings to a theoretical framework based on the Bronfenbrenner Socio-ecological Model, which we adapted to explore how intersectional vulnerabilities at the individual level interact with contextual factors creating barriers and facilitators for health and rights of migrant adolescent girls.

Results: Venezuelan adolescent migrants in Brazil face practical and structural barriers in realising their sexual and reproductive health and rights in four areas: menstruation; family planning, contraception and sexually transmitted infection; prenatal, childbirth and postnatal care; and preventing gender-based violence. The reported barriers were lack of knowledge around sexual and reproductive health rights, exposure to violence and lack of access to age-appropriate healthcare services. Mitigating factors included education (both in the family setting and at school); prevention activities undertaken by health services; care provision from non-governmental organisations and international agencies; and best practices in local health services.

Conclusions: Host states must take action to enhance the right to sexual and reproductive health for adolescent migrants to allow them to make autonomous, independent and informed choices. A socioecological perspective on sexual and reproductive health and rights can help formulate intersectional policies that interconnect different levels of adolescent migrants' experience.

1. Introduction

Since 2014, almost 8 million Venezuelans have fled their country due to political and economic collapse, the rapid deterioration of living conditions, food shortage and lack of access to medical treatment and basic care (Regional Inter-agency Coordination Platform (R4V) 2023). This is the largest crisis leading to forced displacement in the history of Latin America, and it is estimated that a further 1.4 million will leave the country by 2025 (International Monetary Fund (IMF) 2022). The majority of the Venezuelan displaced population crossed to neighbouring countries. Between 2017 and 2023, Brazil received over 500,000 Venezuelan migrants: half of the displaced population were women and girls (Regional Inter-agency Coordination Platform (R4V) 2023).

Migrant women, especially forced migrants, are particularly susceptible to health challenges, especially sexual and reproductive health (SRH), something even more salient to displaced adolescent women (Starrs et al., 2018; Mutea et al., 2020; Meherali et al., 2021). Studies show the risks that women and girls face on the move, including

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trafficking, labour exploitation, premature or forced marriage, unplanned pregnancy, gender-based violence, such as sexual abuse and rape (Starrs et al., 2018; Mutea et al., 2020). For many women and girls, migration is a means by which they flee such situations. Still, paradoxically, the conditions surrounding displacement may increase inequalities and expose migrants to greater risks and ill-health (Starrs et al., 2018).

Sexual and reproductive health and rights (SRHR) are essential rights, and integral to advancing the global objectives of equality and inclusive development. Yet, as acknowledged by the Guttmacher-Lancet Commission, adolescent girls, LGBTQI persons, displaced persons and refugees are priority groups, as they are routinely neglected in terms of access to SRHR (Starrs et al., 2018).

This study identifies the barriers and facilitators affecting the attainment of SRHR for adolescent Venezuelan girls living in Brazil. Our focus is on adolescent migrants, a significantly neglected demographic in migration research, particularly in the context of South-South migration (Garbett et al., 2023). A small number of studies conducted in Chile and Brazil highlighted fear, judgement, discrimination, lack of knowledge about local health systems, legal status, mistreatment by professionals as significant barriers to the access and use of SRHR services (Obach et al., 2022; Obach et al., 2020; Soeiro et al., 2021; Soeiro et al., 2022). We expands this literature and explore how the intersection of gender, age, and forced migration impacts the experiences of Venezuelan migrant adolescent girls regarding their SRHR. Our findings are mapped to a theoretical framework based on the Bronfenbrenner Socioecological Model to understand how factors at different levels impact and interact to increase or reduce vulnerability (Bronfenbrenner, 1979).

2. Methodology

2.1. Study design and ethical procedures

This qualitative research study involved intensive fieldwork conducted in Boa Vista and Manaus, cities hosting the largest numbers of Venezuelan migrants, from May to September 2021. All research protocols were approved in accordance with national ethical principles for research by Human and Social Sciences in Brazil and the Economic and Social Research Council in the United Kingdom. All participants received information about the research and signed a consent form. For minors under 18, their legal guardian signed a Free and Informed Assent Form.

2.2. Participants

The adolescent girls in this study were a sub-population ($n = 19$) taken from a wider sample of migrant Venezuelan women ($n = 172$) involved in the overall project. The criteria for inclusion were interviewees aged 14 to 19 years. While the World Health Organisation (WHO) defines adolescents as individuals aged between 10 and 19 years old, this study specifically focused on the age range 14 to 19, consistent with the Guttmacher-Lancet Commission's definition of adolescents of reproductive age (Starrs et al., 2018).

The research sites included settlements, spontaneous occupations, and official shelters accommodating Venezuelan women and girls, as well as accommodation for overnight stays for homeless migrants in Boa Vista and Manaus. Access to interviewees was facilitated by prior research conducted by Brazilian co-authors in collaboration with a migrant volunteer who worked directly with women in shelters and served as primary liaison for all interviewees. We recruited participants through connections in shelters, local co-investigators, practitioners, chain-referral methods, and snowball sampling.

The sample was chosen seeking to include as much diversity as possible, considering the following characteristics: race/ethnicity, year of schooling, marital status, socioeconomic and housing situation and method of arrival in Brazil. Other personal circumstances were also considered, such as pregnancy status, having young children and having migrated accompanied or alone. The sample size for this subgroup is small, based on pragmatic factors but produced a large body of rich, detailed data which provides an initial exploration of experiences of an unresearched vulnerable group and important exploration of relevant barriers that affect SRHR of displaced teenage girls. It also suggests pathways for further research on adolescent migrants' specific SRHR experiences. While the sampling was pragmatic, no further themes were merging in the final interviews, suggesting that theoretical saturation had been reached (Tight, 2023; Sebele-Mpofu, 2020).

2.3. Procedures

Data was collected using structured questionnaires and semi-structured interviews. The questionnaire gathered sociodemographic and sociocultural data. The semi-structured interview was based on a script containing questions about migratory experiences, expectations and challenges faced during the trip and upon arrival in Brazil; health needs with an emphasis on SRHR and experiences in seeking health and protection services during the different phases of the displacement process (origin, transit and arrival). The interviews were carried out in Spanish by interviewers with experience in qualitative methods and were recorded, transcribed, reviewed and analysed by all co-authors. Only the excerpts used in this article were translated into English. As data collection began during the Covid-19 pandemic, face-to-face interviews were not possible so were carried out over the phone or through safe web tools (Microsoft Teams). Names of interviewees have been changed to preserve confidentiality.

2.4. Analysis

The research team followed a two-stage to establish contextual modality: pre-analysis; identification and coding; analysis, inference and interpretation, using N*Vivo12 Qualitative Data Analysis* software (Bardin, 2015). A hybrid inductive and deductive approach was taken in analysing the data. After initial familiarisation with the data, we developed a semantic thematic analysis stage involving open coding of manuscripts. The coding process allowed the identification of themes which were tested and further developed and refined.

A second deductive phase of analysis involved mapping the emerging themes to a theoretical framework to understand the levels at which both barriers and facilitating factors occurred. We developed an *a priori* framework that combines the concept of SRHR developed by the Guttmacher-Lancet Commission (Starrs et al., 2018), intersectional characteristics (Crenshaw, 1989) and Bronfenbrenner's Socio-Ecological Model (Bronfenbrenner, 1979) to explain individual and intersectional aspects in interaction with context such as family, school, local socioeconomic and health services and related macro-level factors affect adolescent girls' sexual and reproductive needs and rights.

The assumption is that SRHR of migrant adolescent girls are grounded within community and society and in socio-economic and normative realities that in turn enhance or inhibit their experience of health and access to health care and rights. Fig. 1 shows the key environments, by level, of the adapted socioecological model.

Characteristics of the participating adolescents were considered at the individual level and the mother-child dyad where an adolescent was pregnant. At the core of the model are individual factors of migrants such as age, gender, sexual orientation, race and ethnicity, language, immigration status, and culture, and access to information have a significant impact on health-related vulnerabilities and needs, and the exercise of SRHR. The microsystem level identifies characteristics related to family, school, overnight sleeping spaces and shelters. These factors can act as SRHR stressors affecting experiences of settling in society and engaging in social relationships. The mesosystem included characteristics related to institutions and services which provided care for the adolescents: Basic Health Units (UBS as per acronym in

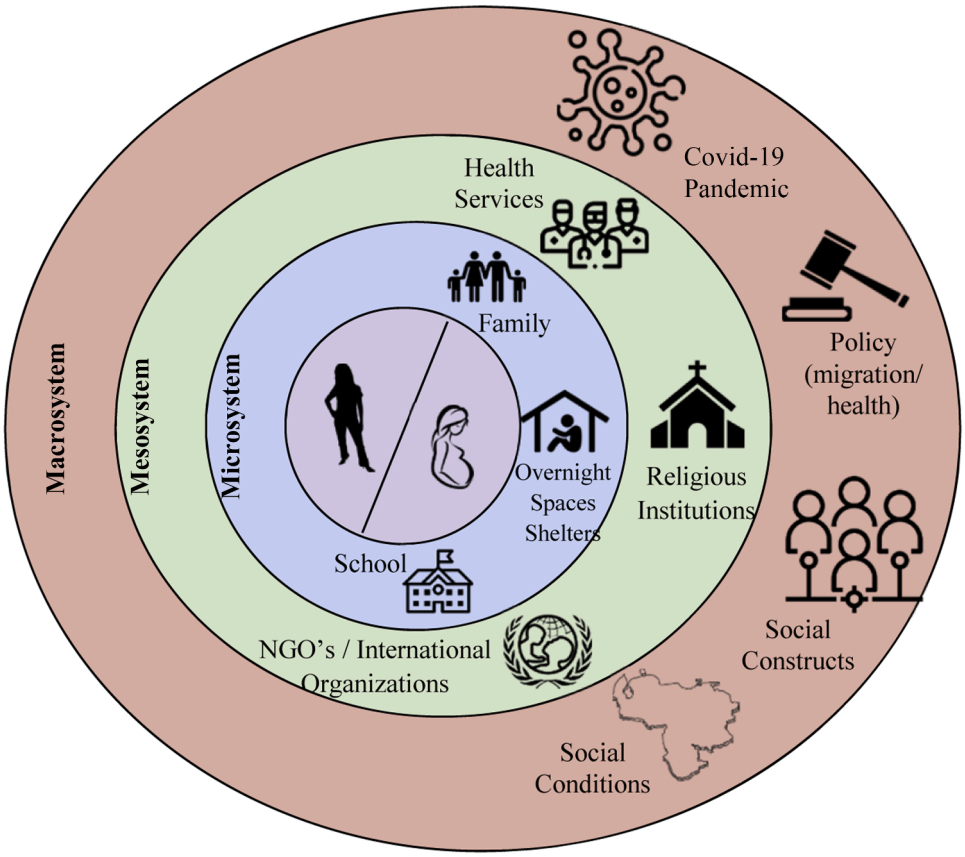

Fig. 1. Key Environments of the Socioecological Model of migrant adolescent girls (adapted from Bronfenbrenner (Bronfenbrenner, 1979)).

Portuguese) and Universal Health System (SUS as per acronym in Portuguese), Maternity Hospitals, religious institutions, non-governmental organisations (NGOs) and international organisations.

At the macro level, factors that affect SRHR refer to the normative policy structure to include the commitments to health, and underpinning social norms that may affect access and enjoyment of health and rights, and in the specific context of this investigation, the Covid-19 pandemic. The health of migrants and refugees may be further affected by the political economy and social conditions in which they transit and settle. They may experience poverty, food insecurity, limited access to safe drinking-water and sanitation, and limited opportunities for education and employment, further exacerbating health needs. All these levels interact with one another and help explain migrants' experiences navigating health services while in transit and upon arrival to a country of abode. Our theoretical framework advances academic inquiry and helps identify barriers impacting displaced girls, recognising them both as agents and subjects of rights. This study is also significant as it can inform policies aimed at fostering more effective and inclusive health system governance.

3. Results

3.1. Description of sample

Of the 19 adolescent participants in the study, 17 declared themselves cisgender women and two transgender women, and Manaus (n = 15) and Boa Vista (n = 4) as their cities of residence. The majority of adolescents declared themselves to be mixed race and with a family income of up to one minimum wage. Schooling level was low, with only four participants having finished High School, and three having received no schooling or not finished Elementary School (Table1). Four were pregnant and four had children, for two of them it was the second child. Among the mothers, two gave birth in Brazil, one gave birth in Venezuela, and another brought a child from Venezuela and had another in Brazil.

3.2. Barriers and facilitators for the SRHR of migrant adolescent girls

Four themes related to SRHR were reported as central to their concerns: (i) menstrual health; (ii) family planning, contraceptive method and sexually transmitted infections (STIs); (iii) prenatal, childbirth and postpartum care; and (iv) prevention of gender-based violence. As most interviewees were cisgender teenagers, the results predominantly reflect the experiences of these teenagers. However, transgender adolescents although fewer in number, experience particular challenges based on gender identity as addressed in categories ii and iv.

3.2.1. Menstrual health

During their journey to Brazil, adolescents faced many vulnerable situations, including menstrual poverty. One participant reported using the same sanitary pad for several days while travelling along irregular routes.

> *"I couldn't leave and change, so I was in the same state for two days. I couldn't clean myself – I felt disgusted with myself and my body" (MAAD2)*

Yet, once sheltered hygienic conditions of the bathrooms and the difficulty in accessing sanitary pads in adequate quantities and sizes also affected menstrual health.

> *"I got an infection, everything there was filthy and unhygienic. My daughter got a rash too" (BVAD49)*

While in cases provisions in shelters mainly by international organisations and religious institutions, mitigated issues of personal hygiene,

Table 1
Participant sociodemographic and sociocultural characteristics. Brazil, 2021.

Participant	Age	Ethnicity	Level of Schooling	Household Income	Children	N °Children	People you live with	Where you live
MAAD1	15	Mixed	Didn't Finish High School	Up to 1 minimum wage	Yes	2	Friends and acquaintances	Bus Station Hostel
MAAD2	15	Mixed	Didn't Finish High School	Up to 1 minimum wage	No	N/A	Mother and Siblings	Rented house
MAAD3	14	Mixed	Didn't Finish High School	Up to 1 minimum wage	No	N/A	Mother and Siblings	Rented house
MAAD4	15	White	Didn't Finish High School	Up to 1 minimum wage	No	N/A	Father and Siblings	Rented house
MAAD5	17	Mixed	Finished Elementary School	Up to 1 minimum wage	Yes	1	Partner and sister-in-law	Rented house
MAAD6	17	Asian	Finished High School	Up to 1 minimum wage	No	N/A	Mother and Siblings	Rented house
MAAD7	15	White	Didn't Finish High School	Up to 1 minimum wage	No	N/A	Father and Siblings	Rented house
MAAD8	19	White	None	Up to 1 minimum wage	No	N/A	Mother, brother and niece	Rented house
MAAD9	15	Mixed	Didn't Finish High School	Up to 1 minimum wage	No	N/A	Mother, Siblings, Friend and Their Children	Other
MAAD10	17	Mixed	Finished High School	Up to 1 minimum wage	No	N/A	Mother and Siblings	Rented house
MAAD11	17	White	Finished High School	No Income	Yes	1	Partner	Bus Station Hostel
MAAD12	16	White	Didn't Finish High School	Up to 1 minimum wage	No	N/A	Cousins	Bus Station Hostel
MAAD13	16	Mixed	Didn't Finish High School	Up to 1 minimum wage	No	N/A	Alone	Rented house
MAADT1	19	Mixed	Finished High School	No income	No	N/A	Friend	Refuge
MAADT2	19	Mixed	Didn't Finish High School	No income	No	N/A	Friend	Refuge
BVAD2	17	Don't know	Didn't finish elementary school	No response	No	N/A	Brother	Refuge
BVAD47	19	Mixed	Didn't Finish High School	No income	Yes	1	Children	Bus Station Hostel
BVAD48	14	White	Didn't finish elementary school	No income	Yes	1	Mother, sisters and child	Refuge
BVAD49	19	Mixed	Didn't Finish High School	Up to 1 minimum wage	Yes	2	Children	Refuge

Source: elaborated by authors.
MAADT1 and MAADT2 correspond to adolescents who identify as transgender.

there was still very little information provided for enhancing menstrual health or even understanding of the menstrual cycle and hormonal changes. As one migrant put it,

> *"I would like to know, what is this process like when a woman's menstruation is irregular? How to control that type of period? Sometimes I catch up and suddenly the next month comes another day" (MAAD7)*

3.2.2. Family planning, contraceptive methods and STIs

Family planning helps to enable people, especially adolescents, to develop autonomy related to their reproductive health, including the prevention of STIs and the appropriate use of contraceptive methods (Starrs et al., 2018). Lack of access to information about contraceptive methods and STI prevention were commonly noticed by interviewees, and so the barriers to accessing information and family planning methods:

> *"I didn't try (look for information) because I wasn't having sexual relations at the time. Then I got pregnant after my first time" (MAAD9)*

Fear and shame, as well as resistance associated with religious or social norms, were also identified as obstacles to practising safe sex.

> *"Many teenagers are afraid of this. When you go somewhere to ask for contraceptives or things like that, you feel fear or shame" (MAAD4)*

> *"I don't think of taking contraceptive pills, because God doesn't accept those things" (MAAD5)*

Within the family environment, it was commonly reported that parents do not usually discuss SRHR. At school, when the topic is discussed, the information is given superficially.

> *"Because in my case, my parents are a little strict and in fact this topic has never come up*" (MAAD8)

> *"It was explained [at school in Venezuela], the explanation was fine, but not completely, only about sexuality, illnesses, syphilis and gonorrhoea*" (MAAD14)

For other adolescents, however, the family played an important part in providing guidance:

> *"My mother taught about it and my grandmother taught us a lot about it too"* (MAAD2)

Participants identified positively some promotion and prevention actions led at health centres (UBS) and by humanitarian organisations.

> *"There are signs that say it is important to use condoms when you don't know the person. There are even condoms in the UBS" (MAAD8)*

> "Yes, *it was easy. There were many organisations that helped. They didn't just have projects to tell us about protection, they also helped with contraceptive methods" (MAADT1)*

3.2.3. Prenatal, childbirth and postpartum care

Around a third of the participants experienced pregnancy and childbirth in Brazil, mostly in situations of socioeconomic difficulties, affecting care for themselves and their children. Interviewees also reported difficult experiences related to precarious conditions in the shelters. Yet, their network of support, mainly from their mothers,

during pregnancy was identified as a major facilitator despite absence of partner.

"We arrived at the bus station; I had a big tummy already, but I wouldn't eat any of the food there, I lost too much weight, I lost 6 kgs while pregnant, my baby was losing weight" (BVAD49)

"During my pregnancy, I felt alone because my daughter's father wasn't with me. And even though I had support from my mother, it wasn't enough for me" (BVAD48)

While the universal health system provides care during pregnancy, childbirth and postpartum, some participants cited travel costs and lack of documentation as important barriers, mentioning in particular the *Cadastro de Pessoas Físicas* (CPF) which in Brazil is a crucial personal identification document needed for accessing various services, including healthcare.

"The service was very good. It's like I am paying for a clinic in Venezuela, that's how I'd be seen to" (BVAD47)

"They were inserting the device [IUD] in the hospital, I said that I wanted to put it in myself. They asked to see my CPF, but because I didn't have it, they didn't put it in" (BVAD48)

Barriers associated with discrimination and language were also identified, mitigated in cases by the presence of bilingual professionals.

"They asked if I was Venezuelan – and I told them I was – and the man turned his back on me and shut the door" (MAAD12)

"They sent me to take a series of test and seeing as I don't understand Portuguese, He happened to be Cuban [doctor], he did me a favour and explained it to me" (MAAD12)

Lack of medicines at UBSs, and difficulties in getting an ultrasound scan stood out as barriers to the provision of comprehensive antenatal care, whilst the provision of a booklet for pregnant women, the availability of non-specialist examinations, follow-up and psychological support were identified as facilitators. Sufficient care and the presence of companions and family members were identified as facilitators during childbirth. The lack of advice about care and a lack of support from the health team were stated as barriers during the postpartum period. Facilitators such as providing food, vaccines and carrying out preventive exams were essential to guaranteeing the health of the mother and child.

"The lady from an international organisation bought me the ointment and a gentleman gave me the money which I bought the antibiotic with. The only thing I'm missing is vitamin C and that's the only thing I can't get at the UBS, and I can't get help" (MAAD12)

"I gave birth in the maternity ward. They looked after me well, I had enough diapers, the food was good'' (BVAD49)

3.2.4. Preventing gender-based violence

The majority of adolescents interviewed reported exposure to risks of violence on the migratory route, especially when travelling along clandestine routes or "*trochas*". Situations involving heightened vulnerability and sexual assault were frequent. They also reported that they felt stereotyped by Brazilians, given that they were minors and migrants, which highlighted certain structural aspects of society such as sexism.

"Traveling along the trocha on your own is very dangerous and many cases of rape have been seen - sadly women have been raped" (MAAD7)

"One comes along, and they just think that because she is alone, they think, how do I explain, that we are going to give in easily. They want to take advantage of us, teenagers, because an older woman can't, because they know more than we do" (MAAD14)

Some adolescents reported that lack of privacy and insecurity in shelters was a barrier and that having separate areas for men and women contributed to a sense of safety.

"*Because it's all like one tent, nobody has what could be called a room and there's no privacy here*" (MAAD1)

Migrants reported exposure to different violent situations: intra-family, interpersonal and institutional, manifesting in different ways, including sexual, physical, psychological, and economic violence. In transgender adolescents, situations of discrimination and violence were particularly noted due to their identity.

"*He [husband] only hits me when he's really mad because he's impulsive"* (MAAD5)

"*I was sexually abused, by an uncle when I was 16. Regrettably, he had HIV" (MAADT2)*

"I've had a lot of prejudiced discrimination. And even violence, not exactly at the bus station, but as we were leaving, we were physically attacked by people, some of them were men who lived there too. We just didn't want to sleep there anymore, and it pushed us on to the streets" (MAADT1)

3.3. Mapping of themes to the Bronfenbrenner socioecological framework

When reviewed against the adapted Bronfenbrenner's framework, we see that both the barriers and facilitating factors for SRHR are located within and between different domains, and that manifest as such because of intersectional characteristics. Termed by Crenshaw (Crenshaw, 1989), intersectionality recognises that individuals can possess multiple social characteristics such as race, gender, class, and age that interact and influence their experiences and opportunities in society. It goes beyond examining these characteristics in isolation and emphasising their intersection, leading to complex forms of oppression, discrimination, and disadvantage, that in turn constitute barriers to SRHR (Table 2).

Barriers related to issues of menstruation are partially located within the individual domain due to lack of information and knowledge, but also within the macro and micro levels due to menstrual poverty experienced during displacement and poor hygiene facilities. Religious institutions and shelters were important facilitating factors at the meso level in providing supplies. Again, regarding family planning, contraceptive methods and STIs, many of the barriers are related to lack of knowledge and information, located within the individual domain with facilitating factors at individual as well as the micro (information from family about SRHR issues) and meso level from NGOs and religious organisations to provide information and contraceptive services. Most issues related of antenatal, intrapartum and postnatal care are located within the micro and Meso domains, with a focus on family support and services provided by NGOs and health services. The theme of prevention of gender-based violence extends across the microenvironment, with a focus on intrafamily violence and safety within hostels and macro-environment, which emphasizes the specific travel risks faced by migrants as well as underlying pervasive gender norms and violence in both their country of origin and destination.

In this study, situations of discrimination in access to health services were reported related to the fact of having foreign nationality in interaction with the lack of documents. Age, in interaction with foreign nationality, was also an aspect to be considered, as some of them mentioned feeling more exposed to harassment situations because they were teenagers and migrants. The reports of pregnant teenagers or teenagers with children and transgender teenagers indicate that they were exposed to various forms of violence (intra-family, interpersonal and institutional), both in their country of origin and after arriving in Brazil. It is also noteworthy that gender identity and teenage pregnancy are intersectional factors that contribute to increasing difficulties related to access to SRHR.

Table 2
Socioecological Model divided by themes related to the SRHR of migrant adolescent girls.

LEVEL	BARRIER	LEVEL	FACILITATOR
Topic 1. Menstrual health			
Ind	Lack of information about irregular cycles and characteristics of different menstrual hygiene items in Brazil.	Micro and Meso	P&P actions taken by shelters and religious institutions (providing hygiene and absorbent items).
Macro	Menstrual (period) poverty experienced during displacement.		
Micro	Living conditions (unhygienic toilet facilities in overnight spaces and shelters)		
Topic 2. Family Planning, Contraceptive Methods and STIs			
Ind	Unfamiliarity with use of contraceptive methods	Ind	Desire to access information about family planning, contraceptive methods and STIs
Ind	Personal, religious beliefs, fear and shame in seeking information or services about SRHR.	Ind	Self-care (use of family planning methods and condoms)
Micro	Lack of SRHR education in the family environment and in schools and shelters	Micro	SRHR education in some families, mainly carried out by women in the family.
		Meso	P&P actions undertaken by NGOs, religious institutions and international organisations within the shelters (providing contraceptives and holding lectures)
Topic 3. Prenatal, childbirth and postpartum care			
Ind	Financial difficulties in providing adequate food and purchasing diapers and other items for children		
Micro	Living conditions (unhygienic toilet facilities in overnight spaces and shelters)		
Micro	Lack of social support from a partner during prenatal, childbirth and postpartum care.	Micro	Mothers to be receiving social support in relation to pregnancy and seeking care while pregnant.
Meso	**Lack of *de facto* Universal Access to healthcare** (Documentation and travel costs)	Meso and Macro	**Universal Access *de jure*** (public policies that allow universal access, including access for migrants)
Meso	**(In)Equity** (Discrimination, language, lack of prioritisation, failure to follow good care practices)	Meso	**Equity** (bilingual professionals and equal treatment)
Meso	Lack of Comprehensive Care (lack of prioritisation, failure to follow good care practices, lack of medications and tests)	Meso	Comprehensive care (good practices, provision of the pregnant woman's card, examinations, psychological support, presence of a companion, vaccines)
Topic 5. Prevention of Gender-Based Violence			
Macro	Travel via irregular routes (risk of sexual violence and violent robbery)		
Macro	Sexism at the root of harassment faced by adolescents in Brazil (teenagers objectified and seen as vulnerable)		
Micro	Living conditions in overnight space and shelters (communal bathrooms and lack of privacy)	Micro	Living conditions in overnight space and shelters (gender-specific areas/ family areas)
Micro	Violence in overnight space and shelters		
Micro	Intra-family Violence (sexual, physical, and psychological) in country of origin and destination		

Source: elaborated by authors.
Ind: Indivídual.
Micro: Microsystem.
Meso: Mesosystem.
Macro: Macrosystem.
P&P: Promotion & Prevention.

4. Discussion

4.1. Overview of findings and the value of a socio-ecological model

Our findings suggest that adolescent migrants from Venezuela experience barriers to realising their SRHR in four specific areas: menstruation, family planning, contraception and STIs, prenatal, childbirth and postnatal care, and preventing gender-based violence. While migrant women as a group face discrimination and stigma, our research highlights how specific characteristics such as age, poverty, ethnicity and caring responsibilities intersect with the inherent gendered vulnerabilities associated with migration, particularly adolescent migrants. We suggest applying an intersectional lens to elucidate how overlapping individual level characteristics interact with wider societal and institutional factors. In our approach, we identify complex patterns of vulnerability and resilience among migrant women and girls, and how individual characteristics impact on their interaction with structural and societal risks and barriers to health and healthcare.

Barriers were underpinned by broader factors such as lack of knowledge around SRHR, exposure to violence and lack of access to age-appropriate healthcare services. Mitigating factors include education (both in the family setting and at school); prevention activities undertaken by health services; care provision from NGOs and international agencies; and best practices in local health services (Fig. 2).

A socio-ecological approach allows for a comprehensive understanding of migrant SRHR that goes beyond individual behaviours and recognises that health outcomes are influenced by multiple levels of factors, including individual, interpersonal, community, and societal levels. It acknowledges the interconnectedness of individuals with their social and physical environments, and how the migrant experience often changes due to social networks, and access to resources, and is dependent on exposure to new cultural norms and health systems, all of which impact their SRHR.

A central consideration in addressing the experience of migrant adolescents in relation to their SRHR is the fact that they go through important changes due to both biological and psychosocial developmental stages, and to being in displacement. Adolescent migrants, particularly forced migrants, are affected in terms of family dynamics, education, and social relations. They interact with their new reality and environment which includes other migrants, a new system of norms and social rules, and new social actors in shelters such as NGOs and International Organisations. In the process, barriers and facilitators emerge in line with the different levels of the socio-ecological framework, the individual, microsystem, mesosystem and macrosystem, that in turn are social determinants of health of adolescent migrants.

4.2. Barriers and facilitating factors at the individual level: the need to empower adolescent migrants

At an individual level, lack of knowledge around menstruation and a general adolescent reticence to seek information or use contraceptive

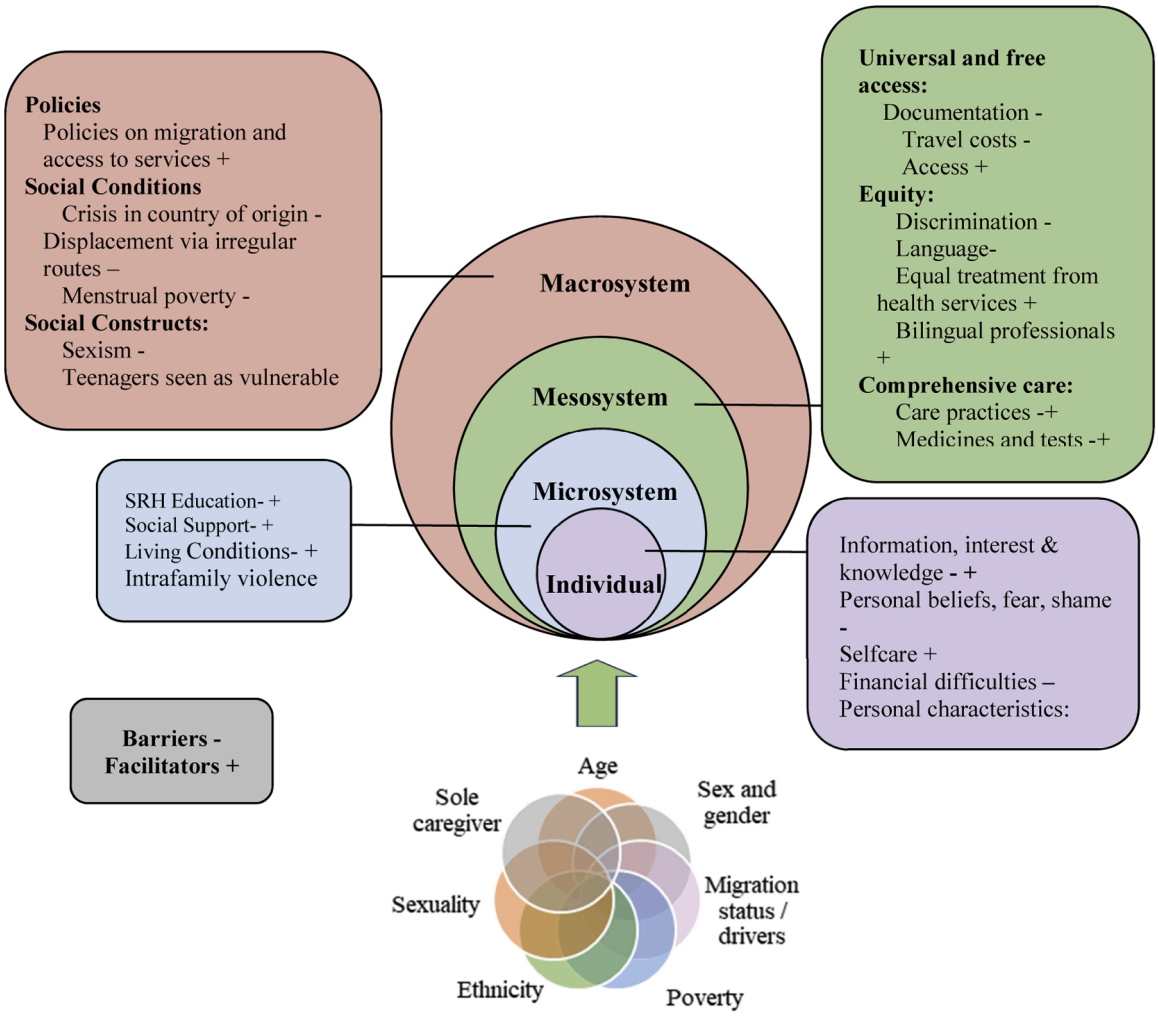

Fig. 2. Adapted Bronfenbrenner`s Socioecological Model showing barriers and facilitator to SRHR among migrant adolescent girl, with acknowledgement of intersectionality (adapted from Tirado et al., (Tirado et al., 2020)).

methods due to personal beliefs or fear and shame were identified as barriers. These results are consistent with studies that indicate pervasive moral judgement around sexuality (often associated with religion) in young people resulting in reluctance to seek information and/or services about SRHR (Mutea et al., 2020; Meherali et al., 2021; Tirado et al., 2020). These barriers can lead adolescents to engage in risky sexual practices, resulting in negative outcomes, such as STIs or unwanted pregnancies (Tirado et al., 2020). A lack of understanding of the menstrual cycle can lead to inadequate hygiene practices that lead to preventable urinary or gynaecological conditions, such as cervical cancer and urinary infections (Soeiro et al., 2021).

The promotion of SRHR for migrant adolescents should encourage the acquisition of knowledge, self-care practices, and autonomy, enabling them to make healthy decisions regarding sexuality and reproduction. At the individual level, our study shows that adolescents are concerned about SRHR topics and are keen to take self-care actions such as the use of contraceptives to prevent pregnancy and STIs. One way to encourage this interest is by providing SRHR services aimed at young people which provide greater confidentiality, privacy and support without the presence of an adult. Rosenberg et al. (2018) show that a teen-friendly service model led to a greater search for SRHR care compared to standard care services not focused on the youth population. A study in Chile also highlighted this service as facilitating access for young migrants, who valued the existence of friendly spaces because it allows them access to contraceptive methods, information about SRHR and mental health (Obach et al., 2020). In this sense, the provision of quality services adapted to young people can improve SRHR.

4.3. The micro level: the role of school and family in adolescent migrant SRHR

In our study, family and school emerged as crucial microsystem environments that simultaneously acted as facilitators and barriers to adolescents' SRHR education. Some participants' families lacked dialogue on SRHR due to conservative attitudes and beliefs among parents. In contrast, other adolescents reported a significant influence of gender on SRHR education, where women played a crucial role in passing this information on to their daughters and granddaughters. Similar findings were observed in other studies (Mutea et al., 2020; Meherali et al., 2021; Tirado et al., 2020), highlighting how SRHR within families remain a taboo topic, with many parents maintaining conservative attitudes.

Our study revealed that education provided in the school setting tends to focus on reproductive health and disease prevention, neglecting crucial aspects of sexuality such as feelings, emotions, intimacy, and desire. Other studies have emphasised the dissatisfaction of many young migrants with the education received in schools, citing the lack of coverage on these topics and the unpreparedness of teachers to discuss SRHR (Mutea et al., 2020; Meherali et al., 2021; Tirado et al., 2020). Therefore, it is essential to raise awareness among parents, teachers, and school directors about the necessity of including these topics to minimise

barriers. Training provision is also crucial to ensuring that this information is grounded in scientific evidence, with clear messages and without religious or moral bias.

4.4. The microenvironment: the importance of safe and hygienic spaces

Most interviewed teenagers spent time in shelters or overnight spaces provided in Brazil by an official humanitarian programme, *Operação Acolhida*. Shelters are part of the microsystem environments where adolescents settle for long periods, and engage in new social dynamics, norms and rules. While providing a place to settle, there are barriers to SRHR mostly related to poor hygiene conditions and lack of privacy as well as risk of violence. Previous research (Tirado et al., 2020; Makuch et al., 2021) show that a frequent concern in relation to refugee camps and shelters, confirmed in this study, is the sense of fear of violence, whether physical or sexual, and abuse due to lack of privacy and overcrowded spaces, as explored in Riggirozzi et al. (2023).

Regarding menstrual health, another study in Brazil argues that although the majority of Venezuelan migrants reported having access to a bathroom to change sanitary pads, and shelters do not offer adequate sanitation conditions (Soeiro et al., 2021). Adolescents were unable to wash hands whenever they wanted and didn't feel safe using the bathrooms, although they identified as a positive factor access to some menstrual products within the shelters. Menstrual hygiene is particularly relevant for adolescents since many still have feelings of embarrassment around the topic and/or are still learning, therefore may feel less inclined to complain about poor sanitary conditions or ask family members for support. This particularly indicates how individual issues (age, embarrassment increased due to age) interact with micro level elements (shelters and their hygiene condition as well as family dynamics).

4.5. The Meso and macro level: the role of the health system and broader health policy in creating both barrier and facilitating adolescent SRHR

Due to the Covid-19 pandemic, the Brazil-Venezuela border was closed between March 18, 2020, and December 8, 2021. This macrostructural aspect had repercussions on the SRHR of the interviewees since the majority of them ($n = 15$) had to travel along irregular paths. This situation resulted in experiences of menstrual poverty and increased the risk of violence during the journey. A study by Bahamondes et al. (2022) indicates that, during the Covid-19 pandemic, access to SRHR was hampered, as 76 % of the basic health centres evaluated stopped providing these services. However, prenatal services and obstetric care continued to be offered. In agreement with these data, in this study, the participants who mainly accessed health services were, for the most part, pregnant teenagers, who did not report access difficulties related to the pandemic.

In this research, the SUS was a significant facilitator for access to healthcare. Pregnant teenagers who gave birth in Brazil reported having received prenatal, childbirth, and postpartum care. In Brazil, the SUS establishes the universalisation of the right to health and guarantees free access to services, regardless of migratory status. Other studies on Venezuelan migrant women agree that the existence of the SUS and the constitutional guarantee of the right to health is an extremely important facilitator for the SRHR of migrants (Makuch et al., 2021; Bahamondes et al., 2020).

Overall, most interviewees expressed satisfaction with the care received, emphasizing the prioritisation of care during prenatal sessions, adherence to good practices during childbirth (such as having a companion) and the care provided in the postpartum period, including the provision of food, vaccines, and preventive exams to ensure the health of both the mother and child. Similar results were presented in studies by Bahamondes et al. (2020) and Makuch et al. (2021) highlighting the satisfaction of Venezuelan women with the care they received in health units and maternity wards.

A number of interviewees described barriers because of the lack of documentation, a concerning issue given that access should be available to all migrants, regardless of migratory status, as per constitutional norm. Other reported barriers related to socioeconomic issues such as transport costs, for example, reveal gaps in the institutional organisation of the Brazilian health system and the need to create specific responses that take this reality into account. It is important to highlight that the barriers faced by many migrants in terms of difficult access to healthcare, consultation and in some cases lack of provision of contraceptive methods are similar to those suffered by nationals. Unequal access to healthcare services and resources, especially in rural areas and regions with high poverty rates, is exacerbated by significant territorial disparities (Roman, 2023). In Boa Vista and Manaus, pre-existing poverty, lack of resources, and underfunded social services meant that the rapid influx of Venezuelan migrants posed significant strains to populations already facing social inequalities for decades (Leal et al., 2024).

Additionally, some adolescents reported discriminatory language and treatment by employees in Basic Health Units, with some adolescents reported being denied care due to their nationality. Difficulties in communication and understanding in relationships with health professionals were also reported (Makuch et al., 2021; Mocelin et al., 2023). Discrimination based on nationality has also been identified in other studies (Obach et al., 2020; Rivillas-García et al., 2021; Guijarro et al., 2023).

Good treatment by health professionals is an important facilitator, being recognised as essential to the access to SRH services (Obach et al., 2022; Obach et al., 2020; Makuch et al., 2021; Bahamondes et al., 2020; Mocelin et al., 2023). In this sense, health workers must be sensitised and guided to work with migrant populations, considering social markers such as gender, age, social class, and nationality.

4.6. Interaction of risk and protective factors between different levels, and the role of intersectionality

Many of the issues raised in the interviews cut across the levels of the socio-ecological model, illustrating how factors within the different levels interact to increase or mitigate risk. For example, gender-based violence may be rooted in macrostructural aspects such as the economic crisis in Venezuela, leading to vulnerability and violence. Risks of robbery, physical and sexual violence were identified during the migration route, street harassment in the destination country, various forms of violence in hostels and shelters, and finally, situations of intrafamily violence, encompassing physical, sexual violence, and negligence.

At the individual level, characteristics such as age, gender, nationality and sexuality both intersected and interacted with factors within the wider levels to create vulnerabilities. Our limited evidence based on small numbers suggest pregnant and transgender adolescent migrants, for example, may be particularly exposed to situations of discrimination, stigma, and violence in different contexts of the ecological environment (family, shelters, health services, and society). All together these observations recognise the value of intersectionality and multi-level analysis to identify simultaneous interactions and experiences that facilitate or obstruct SRH and rights, risking situations of marginalisation and exclusion [15]. Through this lens, and focusing on adolescent migrants, we echoed the call to examine migratory processes through the lens of intersectionality (Crenshaw, 1989; Rosati et al., 2021).

4.7. Strengths and limitations

This study provides an in-depth analysis of barriers migrant adolescents face in securing SRHR and identifies facilitators that should be leveraged to overcome these challenges. The study's strengths include its focus on the adolescent life cycle, proposing a framework that enables a comprehensive analysis of spheres of an individual's development,

identifying key interaction contexts and their impact on SRHR. We also acknowledge a number of limitations. As discussed, our sampling was a subset of a larger sample, and size was essentially pragmatic. Nonetheless, it produced rich, thick data although we are unable to make strong statements or recommendations based on the experiences of subgroups such as adolescent mothers or Due to the Covid-19 pandemic, the interviews had to be conducted online. Although conducted with the utmost rigor and confidentiality, it's possible that teenagers might have been more open to discussing the sensitive topic of SRHR in face-to-face interviews. The pandemic also limited our access to Boa Vista, as our key informants and partnerships were mainly in the city of Manaus. Consequently, we have fewer participants from Boa Vista. Finally, it is worth noting that this study included a small sample of transgender adolescents who are likely to have experienced very specific vulnerabilities and have distinct needs, and this will have influenced the perspectives portrayed in the results. Ideally the experience of this group would have been analysed separately to bring out these distinct differences.

5. Conclusion

Adolescent gilrs in displacement face many challenges to their health and rights. Venezuelan adolescent girls in Brazil experience prevailing barriers to realising their SRHR in four specific areas: menstrual health; family planning, contraception and STIs; prenatal, childbirth and postnatal care; and preventing gender-based violence. Our study also identified facilitators for adolescent migrant' enjoyment of SRHR, including access to universal health system and age and gender appropriate information. However, prevailing barriers, particularly a lack of knowledge about SRHR, underscore the imperative for intersectoral and intersectional actions tailored to the specific realities of migrant adolescents across various socio-ecological contexts.

Addressing these challenges calls for proactive policies and programmes that create conditions for the empowerment of adolescent migrants and promote their autonomy and well-being. The socio-ecological perspective offered in this study could guide such initiatives for a comprehensive approach, grounded in SRHR, while considering the diverse contexts in which adolescents interact at different levels and with different actors in society.

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CRediT authorship contribution statement

Leidy Janeth Erazo Chavez: Writing – review & editing, Writing – original draft, Visualization, Validation, Formal analysis, Data curation. **Zeni Carvalho Lamy:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Larissa da Costa Veloso:** Writing – review & editing, Writing – original draft, Visualization, Formal analysis, Data curation. **Laura Froes Nunes da Silva:** Writing – review & editing, Writing – original draft, Visualization, Formal analysis, Data curation. **Ana Maria Ramos Goulart:** Writing – review & editing, Writing – original draft, Visualization, Formal analysis, Data curation. **Natalia Cintra:** Writing – review & editing, Visualization, Validation, Investigation, Formal analysis, Data curation. **Sarah Neal:** Writing – review & editing, Visualization, Validation. **Pía Riggirozzi:** Writing – review & editing, Visualization, Validation, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

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.

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