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ORIGINAL ARTICLE

Exploring the sexual and reproductive health of migrant adolescents in Chile: insights from the 10th National Youth Survey

Explorando la salud sexual y reproductiva de adolescentes migrantes en Chile: perspectivas desde la 10° Encuesta Nacional de la Juventud

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What do we know about the subject matter of this study?

In Chile, the foreign population has increased, including adolescents. Adolescent migrants face barriers in accessing sexual and reproductive health (SRH) services and exercising their rights, exposing them to unfavorable consequences.

What does this study contribute to what is already known?

A cross-sectional-analytical study was conducted using the X National Youth Survey. The results showed that one-third of migrant adolescents are not covered by any health insurance and there are differences in sexual behaviors and reproductive variables in both groups, which may reflect cultural and social influences and inequities in access to health care.

Abstract

Migration is a phenomenon with an impact on the health of adolescents. Barriers to accessing health services expose them to risks such as sexual violence, unwanted pregnancies, and sexually transmitted infections/HIV. **Objective:** To analyze variables of sexual and reproductive health in migrant and Chilean adolescents. **Patients and Method:** Cross-sectional and analytical study with a sample of 3 375 adolescents aged 19 or younger, both Chilean and foreign, from the 10th National Youth Survey. Sociodemographic and sexual and reproductive health variables were analyzed. Descriptive analysis, Rao-Scott statistical test, and adjusted Odds Ratio calculation were performed using STATA v 12 software. **Results:** 6.4% of the adolescents were foreigners, mainly from Venezuela (36.98%). Differences were found in health insurance coverage, sexual behaviors, contraceptive use, and children between Chilean and foreign adolescents. **Conclusions**: It is concerning that one-third of migrant adolescents are not registered in the health insurance system. Differences in sexual behaviors and reproductive variables may reflect cultural and social influences, as well as inequities in access to healthcare.

Keywords:
Adolescents; International Migrants; Migrant Women; Sexual and Reproductive Health; Contraception

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Introduction

In Chile, foreign immigration has increased, constituting a dynamic and complex phenomenon that includes adolescents, who may face barriers in accessing health services, including Sexual and Reproductive Health (SRH) services, and exercising their rights in this area, exposing them to unfavorable consequences[1,2]. Migration is recognized as a social determinant of health, which is related to economic, labor, and legal aspects, among others[2]. Although migration can generate new opportunities, its impact varies according to personal, socioeconomic, educational, sex, ethnicity, migratory status, language, country of origin, and destination[3].

The foreign population in Chile is around 1.5 million people, with Venezuela, Peru, Haiti, Colombia, and Bolivia being the most common countries of origin[4]. It is estimated that approximately 134,810 adolescents between 10 and 19 years of age live in Chile, representing 9% of the total foreign population[4,5]. Although the countries of origin share macro-structural characteristics, some differences translate into group diversity[2,6].

There is little research and public policies that address the particular needs of adolescent migrants in Chile[7,8]. This is partly because destination countries establish adaptation strategies focused on other groups, such as the child population[10]. In addition, the rapid incorporation into the adult world through employment or family formation means that the traditional concept of adolescence does not always apply to this group[7,9,10].

Sexuality in adolescence has historically been treated from an adult-centered and risk-centered perspective, especially for women. Foreign adolescents share sociocultural characteristics with Chilean adolescents, which impacts their SRH as they are inserted into a traditional, patriarchal, and sexually conservative Latin culture[11]. They also face barriers to accessing SRH services due to language barriers, lack of documentation, and lack of knowledge of the health system[12]. In addition, they may face difficulties associated with acculturation and incorporation into a society that may be perceived as individualistic and ethnocentric. All this added to prejudices about their sexuality, gender stereotypes, and difficulties in exercising their sexual and reproductive rights exposing them to sexual violence, unwanted pregnancies, and sexually transmitted infections/HIV[5,7,9,12-14,16,21].

Nationally, the specific adolescent fertility rate is low in comparison with other Latin American and Caribbean countries[20-24]. However, there is a significant increase in new cases of HIV, with a feminization of the epidemic in the general population as well as in adolescents and young people[14,15,25]. Most health strategies for migrant women are oriented to maternal and child care but do not consider aspects such as fertility control and sexuality from a comprehensive perspective[5]. In the case of migrant men, the supply of health services in these areas is even more limited, probably not so different from Chilean men, which highlights the need to comprehensively address SRH in the male population[5,7,27]. It is necessary to explore the specific needs of this group from a rights perspective. The objective of this study was to analyze SRH variables in migrant and Chilean adolescents, based on the X National Youth Survey.

Patients and Method

Study design and participant characteristics

Cross-sectional and analytical study. The sample was obtained from the database of the X National Youth Survey. The report of the X National Youth Survey describes the calculation of the sample size with national significance, the type of sampling, its design, the selection of participants, and how the information was collected[28]. The weighting factor was considered in the analyses. This survey has 13 thematic modules. Five thematic modules were selected for this study: education, partner and family, SRH, violence, and others. The data collection period was between December 2021 and May 2022. The sample was 3,375. For the analysis of reproductive variables and some sexuality variables, only sexually active adolescents were included, corresponding to 1,313 participants.

Inclusion Criteria

Adolescents aged 19 years and younger, foreigners and Chileans, who have or have not initiated sexual activity, and from urban and rural areas.

Variables Description

The variable "nationality" was classified as foreign, for adolescents with nationalities from Latin American and Caribbean countries, and Chilean in the case of adolescents born in Chile. Other nationalities were excluded.

The sociodemographic variables were: "sex", "age in completed years", "socioeconomic level", "level of education", "relationship status", and "health insurance system".

The reproductive variables were: "number of children", "age of first pregnancy", "unplanned pregnancy", "age of unplanned pregnancy", "use of a contraceptive method (CCM) first sexual intercourse", "use of CCM last sexual intercourse", "type of CCM used in the first sexual intercourse", "type of CCM used in the

last sexual intercourse". Contraceptives were classified according to effectiveness as "Less effective" (vaginal douching, natural planning method, coitus interruptus, female condom, diaphragm, and male condom), "Effective" (emergency pill, contraceptive ring, patch, the pill, and contraceptive injection), and "Very effective" (IUD, implant)[29].

The sexuality variables were: "initiation of sexual activity", "age at initiation of sexual activity", "number of sexual partners in the last 12 months", "condom use in last sexual intercourse", "history of partner violence", "history of induced abortion", "oral sex", "anal sex", "type of relationship with first sexual partner", "type of relationship with last sexual partner", "HIV test", "sexual orientation", and "sex".

Statistical Analysis

Statistical analysis was used for weighted samples (survey). A descriptive analysis of the information was performed to characterize the sample. The association between sociodemographic and RSH variables was measured by comparing the Chilean and foreign adolescent populations using the Rao-Scott statistical test. The association between the variables number of children, unplanned pregnancy, and nationality was evaluated by calculating OR adjusted for sex, age, socioeconomic level, and level of education, through the adjustment of two multiple logistic regression models. The data were analyzed using STATA v 12 statistical software (StataCorp LP, Texas, USA).

Table 1. Distribution of nationalities, age at time of arrival, and length of residence of adolescents

Nationality	Prevalence %
Chilean	93.6
Foreign	6.4
Total	100
Foreign	
Argentine	0.22
Bolivian	6.85
Colombian	19.41
Dominican	1.54
Ecuadorian	0.82
Haitian	6.14
Peruvian	27.66
Venezuelan	36.98
Other nationality	0.38
Total	100
Average age of arrival in Chile of young migrants	12.26
(95% CI)	(11.42 - 13.09)
Average time (years) that young migrants have been in Chile	4.52
(95% CI)	(3.73 - 5.32)

Ethical Aspects

This study was approved by the Human Research Ethics Committee of the Faculty of Medicine of the University of Chile.

Results

Foreign adolescents accounted for 6.4% of the sample; the nationalities of these adolescents were mostly Venezuelan (36.98%) and Peruvian (27.66%). On average, they arrived in Chile at 12.26 years of age and have been living in the country for 4.52 years (table 1).

Regarding sociodemographic variables, no statistically significant differences were found for sex, socioeconomic level, and level of education. Another difference was found in the health insurance system, as it was more frequent to find adolescents of foreign nationality without health insurance than Chileans, showing 33.98% and 5.26%, respectively (p = 0.0001). Chilean adolescents were older than foreign adolescents (17.14 y/o v/s 16.79 y/o) (p = 0.0240) (table 2).

Regarding reproductive variables, foreign adolescents had a higher percentage of one or more children (10.51%), while most Chilean adolescents reported no children (96.58%) (p = 0.0450). Foreign adolescents used less effective CCM in a higher percentage, both for the first and the last sexual intercourse (65.98% and 65.40%) compared with Chileans (p = 0.0118 and 0.0442, respectively) (table 3).

Regarding sexuality variables, a history of intimate partner violence was present in a higher percentage of foreign adolescents compared with Chilean adolescents (28.86% v/s 12.15%) (p = 0.0446). The practice of oral sex was more common in Chilean adolescents than in foreigners (35.09% v/s 22.58%) (p = 0.0235). Regarding the type of sexual partner in the first relationship, friends or "*andantes*[a]" were more common among foreigners than among Chileans (47.43% v/s 27.28%), and boy/girlfriends or "*pololos/as*[b]" were more common among Chileans than among foreigners (71.42% v/s 50.61%) (p = 0.0501) (table 4).

The ratio between adolescents who had one or more children versus those who had no children is 3.62 times higher in foreign adolescents compared with Chilean adolescents (OR: 3.62; 95%CI: 1.13-11.65).

The ratio between adolescents who had an unplanned pregnancy versus those who did not have an unplanned pregnancy is 2.74 times higher in foreign adolescents compared with Chileans (OR: 2.74; 95%CI: 1.002-7.52).

[a]Type of low-commitment love relationship, similar to "friends with benefits".

[b]In Chile, boyfriend (pololo) / girlfriend (polola).

Discussion

Adolescence is a stage of great vulnerability due to the multiple changes experienced in the social, psychological, and cognitive areas in a short period. In Chile, migrant adolescents constitute a small percentage of the total number of adolescents, and their nationalities are mainly Venezuelan and Peruvian. In this study, it is observed that the average age of migrant adolescents at the time of arrival in the country corresponds to the beginning of adolescence, a stage characterized by pubertal development, high involvement with peers, exploration of sex roles, and concern for the body. These changes may generate greater stress in these adolescents, who must start a new life outside their cultural frames of reference and adapt to those of the country of origin. This acculturation process can make them more vulnerable in various dimensions of health, including SRH[6,7,12]. Although the group of migrant adolescents studied have been residing in Chile for an average of more than 4 years, this period, although prolonged, does not ensure adequate integration of these adolescents into Chilean society. The multiple social gaps present function as obstacles to effective inclusion and could be part of the explanation for the differences found between the groups[13].

Previous reports indicated more years of schooling in the foreign population[30]. However, in this study, this difference was not found, but rather a tendency to a higher frequency of higher education in Chileans than in migrants. This change may be attributable to the fact that, initially, migrants arrived in the country with their education completed from their countries of origin, while, at present, adolescent migrants complete their education in the Chilean educational system. In addition, differences were observed, although not significant, in marital and cohabitation status, which could suggest that migrant adolescents tend to form their own families before their Chilean peers. This finding is in line with theoretical approaches that describe this population as a group that enters the adult world through family formation and working life before their

Table 2. Distribution of sociodemographic variables by nationality in adolescents in Chile

Variables	Categories	Nationality			p
		Total (%)	Foreign (%)	Chilean (%)	
Sex	Male	50.99	46.95	51.27	0.5101
	Female	49.01	53.05	48.73	
	Total	100	100	100	
Socioeconomic status	High	4.24	1.19	4.44	0.2048
	Medium	56.87	65.38	56.28	
	Low	38.9	33.43	39.27	
	Total	100	100	100	
Education level	Higher	17.79	10.56	18.28	0.1944
	Secondary	77.83	81.49	77.58	
	Basic	4.38	7.95	4.14	
	Total	100	100	100	
Relationship status	Single	97.68	95.11	97.85	0.2027
	Married/cohabiting	2.32	4.89	2.15	
	Total	100	100	100	
Health insurance	Public	82.04	65.27	83.14	0.0001
	Private	9.27	0.74	9.83	
	Other	1.66	0	1.77	
	None	7.03	33.98	5.26	
	Total	100	100	100	
Age	Average	17.11	16.79	17.14	0.0240
	CI (95%)	(17.04 - 17.19)	(16.50 - 17.08)	(17.06 - 17.21)	

Table 3. Distribution of reproductive variables by nationality, in adolescents in Chile

Variables	Categories	Nationality			p
		Total (%)	Foreign (%)	Chilean (%)	
Number of children	1 or more	3.78	10.51	3.42	0.0450
	None	96.22	89.49	96.58	
	Total	100	100	100	
Unplanned pregnancy	No	94.91	88.46	95.26	0.0789
	Yes	5.09	11.54	4.74	
	Total	100	100	100	
History of abortion	No	99.22	100	99.18	0.6615
	Yes	0.78	0	0.82	
	Total	100	100	100	
CM at first sexual intercourse	No	6.6	0	6.95	0.1784
	Yes	93.4	100	93.05	
	Total	100	100	100	
CM at last sexual intercourse	No	4.35	2.11	4.47	0.3062
	Yes	95.65	97.89	95.53	
	Total	100	100	100	
Type of CM at 1st sexual intercourse	Very effective	9.63	21.05	8.97	0.0118
	Effective	32.94	12.97	34.08	
	Less effective	57.43	65.98	56.94	
	Total	100	100	100	
Type of CM at last sexual intercourse	Very effective	11.36	18.48	10.97	0.0442
	Effective	41.04	16.11	42.39	
	Less effective	47.61	65.40	46.64	
	Total	100	100	100	
Age at first pregnancy	Average	16.99	16.95	16.99	0.9490
	CI (95%)	(16.31 - 17.66)	(16.07 - 17.84)	(16.22 - 17.77)	
Age at unplanned pregnancy	Average	16.75	16.03	16.85	0.1250
	CI (95%)	(16.14 - 17.36)	15.22 - 16.84)	16.19 - 17.51)	

CM: Contraceptive method

peers[6,7]. These results highlight the importance of understanding the educational and social dynamics of migrant adolescents in the Chilean context, as well as the need to provide specific support to this population during their adaptation process[7,13].

Although no socioeconomic differences were observed, it is worrying from the perspective of health protection that a third of foreign adolescents were not covered by a health insurance system, which leaves them unprotected in terms of healthcare, including SRH. Although there are regulations that guarantee access to health care for foreign minors, they are often unknown or generate fear due to their irregular migratory situation, added to administrative obstacles, and the lack of access to language and culturally sensitive services[1,7,9,11,12,15,16].

Regarding the differences in SRH between Chilean and foreign adolescents, it was observed that the latter had a more frequent history of pregnancy and children, which differs from another national study that showed that births in migrant adolescents are less frequent than in Chilean women[27]. This may be because, in previous years, the proportion of migrant children and adolescents was lower than it is today, added to

Table 4. Distribution of sexuality variables by nationality in adolescents in Chile

Variables	Categories	Nationality			p
		Total (%)	Foreign (%)	Chilean (%)	
Sexual activity initiation	No	60.85	70.44	60.18	0.1025
	Yes	39.15	29.56	39.82	
	Total	100	100	100	
Number of sexual partners in the last 12 months	2 or mores	29.32	20.29	29.8	0.2339
	0 to 1	70.68	79.71	70.2	
	Total	100	100	100	
Condom use at last sexual intercourse	No	19.07	22	18.93	0.6871
	Yes	80.93	78	81.07	
	Total	100	100	100	
History of intimate partner violence	No	86.88	71.14	87.85	0.0446
	Yes	13.12	28.86	12.15	
	Total	100	100	100	
Oral sex	No	65.73	77.42	64.91	0.0235
	Yes	34.27	22.58	35.09	
	Total	100	100	100	
Anal sex	No	86.87	91.59	86.54	0.2489
	Yes	13.13	8.41	13.46	
	Total	100	100	100	
Type of relationship with first sexual partner	Friend, recently met, family member	28.28	47.43	27.28	0.0501
	Boyfriend or partner	70.39	50.61	71.42	
	Spouse, cohabiting partner	1.33	1.96	1.3	
	Total	100	100	100	
Type of relationship with last sexual partner	Friend, recently met, family member	30.84	22.55	31.27	0.4364
	Boyfriend or partner	67.26	75.47	66.84	
	Spouse, cohabiting partner	1.9	1.98	1.89	
	Total	100	100	100	
Age of sexual activity initiation	Average	15.54	15.65	15.54	0.805
	CI (95%)	(15.40 - 15.68)	(14.75 - 16.55)	(15.39 - 15.68)	
¿Te has realizado alguna vez el test del VIH?	No	89.72	89.25	89.75	0.8762
	Yes	10.28	10.75	10.25	
	Total	100	100	100	
Have you had an HIV test?	Heterosexual	79.04	81.9	78.84	0.7591
	Homosexual	1.65	1.91	1.64	
	Other	19.3	16.18	19.52	
	Total	100	100	100	
Sexual orientation	Male	49.68	46.36	49.91	0.7509
	Female	45.65	49.97	45.35	
	Other	4.67	3.67	4.74	
	Total	100	100	100	

other variables related to the social determinants of health, which have worsened for the migrant population and are related to adolescent pregnancy[6,31].

Regarding the frequency of contraceptive use, no significant differences were found between migrant and Chilean adolescents, suggesting that migrant adolescents are not at a disadvantage in accessing contraception compared with Chilean adolescents. However, when examining the types of contraceptives used, it was observed that less effective contraceptives were used more by the foreign population compared with the Chilean population[32]. This trend could be related to multiple factors, such as cultural beliefs about fertility and contraception, as well as barriers and inequities in accessing more effective contraceptives, such as implants and intrauterine devices, which require the assistance of a trained health provider for their insertion, in addition to the high economic cost that may be involved when purchased outside the public health system[32,33]. In contrast, for less effective methods such as condoms, the intervention of a health provider is not essential, and their initial cost is much lower. Therefore, it is valid to question whether the higher frequency of children in migrant adolescents may be related to cultural aspects such as the formation of stable couples and families, as well as to the use of less effective contraceptive methods due to lack of access, for economic or cultural reasons, or because they do not have health insurance, as suggested by other studies[24,33,34].

Regarding sexual behaviors, some differences and similarities were found between the two groups. The age of initiation of penetrative sexual intercourse, frequency of sexually active adolescents, condom use, and number of sexual partners were similar[34]. However, the differences were mainly in the set of sexual practices, with oral and anal sex being more frequent in Chilean adolescents. One possible explanation may be related to cultural and social factors. For example, attitudes towards sexuality and sex education may vary between groups, which could influence the adoption of different sexual practices. In addition, the availability of information and access to SRH services may also influence the differences observed in sexual behaviors between Chilean and migrant adolescents[18,19,34,35].

It is important to note that Chile is experiencing a social transformation in sexuality issues, such as the feminist movement and social and legislative discussions on issues such as free abortion, equal marriage, and gender identity and equality laws, among others. These changes will have an impact on the sexual and reproductive decisions of people, especially adolescents and young people.

This study sought to contribute to the scarce evidence on SRH among adolescent migrants in Chile. However, there are limitations related to the underrecording of migratory data and the difficulty of keeping records as entry through unauthorized crossings and the difficulty of regularizing migratory status are increasing. In addition, it is important to consider the limitations associated with the use of a secondary source of weighted samples that do not specifically represent the migrant population, which reduces statistical robustness by not allowing the use of certain statistics and limits the ability to delve into the differences within this heterogeneous group. It is also relevant to note that the nationality variable does not allow us to distinguish Chilean adolescents who are children of foreigners, who probably face similar living conditions to the population with foreign nationality.

Based on these findings, it is recommended that SRH policies and programs incorporate gender and intercultural approaches that specifically address the needs of adolescent migrants, including equitable access to contraceptive methods. In addition, it is essential to expand health insurance coverage to ensure that adolescent migrants have access to comprehensive health care. Further research is needed to better understand the specific needs and challenges faced by adolescent migrants in the country.

In conclusion, adolescent migrants face significant challenges in addressing sexual and reproductive health, including lack of affiliation to the health insurance system, differences in contraceptive methods use and childbearing history, and differences in sexual practices. These disparities may reflect sociocultural influences and inequities.

Ethical Responsibilities

Human Beings and animals protection: Disclosure the authors state that the procedures were followed according to the Declaration of Helsinki and the World Medical Association regarding human experimentation developed for the medical community.

Data confidentiality: The authors state that they have followed the protocols of their Center and Local regulations on the publication of patient data.

Rights to privacy and informed consent: The authors have obtained the informed consent of the patients and/or subjects referred to in the article. This document is in the possession of the correspondence author.

Conflicts of Interest

Authors declare no conflict of interest regarding the present study.

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