ECRONICON OPEN ACCESS

EC GYNAECOLOGY
Research Article

Factors Associated with Contraceptive Uptake Following Abortion in Three Different Legal Contexts in Latin America

Liliana León Rogel[1]*, M Valeria Bahamondes[2], Rodolfo Gómez Ponce de León[3] and Musa Work Group[4]

[1]Escuela de Salud Pública de México, Instituto Nacional de Salud Pública, Cuernavaca, Mexico

[2]Consultora Internacional, Centro Latinoamericano de Perinatología, Salud de la Mujer y Reproductiva (CLAP/ SMR), Organización Panamericana de la Salud/Organización Mundial de la Salud, Córdoba, Argentina

[3]Asesor Reginal de Salud Sexual Y Reproductiva, Centro Latinoamericano de Perinatología, Salud de la Mujer y Reproductiva (CLAP/SMR), Organización Panamericana de la Salud/Organización Mundial de la Salud, Montevideo, Uruguay

[4]Musa Work Group: Messina A, Copello F, Decillis K, Lukin G, Valls MJ, Soler F, Rumante K, Rubio G, Alviar JF, Marroquin O, Guerrero G, Rivillas JC, Betancourt L, Menjivar E, Sorto M, Sorto S, Castro R, Mejia D, Stefan A, Hernandez F

Dr Gomez Ponce de Leon is a staff member of the Pan American Health Organization. The author alone is responsible for the views expressed in this publication, and they do not necessarily represent the decisions or policies of the Pan American Health Organization

***Corresponding Author:** Liliana León Rogel, Escuela de Salud Pública de México, Instituto Nacional de Salud Pública, Cuernavaca, Mexico.

Received: April 12, 2021; **Published:** September 22, 2021

Abstract

Purpose: Around 3 million abortions/year occur in adolescents aged 15 - 19 years, increasing maternal mortality. Abortion care and post-abortion contraception should be a priority. Our objectives were to describe the factors associated with contraceptive practices prior to and following abortion care in adolescents of 10 to 19 years of age.

Methods: A cross-sectional study using secondary data obtained from the Perinatal Information System (CLAP/SPI-A) on the care offered to 3,827 women in a situation of incomplete abortion or legal abortion. Data from five countries with three distinct profiles regarding access to legal abortion were included: Argentina and Colombia, with less restrictive policies; Chile, where abortion was decriminalized under certain circumstances in 2017; and Honduras and El Salvador where abortion is illegal under any circumstances.

Results: Mean age was 17.5 years (96% being of 15 - 19 years and 4% of 10 - 14 years). Most were single, 56.8% had high-school education and 7.5% were illiterate. Based on data availability, 94% stated that the pregnancy was unplanned, while 84% declared having not used contraception. Most of the women using contraception used a hormonal or barrier method. Following abortion, 89.9% of the adolescents received written counseling.

Discussion: Although these pregnancies were generally unplanned, only 1 in 10 adolescents had used contraception and 1 in 5 had conceived previously. In the most restrictive settings, significantly fewer adolescents initiated contraception following abortion. Good counseling and ensuring the availability of and access to contraception, particularly long-acting reversible contraception, following abortion could reduce the incidence of unplanned pregnancy and unsafe abortion.

Conclusion: To reduce the incidence of unplanned pregnancy and, consequently, the rates of safe and unsafe abortion, work has to be done to improve counseling and increase the availability of and access to contraception. An important element in reversing this trend is to provide access to long-lasting modern contraceptive methods immediately following abortion. In the present sample, it was found that adolescents whose pregnancy was unplanned and who had not been using contraception left the healthcare service using a safe, modern contraceptive method.

Keywords: *World Health Organization (WHO); Latin America and the Caribbean (LAC); Contraceptive Uptake*

Introduction

The World Health Organization (WHO) estimates that 56 million safe/unsafe induced abortions occurred annually between 2010 and 2014 in women of 15 to 44 years of age [1]. The highest abortion rates occurred in the developing regions of the world, with 25 million procedures being unsafe. In Africa and the Latin America and the Caribbean (LAC) region, three out of every four abortions were considered unsafe [2].

According to the WHO, complications of unsafe abortion account for 4.7 - 13.2% of all maternal mortality. The unsafe abortion mortality ratio (the number of deaths per 100,000 unsafe abortions) was 30 in developed countries compared to 220 in developing countries and 520 in Africa [2]. Annually, around 3 million abortions occur in adolescents of 15 to 19 years of age, with this being the age group that is at the highest risk of maternal mortality. In the LAC region, the annual number of unsafe abortions in adolescents is estimated to be as high as 670,000 [3,4].

WHO data show that around 16 million adolescents of 15 - 19 years of age and another 2 million under 15 years of age become pregnant annually. Of the 252 million adolescents living in a developing country, 38 million are believed to be sexually active and do not plan or do not wish to become pregnant in the immediate future. Of these, 15 million young women use a modern contraceptive method, while the remaining 23 million have no access to such methods [5]. Therefore, meeting the unmet need for contraception in adolescents would prevent 2.1 million unplanned births, 3.2 million abortions and 5,600 maternal deaths annually [5].

More than 60% of the world population lives in countries where abortion is permitted, either under a wide range of conditions and circumstances or with no restrictions at all. On the other hand, over 25% of the world population lives in countries where abortion is essentially prohibited, and around 15% live in countries where abortion is permitted only to save the woman's life or to preserve her health [6].

Changes in legislation have been seen in the LAC region with respect to the voluntary interruption of pregnancy. In some countries, advances have been made in the provision of reproductive services, with more permissive legislation being introduced regarding the legal termination of pregnancy in Cuba, Uruguay and Mexico City, where abortion is permitted on demand in the first twelve weeks of pregnancy. In other countries, the process of legalizing abortion advances slowly, as in Argentina and Chile, a situation that forces women to resort to the use of unsafe abortion services [7].

Priority should be given to the provision of abortion care, with particular emphasis on family planning programs as part of post-abortion care. This would help meet the third United Nations Sustainable Development Goal, which is to ensure universal access to sexual and reproductive healthcare services, reduce the maternal mortality rate and increase the prevalence of contraceptive use [8,9]. When family planning counseling is offered to a woman following abortion, the likelihood of her agreeing to use contraception is high. Therefore, methods of contraception should be offered and delivered in the same place as the abortion care is provided, before the woman is discharged from the clinic [10,11].

In 2015, the Latin American Center for Perinatology (CLAP) created a research network referred to as MUSA, the Spanish acronym for Women in a Situation of Abortion, with 40 sentinel centers in 16 countries of Latin America and the Caribbean. Some of these centers in five different countries (Argentina, Chile, Colombia, El Salvador and Honduras) were selected for inclusion in this study.

In Honduras and El Salvador, abortion is punishable under any circumstances. In the case of Honduras, this legislation is included under Chapter II of the Constitution on individual rights and in article 67, which establishes that "the unborn shall be considered as born" and article 65, which states that the right to life is inviolable [12]. In El Salvador, decree 1,030 of the 1997 Penal Code establishes that abortion is punishable under all circumstances [13].

Conversely, in Argentina abortion is non-punishable under the following circumstances: i) Where the life or health of the pregnant woman is in danger and when this threat cannot be avoided by any other means; ii) Where the pregnancy is the result of the rape of a mentally disabled woman, as stipulated in the 1921 Argentine penal code and in the 1984 decree number 11,179 [13]. In Colombia and Chile, abortion is permitted to preserve the pregnant woman's health and is non-punishable under three circumstances: 1) Rape; ii) Where the pregnant woman's life is in danger; and iii) In the case of non-viable pregnancies. In Chile, the decriminalization of abortion is covered under decree number 21,030, which regulates the voluntary interruption of pregnancy in the three aforementioned circumstances. Of these three countries, Chile was the last to adopt this legislation [14].

Objective of the Study

Our objectives was to describe the factors associated with contraceptive practices prior to and following abortion care in adolescents of 10 to 19 years of age who received care at one of the five selected sentinel centers included in the MUSA network, operating under three different legal situations.

Methods

A cross-sectional study was conducted between 2016 and 2019 using secondary data obtained from the abortion section of the Perinatal Information System (CLAP/SPI-A). That system was designed to record relevant clinical data on the care and follow-up offered to women in a situation of abortion, either incomplete abortions or legal abortions. The database also permits evaluation to be made of the quality of care provided. The requirement for ethical approval was waived for the present study, since the form used to compile the data had already been approved in all the participating institutes. As soon as the data had been collected, all information regarding patient identity was removed.

Criteria for selecting the countries

Eleven sentinel centers from 5 of the 16 LAC countries were selected from among the 40 centers that form part of the MUSA network. These centers were chosen as a function of the country's current policies on access to legal abortion: Argentina and Colombia because they have already introduced policies to decriminalize abortion and legislation is less restrictive; Chile because in 2017 a law decriminalizing abortion was approved that allows women access to safe, legal abortion services under three conditions; and Honduras and El Salvador because legislation regarding abortion is extremely restrictive, with abortion not being permitted under any circumstances.

The statistical software program Stata, version 15.0, was used in the statistical analysis. First, a descriptive analysis was performed of the study variables and the association between the variables of interest was evaluated using Fisher's exact test and multiple logistic regression analysis. The level of statistical significance was defined as $p < 0.05$, with a 95% confidence interval.

Results

A convenience sample was initially extracted, consisting of data on 3,950 adolescents of 10 to 19 years of age in a situation of abortion. However, 123 cases had to be excluded due to missing data, resulting in a final sample of 3,827 cases. Of these, 3,177 (83%) were from Colombia and 421 (11%) were from Honduras. The mean age of the women was 17.5 years old, with 3,667 (96%) being between 15 and 19 years of age. Most of the adolescents (n = 2,174; 56.8%) had attended high school, while 286 (7.5%) were illiterate. Overall, 3,341 (87.3%) were single. Regarding their obstetric history, 666 (17.4%) had had at least one previous pregnancy and, of these, 262 (6.8%) had had a previous abortion. Overall, 3,558 (93.0%) stated that the pregnancy was unplanned; however, at least 1,803 (47.1%) had not been in use of any contraceptive method prior to becoming pregnant (data on previous contraception was missing for another 1,672 adolescents) (Table 1).

Characteristics	n	%
Country		
Argentina	84	2.2
Colombia	3,177	83.0
Chile	85	2.2
Honduras	421	11.0
El Salvador	60	1.6
Education level		
Illiterate	286	7.5
Elementary school	300	7.8
High school	2,174	56.8
University	1,057	27.6
Data missing	10	0.3
Marital status		
Married	27	0.7
In a stable union	427	11.1
Single	3,341	87.3
Other	19	0.5
Data missing	13	0.3
Previous pregnancies		
Abortions	262	6.8
Deliveries	299	7.8
Cesarean sections	105	2.7
Was the pregnancy planned?		
No	3,558	93
Yes	242	6.32
Data missing	27	0.70
Contraceptive method used		
None	1,803	47.11
Barrier method	159	4.15
Intrauterine device	14	0.37
Hormonal contraception	157	4.10
Emergency contraception	14	0.37
Natural methods	8	0.21
Data missing	1,672	43.7

Table 1: *Sociodemographic and reproductive characteristics of the adolescents in the sample analyzed, 2016-2019.*
Source: Perinatal Information System - Abortion (SIP-A), Network of Sentinel Centers for the Care of Women in a Situation of Abortion.

With reference to the care provided to adolescents with incomplete abortions and those undergoing a legal abortion at each center, 3,406 of the adolescents (89%) were between 15 and 19 years of age and 421 (11%) were of 10 to 14 years of age (Table 2). Analysis of the

contraceptive counseling provided as part of post-abortion care showed that 3,441 adolescents (89.9%) had been given written advice, while 328 (8.5%) had received only verbal counseling. An association was found between having received written advice and contraceptive uptake prior to discharge from hospital.

Countries	Centers	Type of care provided	
		Incomplete abortion n (%)	Legal abortion n (%)
Argentina	1	24 (36.9)	41 (63.1)
	2	15 (78.9)	4 (21.1)
Colombia	3		3,141 (100)
	4	2 (5.7)	33 (94.3)
Chile	5	76 (95)	4 (5)
	6	5 (100)	
Honduras	7	121 (100)	
	8	19 (100)	
	9	92 (100)	
	10	173 (100)	
El Salvador	11	60 (100)	

Table 2: *Types of abortion care provided for the adolescents at each sentinel center.*
*Source: Perinatal Information System - Abortion (SIP-A), Network of Sentinel Centers for the Care of Women in a Situation of Abortion. *Data missing for 17 cases.*

The unmet need for contraception in adolescents is shown in table 3. For the adolescents who provided information on whether the pregnancy that resulted in abortion was planned or not, data regarding the previous contraceptive method used was only available for 2,145. Of these, 1,570 (73.2%) were adolescents who had not been in use of any contraceptive method prior to becoming pregnant despite not wishing to become pregnant. Of those who were using contraception, in most cases this consisted of barrier or hormonal methods (Table 3).

Contraceptive method used	Was the pregnancy planned?		
	No n (%)	Yes n (%)	
None	1570 (73.19)	223 (10.39)	
Barrier method	157 (7.31)	2 (0.09)	
Intrauterine device	14 (0.65)	0	
Hormonal contraception	143 (6.66)	14 (0.65)	
Emergency contraception	13 (0.60)	1 (0.04)	
Natural methods	8 (0.37)	0	
Total	1,905 (88.81)	240 (11.19)	2,145 (100)

Table 3: *Unmet contraceptive need of the adolescents in the sample analyzed, 2016-2019.*
Source: Perinatal Information System - Abortion (SIP-A), Network of Sentinel Centers for the Care of Women in a Situation of Abortion.

Of the 2,155 adolescents for whom information on the contraceptive method used immediately prior to this pregnancy was available, and irrespective of whether or not they had provided information on whether the pregnancy was planned, a total of 83.7% had not been in use of any contraceptive method. Data on the contraceptive methods that failed, resulting in the pregnancy, are listed in table 4. Of those adolescents for whom data on previous contraceptive use is known, 76.5% requested a hormonal method of contraception or an intrauterine device (IUD). Overall, 62.7% received the contraceptive method requested (Table 4).

Previous contraceptive method n = 2,155 adolescents	Methods	Requested	Received
		%	%
None	Pill	87	6.7
83.7%	Injectable	24.7	19.7
	Implant	23.4	19.3
	Condom	2.9	2.6
	IUD	28.5	23.8
	Abstinence	0.1	0.1
Barrier method	Pill	6.3	5
7.38%	Injectable	25.5	22
	Implant	26.4	22
	Condom	1.9	2.5
	IUD	34.6	32.1
	Abstinence	0	0
Intrauterine device	Pill	7.1	7.1
0.65%	Injectable	28.6	14.3
	Implant	14.3	7.1
	Condom	14.3	14.3
	IUD	42.9	35.7
	Abstinence	0	0
Hormonal methods	Pill	8.3	6.4
7.29%	Injectable	21.7	17.2
	Implant	24.8	23.6
	Condom	5.1	4.5
	IUD	24.8	22.3
	Abstinence	0	0

Emergency contraception 0.65%	Pill Injectable Implant Condom IUD Abstinence	14.3 35.7 42.9 0 7.1 0	14.3 28.6 35.7 0 7.1 0
Natural methods 0.37%	Pill Injectable Implant Condom IUD Abstinence	12.5 12.5 37.5 0 25 0	12.5 12.5 12.5 0 25 0
Total 100%			

Table 4: *Failure of the contraceptive method used prior to the abortion and the contraceptive method requested and received following post-abortion care in adolescents, 2016-2019.*
Source: Perinatal Information System - Abortion (SIP-A), Network of Sentinel Centers for the Care of Women in a Situation of Abortion.

According to the multiple logistic regression analysis, the variables significantly associated with higher contraceptive uptake following counseling ($p \leq 0.05$) were: years of schooling, having been pregnant prior to the current pregnancy that resulted in abortion, and country of residency. The variable contraceptive counseling, although not significantly associated, remained in the model due to the fact that it improved or changed the fit of the model. The likelihood that an adolescent girl with only primary school education would initiate contraceptive use is 34% lower than for an adolescent who had attended high school.

The probability that an adolescent girl who has had three previous pregnancies will initiate contraception immediately following abortion is 50% lower than for an adolescent who has had one or two previous pregnancies. Regarding the five countries included in this analysis, the likelihood that an adolescent would initiate contraceptive use is 57% lower in countries such as Honduras and El Salvador in which access to safe abortion is more restricted compared to adolescents in Argentina, Colombia and Chile (Table 5).

	Category	**Multiple logistic regression analysis**		
		Adjusted OR	**p-value**	**95%CI**
Education level	None	1.0		
	Elementary	0.66	0.07	(0.42-1.04)
	High school	0.73*	0.05	(0.53-1.01)
	University	0.62*	0.00	(0.44-0.87)
Previous pregnancies	0	1.0		
	1	0.77*	0.04	(0.60-0.99)
	2	0.88	0.42	(0.64-1.20)
	3 or 4	0.50*	0.04	(0.26-0.96)
Counseling	Verbal	1.0		
	Written	1.03	0.85	(0.74-1.41)
	None	1.0		
Country	Argentina/Colombia	1.0		
	Chile	1.97	0.06	(0.95-4.06)
	Honduras/El Salvador	0.43*	0.00	(0.30-0.61)

Table 5: *Analysis of the factors associated with uptake of a contraceptive method by adolescents following abortion.*
*Source: Perinatal Information System - Abortion (SIP-A), Network of Sentinel Centers for the Care of Women in a Situation of Abortion; *p ≤ 0.05.*

Complications were recorded in three cases (0.08%), one case of pelvic infection and sepsis, one with excessive bleeding and hypovolemic shock, and one case of a perforated uterus and vaginal tearing. There was a statistically significant association between adolescents with complications and the pregnancy being unplanned, having presented with an incomplete abortion, and undergoing surgical evacuation of the uterus ($p < 0.05$).

Discussion

The LAC region is facing a public health issue with respect to unplanned pregnancy and unsafe abortion in adolescents and this concern has to be prioritized in public health policies. Half the adolescents in this sample had attended high school, highlighting this as the opportune moment at which to teach healthy sexual behavior, an approach that should be adopted in educational and healthcare institutes.

Although the great majority of these adolescents were single, around 12% had a partner. This is a common occurrence in resource-poor populations where seeking a partner is considered an option when educational and employment prospects are limited and there are barriers to personal growth.

In relation to whether or not the pregnancy was planned, over 90% of the adolescents stated that it was not; however, only 11% had been in use of a contraceptive method. This could be due to poor compliance with voluntary contraceptive use, either because of a lack of counseling, difficulty in accessing healthcare or a lack of healthcare coverage, highlighting a clear unmet need for contraception among adolescents, particularly in developing regions of the world [17].

Of 9.6 million adolescent pregnancies, approximately half are unplanned and around 50% end in abortion [17]. For various reasons that include legal restrictions and stigma, more than half of all abortions in adolescents in developing countries are unsafe. In relation to the contraceptive method requested and received during post-abortion care, the response of the healthcare system was found to be appropriate, with effective counseling and access to modern contraceptive methods.

Of the countries included in this analysis, the majority of legal abortions were performed in Colombia, Argentina and Chile, clearly because legislation in those countries has decriminalized abortion, although abortion is restricted under certain circumstances. In Honduras and El Salvador, all the adolescents included in the study were receiving care for an incomplete abortion; however, it is unknown how many of these girls had undergone unsafe abortions. Restrictive abortion policies increase the risk of women developing a complication and reduce the likelihood that the adolescent will adopt a contraceptive method [17].

Our results showed that in the sentinel centers analyzed here advances are being made with respect to the different objectives laid out in the Pan American Health Organization (PAHO)'s Plan of Action for Women's, Children's and Adolescents' Health 2018 - 2030 [18].

Conclusion

Unsafe abortion continues to constitute an important public health issue in countries where policies regarding the decriminalization of abortion are more restrictive. To reduce the incidence of unplanned pregnancy and consequently, the rates of safe and unsafe abortion, work has to be done to improve counseling and increase the availability of and access to contraception. An important element in reversing this trend is to provide access to long-lasting modern contraceptive methods immediately following abortion. In the present sample, it was found that adolescents whose pregnancy was unplanned and who had not been using contraception left the healthcare service using a safe, modern contraceptive method. Combining this strategy with interventions to guarantee access to safe abortion is crucial, thus complying with the global commitment to the United Nations' Sustainable Development Goal of universal access to sexual and reproductive health [8].

Bibliography

1. Organización Mundial de la Salud. "Prevención del aborto peligroso". Organización Mundial de la Salud, 2019. Web. 10 April 2019 (2019).

2. Organización Mundial de la Salud. Prevención del aborto peligroso. Organización Mundial de la Salud, 2018. Web. 10 April 2019 (2018).

3. Noticias ONU. "El embarazo adolescente, un grave problema en América Latina Organización de las Naciones Unidas, 2013. Web. 14 April 2019 (2019).

4. Ganatra B., *et al*. "Global, regional, and subregional classification of abortions by safety, 2010–14: estimates from a Bayesian hierarchical model". *Lancet* 390.10110 (2017): 2372-2381.

5. Pan American Health Organization. "Latin America and the Caribbean have the second highest adolescent pregnancy rates in the world". PAHO/WHO, 2018. Web. 15 April 2019 (2019).

6. Bergallo P., *et al*. "El aborto en América Latina Estrategias jurídicas para luchar por su legalización y enfrentar las resistencias conservadoras". Buenos Aires: Siglo Veintiuno (2018): 464.

7. Faúndes Anibal and Dorothy Shaw. "Universal access to reproductive health: opportunities to prevent unsafe abortion and address related critical gaps". *International Journal of Gynecology and Obstetrics* 110 (2010): v-vi, S1-S42.

8. Programa de las Naciones Unidas para el Desarrollo. "Objetivos de Desarrollo Sostenible". PNUD, n.d. Web. 15 April 2019 (2019).

9. Planificación familiar: un componente esencial de la atención post-aborto". CLACAI, n.p., 15 September 2009 (2009).

10. Organización Mundial de la Salud. Aborto sin riesgos: guía técnica y de políticas para sistemas de salud. 2nd edition. Ginebra: OMS (2012): 134.

11. Ganatra Bela and Aníbal Faúndes. "Role of birth spacing, family planning services, safe abortion services and post-abortion care in reducing maternal mortality". *Best Practice and Research Clinical Obstetrics and Gynaecology* 36 (2016): 145-155.

12. Observatorio de Igualdad de Género. "Leyes". CEPAL, n.d. Web. 20 April 2019 (2019).

13. Argentina. Código Penal de la Nación Argentina. "Ley 11.179 (T.O. 1984 actualizado). Artículo 86". 1984. Web. 20 April 2019.

14. Chile. Ministerio de Salud. "Ley 21.030. Regula la despenalización de la interrupción voluntaria del embarazo en tres causales". MINSA, 2017. Web. 16 April 2019 (2017).

15. Center for Reproductive Rights. "The World's Abortion Laws Map (2014)". CRR, 2014. Web. 16 April 2019 (2019).

16. Center for Reproductive Rights. "The World's Abortion Laws Map (2019)". CRR, n.d. Web. 16 April 2019 (2019).

17. Guttmacher Institute. Haciendo cuentas: Costos y beneficios de satisfacer las necesidades de anticoncepción de las adolescentes en las regiones en desarrollo. New York: Guttmacher Institute (2018).

18. Organización Panamericana de la Salud. Plan de Acción para la Salud de la Mujer, el Niño, la Niña y el Adolescente 2018-2030. OPS/OMS. 70ª Sesión del Comité Regional de la OMS para las Américas. Washington, D.C.: OPS. 23-27 September 2018 (2018).

Volume 10 Issue 10 October 2021