



<https://doi.org/10.24245/gom.v92i2.9212>

Acceptance and factors associated with modern post-abortion contraception in women treated in a public hospital.

Aceptación y factores asociados con la anticoncepción moderna posaborto en mujeres atendidas en un hospital público

Beatriz Falcón Lucas,¹ Yuly Raquel Santos Rosales,^{1,2} Karen Elizabeth Campos Correa¹

Abstract

OBJECTIVE: To determine the frequency of acceptance, and factors associated with modern post-abortion contraception in patients treated in a public hospital in Peru.

MATERIALS AND METHODS: Observational, cross-sectional study, carried out with patients in the immediate post-abortion, treated between June and December 2022, at the emergency services in the *San Juan de Lurigancho* Hospital, in Lima, Peru. The patients were selected by convenience, and a validated questionnaire was selected. The Pearson chi-squared test was applied with a significance level of 5%.

RESULTS: One hundred sixty-six patients were studied in the immediate post-abortion, and 94% (n = 156) accepted some kind of modern contraceptive method; the most frequent was the monthly injection (44.0%), and the least accepted one was the intra-uterine device (0.6%). Personal factors associated with the acceptance of the modern contraceptive method were age (p < 0.01), not having a couple (p < 0.001), and the couple's agreement on the chosen contraception method (p = 0.000). The institutional associated factors were agreement with the time of family planning counseling (p = 0.047), consideration of the importance of privacy-confidentiality in counseling (p < 0.001), and agreement with the care provided during the counselling (p = 0.026).

CONCLUSIONS: Age, having no partner, and the couple's agreement with the post-abortion contraceptive method, together with institutional factors (time of family planning counselling, importance of privacy-confidentiality, and perception of the attention received in family planning counseling), were associated significantly with the acceptance of a modern post-abortion contraceptive method.

KEYWORDS: Post-abortion; Contraceptive; Contraceptive method; Counselling; Family planning services; Aftercare; Intrauterine device; Peru.

Resumen

OBJETIVO: Determinar la frecuencia de aceptación y los factores asociados con la anticoncepción moderna posaborto en pacientes atendidas en un hospital público de Perú.

MATERIALES Y MÉTODOS: Estudio observacional y transversal efectuado en pacientes en el posaborto inmediato atendidas de junio a diciembre de 2022 en el servicio de Urgencias del Hospital San Juan de Lurigancho, Lima, Perú, seleccionadas por conveniencia. Se utilizó un cuestionario validado. Se aplicó la prueba χ^2 de Pearson con un nivel de significación del 5%.

RESULTADOS: Se estudiaron 166 pacientes en el posaborto inmediato de las que el 94% (n = 156) aceptó algún método anticonceptivo moderno; el más frecuente fue el inyectable mensual (44.0%) y el menos aceptado el dispositivo intrauterino (0.6%). Los factores personales asociados con la aceptación del método anticonceptivo moderno fueron: edad (p < 0.01), no tener pareja (p < 0.001) y ésta estuviera de acuerdo con el

¹ Obstetrician, Universidad Nacional Mayor de San Marcos, Peru.

² PhD in Education Sciences, professor at the Universidad Nacional Mayor de San Marcos, Peru.

ORCID

<https://orcid.org/0000-0001-8748-7162>

<https://orcid.org/0000-0002-4536-8293>

<https://orcid.org/0000-0001-6664-2557>

Received: octubre 2023

Accepted: noviembre 2023

Correspondence

Karen Elizabeth Campos Correa
elcampos87@gmail.com

This article should be cited as: Falcon-Lucas B, Santos-Rosales YR, Campos-Correa KE. Acceptance and factors associated with modern post-abortion contraception in women treated in a public hospital. *Ginecol Obstet Mex* 2024; 92 (2): 39-49.

anticonceptivo elegido ($p = 0.000$). Los factores institucionales asociados fueron: estar de acuerdo con el tiempo de consejería en planificación familiar ($p = 0.047$), considerar la importancia de la privacidad-confidencialidad de la consejería ($p < 0.001$) y estar de acuerdo con la atención ofrecida durante la orientación ($p = 0.026$).

CONCLUSIONES: La edad, carecer de pareja y estar de acuerdo con ésta acerca de la elección del método anticonceptivos posaborto junto con los factores institucionales (tiempo de consejería en planificación familiar, importancia de la privacidad-confidencialidad y percepción de la atención en consejería en planificación familiar) se asociaron, significativamente, con la aceptación de algún método anticonceptivo moderno posaborto.

PALABRAS CLAVE: Posaborto; anticoncepción; método anticonceptivo; asesoramiento; servicios de planificación familiar; cuidados posteriores; dispositivos intrauterinos; Perú.

BACKGROUND

Abortion is the spontaneous, or induced, culmination of pregnancy, before reaching viability (20 weeks).¹ Abortion is also a public health problem, and one of the main maternal mortality causes, with repercussions in health, economy, and society. Globally, induced abortion is practiced in 6 out of 10 unintended pregnancies, and 75 million women need, every year, medical care for abortion.² Between 2015 and 2019 there was a global rate of 64 unintended pregnancies for every 1000 women between 15 and 49 years, with 61% ending in abortion.³ In South America, the rate of unintended pregnancies has decreased 26% in the past two decades, and that of abortion has decreased in 9%. On the other hand, the rate of abortion for unintended pregnancies has increased from 38 to 46%.³ In Peru, 19% of women reported at least one abortion, and 42% did not seek professional medical care, circumstance which put their lives at risk.^{4,5} This problem is greater in populations with lower income, and where legal abortion is restricted.³

Unintended pregnancies which end in abortion are, almost all, due to the lack of use, or

inadequate use, of a contraceptive method. Thus, promoting the use of an immediate post-abortion contraception is decisive,⁶ as it allows an optimal spacing between pregnancies, and reduces the risk of low birth weight, premature birth, maternal iron deficiency, and maternal death.⁷ It also allows for an adequate control of fertility in contexts where safe abortion is restricted.⁸ This situation can be reverted if access to free and effective contraception is improved.⁹ The International Federation of Gynecology and Obstetrics reports a quick recovery of fertility post-abortion,¹⁰ eight days after the administration of medication, and ten days after manual vacuum aspiration.¹¹ Because of this, hospital discharge is an ideal time to provide services of family planning that include education,¹² and an offer of the gamut of adequate contraceptive methods, by an experienced professional. Only in cases of septic abortion is the insertion of the intrauterine device delayed until recovery, with the rest of the contraceptive methods being eligible.

The acceptance of post-abortion contraceptive methods is variable across countries; for example, Bangladesh reports 84%, while Nepal and Ethiopia report 84 and 68%, respectively.^{12,13,14}



However, in South Africa, only 42% accepts post-abortion contraception, and they choose long lasting contraceptives even less frequently.¹⁴ A lower post-abortion contraception coverage is reported also, in women who have a couple, and in those who plan to have a child in the following 1 to 3 years, or after 3 to 5 years.¹³

Offering quality family planning services is a challenge, especially in low- and middle-income countries.¹⁵ Nearly 14% of the women who participated in a study reported that their acceptance of contraception was influenced by the pressure exerted by the medical services provider, without it being a free or voluntary choice. This is why a counseling centered in women's rights is fundamental.¹⁶

Among the factors that improve post-abortion contraceptive acceptance are an induced abortion, being 25 years or older, that the uterine evacuation procedure was manual vacuum aspiration,¹⁴ an adequate knowledge of family planning methods, counseling, and support from the couple.^{12,17} It is necessary to provide women who want permanent sterilization with alternative contraceptive methods.¹⁷

Cases of emergency care for patients with hemorrhage due to abortion are frequent (70 cases per month) at the *San Juan de Lurigancho* Hospital, located in the most populous district of Lima, Peru. In a lot of the cases, the culmination is manual vacuum aspiration. After two hours of procedure, without complications, the patient is discharged, and during this time, counseling and contraceptive methods are offered. Between 2017 and 2021, the highest rates of abortion were recorded, 24% (2020), and 27% (2021), higher than in previous years.¹⁸ Given the necessity to analyze this issue, the objective for the present study was to determine the frequency of acceptance, and associated factors with modern post-abortion contraception, in patients treated in a public hospital in Peru.

MATERIALS AND METHODS

Observational, cross-sectional study, carried out in patients in an immediate post-abortion condition. The patients were treated at the emergency services of the *San Juan Lurigancho* Hospital, in Lima, Peru, between June and December 2022. The patients were selected by convenience. *Inclusion criteria:* patients with manual vacuum aspiration due to abortion, between 2 to 6 hours after the procedure, without complications, and voluntary participation. *Exclusion criteria:* Patients with incomplete data, and victims of sexual violence. We didn't ask about the type of abortion, induced or spontaneous, because the Peruvian legislation only accepts therapeutic abortion, and women don't express if it is induced, to safeguard their integrity.

The sample was calculated at 166 patients, with a 95% confidence. The sampling was non-probabilistic and by convenience, due to available schedules for collecting (three times a week during the day shift).

Study variables: Age, school grade, civil status, occupation, method acceptance, type of contraceptive, couple's method acceptance, companion to the hospital, level of knowledge of contraceptive methods (good: 9-10 points, regular: 6-8 points, low: 0-5 points, categorized by percentile 50 and 75). A questionnaire was made for the last variable (Annex 1) which was validated by 5 experts (global Aiken's V: 0.948), and its reliability was checked with a pilot run with 20 participants (KR-20: 0.72).

The obstetric-gynecologic factors we collected were age of initiation of sexual relations, pregnancies, live births and previous abortions, interpregnancy period, type of previous contraceptive method, wish for new pregnancy, projected time for new pregnancy, and number of planned children. The institutional factors were sufficiency of counseling time, importance

of privacy-confidentiality, and agreeing with the counseling service.

The data was collected with a survey (questionnaire) applied by the obstetrician or the main researcher. The statistical analysis was processed in the SPSS software, version 27. To identify the association of qualitative variables with the acceptance of post-abortion contraceptive methods, the Pearson's chi-squared test, or Fisher's exact test were used, and for quantitative variables, the Mann-Whitney U test was used. Given that the distribution was not normal (Kolmogorov-Smirnov), the confidence level was 95%.

The hospital's Ethics Committee authorized the research, and the participants signed an informed consent statement as voluntary acceptance, as respect for their autonomy. Also, for under-age women, an informed assent was obtained.

RESULTS

One hundred sixty-six patients were treated during the period of the research, and 157 (94%) of them answered the survey. Seventy-three of them accepted the monthly injection method, 43 the quarterly injection, 18 condom, 14 contraceptive pills, 8 subdermal implant, and 1 intrauterine device. **Table 1**

Table 1. Type of chosen post-abortion contraceptive method

Type of contraceptive method	n (166)	(%)
None	10	6.0
Condom	18	10.8
Pills	14	8.4
Monthly injection	73	44.0
Quarterly injection	42	25.3
Intrauterine device	1	0.6
Implant	8	4.8

Regarding the personal factors associated with the acceptance of contraceptive methods, we found that women who accepted contraception were younger ($p < 0.01$), didn't have a couple ($p < 0.01$), and the couple agreed with the choice of contraception ($p < 0.01$). **Table 2**

As for obstetric-gynecologic factors, having 1 or 2 children ($p < 0.01$) was found to be associated with the acceptance of contraceptive methods.

Table 3

The institutional factors associated with the acceptance of contraceptive methods were agreeing with the time of family planning counseling ($p = 0.04$), the importance of privacy and confidentiality ($p < 0.01$) and agreeing with the provided counseling ($p = 0.02$). **Table 4**

DISCUSSION

Unintended pregnancies which end in abortion are a public health problem that rose to 46% in Latin America, in 2019, while the Caribbean had a rate of 50%.¹⁹ The women who accepted some kind of post-abortion contraceptive method in the present study were younger than the ones who did not accept it. Kayi et al., found in their study that young women can be more willing to accept family planning to prevent future pregnancies when their life-plan is clear to them.²⁰

Regarding civil status, women without a couple were associated with the acceptance of post-abortion contraceptive methods. On the contrary, Asubiojo et al. reported that single, divorced or widowed women were more inclined to choose modern contraceptive methods, after abortion.²¹ It is possible that women without a couple be more afraid of pregnancy as they don't have a stable relationship, or because pregnancy without the bond of marriage is culturally unacceptable.

When the couple agrees with the choice of contraceptive method, there is more acceptance than

**Table 2.** Personal factors associated with the acceptance of post-abortion contraceptive methods

	Acceptance of contraceptive methods				
Personal factors	Yes (156)		No (10)		p value [†]
Age (Me – IQR) years	(28 -10)		(33-11.5)		<0.01*
	n	%	n	%	
Education level					
No higher education	102	65.4	5	50.0	0.32**
Higher education	54	34.6	5	50.0	
Civil status					
No couple	142	91.0	4	40.0	<0.01**
With couple	14	9.0%	6	60.0	
Occupation					
Housewife	62	39.7	2	20.0	0.29
Dependent work	33	21.2	4	40.0	
Independent work	61	39.1	4	40.0	
Religion					
Catholic	106	67.9	7	70.0	0.57
Christian-Evangelical	36	23.0	3	30.0	
Agnostic or Atheist	14	9.0	0	0.0	
Nationality					
Peruvian	146	93.6	10	10.0	0.41**
Venezuelan	10	6.4	0	0.0	
The couple agrees with the choice of post-abortion contraceptive method					
Yes	131	84.0	3	30.0	<0.01
No	10	6.4	3	30.0	
No couple	15	9.6	4	40.0	
Person who accompanies the patient to the hospital for the abortion diagnosis care					
Couple	102	65.4	4	40.0	0.17**
Family-friend	54	34.6	6	60.0	
Level of knowledge about contraceptive methods					
Low-Regular	124	79.5	8	80.0	1.00**
Good	32	20.5	2	20.0	

[†] Pearson's chi-squared test, **Fisher's exact test, * Mann-Whitney U test.
Me: Median, IQR: Interquartile range.

Table 3. Obstetric-Gynecologic factors associated with the acceptance of post-abortion contraceptive methods

Obstetric-gynecologic factors	Acceptance of Contraceptive methods				p-value [†]
	Yes (156)		No (10)		
Age of initiation of sexual relations (Me – IQR) years	(18-3)		(17.5-3.5)		0.25*
	n	%	n	%	
Number of pregnancies					
None	24	15.4	1	10.0	0.83
1-2 pregnancies	67	42.9	4	40.0	
3 pregnancies or more	65	41.7	5	50.0	
Number of live children					
None	41	26.3	2	20.0	<0.01
1-2 children	94	60.3	3	30.0	
3 children or more	21	13.5	5	50.0	
Interpregnancy period					
< 6 months - 1 year	36	23.1	2	20.0	0.94
>1 year - 2 years	10	6.4	1	10.0	
> 2 years or more	87	55.8	6	60.0	
Does not apply	23	14.7	1	10.0	
Number of previous abortions					
None	63	40.4	5	50.0	0.06
1-2 abortions	86	55.1	3	30.0	
3 abortions or more	7	4.5	2	20.0	
Type of contraceptive method used before the abortions					
None	43	27.6	3	30.0	0.37
Hormonal method	69	44.2	2	20.0	
Mechanical barrier method	22	14.1	3	30.0	
Natural method	22	14.1	2	20.0	
Desire for new pregnancy					
Yes	98	62.8	6	60.0	0.85**
No	58	37.2	4	40.0	
Projected interpregnancy period					
1 month to 1 year	8	5.1	0	0.0	0.88
> 1 year to 2 years	24	15.4	2	20.0	
> 2 years or more	66	42.3	4	40.0	
Does not apply	58	37.2	4	40.0	
Number of children who were planned					
None	9	5.8	0	0.0	0.13
1 -2 children	100	64.1	4	40.0	
3 children or more	47	30.1	6	60.0	

[†] Pearson's chi-squared test, **Fisher's exact test, * Mann-Whitney U test.
Me: Median, IQR: Interquartile range.

**Table 4.** Institutional factors associated with the acceptance of post-abortion contraceptive methods

Institutional factors	Acceptance of contraceptive methods				p-value [†]
	Yes (156)		No (10)		
	N	%	N	%	
Considers that the counseling time in family planning was enough					
Totally disagrees-Disagrees	35	22.4	5	50.0	0.04
Neither agrees nor disagrees	29	18.6	3	30.0	
Agrees-Totally agrees	92	59.0	2	20.0	
Considers that privacy-confidentiality are important during family planning counseling					
Totally disagrees-Disagrees	15	9.6	1	10.0	<0.01
Neither agrees nor disagrees	2	1.3	2	20.0	
Agrees-Totally agrees	139	89.1	7	70.0	
The service received in family planning counseling was adequate					
Totally disagrees-Disagrees	25	16.0	2	20.0	0.02
Neither agrees nor disagrees	27	17.3	5	50.0	
Agrees-Totally agrees	104	66.7	3	30.0	

[†] Pearson's chi-squared test.

what is chosen in the post-abortion. Lencha et al. found that women with a couple who support post-abortion family planning, had 3.21 times more chances of using a contraceptive method.¹² This scenario reflects the influence of the male couple in the choice of contraceptive method.

Regarding institutional factors, the importance of privacy and confidentiality during counseling in family planning were associated with the acceptance of post-abortion contraceptive methods. According to Tong et al., the use of contraceptives by women was associated with a trustworthy counseling.²² Lencha et al. observed that when there is bad patient-health professional rapport, women leave the health services location without a family planning method. Thus, empathy, assertive communication, and trust, are decisive factors to be shown by the health professional during counseling.¹²

The time of counseling in family planning offered by the health professional, and the perception

of the service received in family planning, were associated with the acceptance of post-abortion contraceptive methods. These findings agree with those of Bizuneh et al., who report that the chances of using post-abortion family planning were greater among women who received timely counseling.²³ Hinkosa et al. mention that around 92% of the patients received counseling related with the return of fertility.²⁴ This explains why women who receive counseling easily understand the risks of pregnancies for them and the growing fetus. Also, they are more aware and knowledgeable, and this is manifest in the increased use of post-abortion contraceptive methods.

Abebe et al. found that the right counseling can prevent negative attitudes and perceptions in women, about the efficacy and safety of contraceptives.⁶ Likewise, the authorities of health institutions must encourage service providers to participate in periodical trainings, and to attend academic conferences where reproduction and

contraception are the subjects, to update their competences.

The limitations of the study stem from the cross-sectional design, which doesn't allow to demonstrate causality relations between the analyzed factors and the acceptance of contraceptive methods. However, it allows to identify the variables that are most frequently associated with the acceptance, or rejection, of a family planning method. We suggest further research on how the characteristics of hospital care, and supply availability can be related with the acceptance of a contraceptive method. Also, the sampling was non-probabilistic, limiting the generalization of the results to the population, or other hospital realities.

CONCLUTIONS

Age, not having a couple, and agreeing with the couple about the choice of post-abortion contraceptive method, together with institutional factors (time of counseling in family planning, importance of privacy-confidentiality, and perception of the service of counseling in family planning) were associated, significantly, with the acceptance of some modern post-abortion contraceptive method.

REFERENCES

- Hoffman B, Schorge JO, Schaffer JI, Halvorson LM, Bradshaw KD, Cunningham FG. Williams Ginecología. 2ª ed. México D.F.: McGraw-Hill Interamericana Editores, 2014.
- Huber D, Curtis C, Irani L, Pappa S, Arrington L. Postabortion Care: 20 Years of Strong Evidence on Emergency Treatment, Family Planning, and Other Programming Components. *Glob Health Sci Pract.* 2016;4(3):481-94. <https://doi.org/10.9745/GHSP-D-16-00052>
- Bearak J, Popinchalk A, Ganatra B, Moller AB, Tunçalp Ö, Beavin C, et al. Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990–2019. *The Lancet Global Health.* 2020;8(9):e1152-61. [https://doi.org/10.1016/S2214-109X\(20\)30315-6](https://doi.org/10.1016/S2214-109X(20)30315-6)
- PROMSEX. PROMSEX lanza nuevo estudio sobre aborto. [en línea]. Dirección URL: <<https://promsex.org/el-aborto-en-cifras/>> (Consulta: septiembre 2023)
- Juárez-Chávez E, Villalobos Ruiz JH, Carrasco Navarro RM, Guerrero Vásquez R, Chávez Alvarado SI. Exploring the prevalence of abortion and its characteristics in Perú. *Contraception.* 2023;126, ID 110115, 5 páginas. <https://doi.org/10.1016/j.contraception.2023.110115>
- Abebe AM, Wudu Kassaw M, Estifanos Shewangashaw N. Postabortion Contraception Acceptance and Associated Factors in Dessie Health Center and Marie Stopes International Clinics, South Wollo Northeast, Amhara Region, 2017. *International Journal of Reproductive Medicine.* 2019;2019, ID 1327351, 10 páginas. <https://doi.org/10.1155/2019/1327351>
- Virk J, Zhang J, Olsen J. Medical Abortion and the Risk of Subsequent Adverse Pregnancy Outcomes. *N Engl J Med.* 2007;357(7):648-53. <https://doi.org/10.1056/NEJMoa070445>
- Magalona S, Byrne M, OlaOlorun FM, Mosso R, Omoluabi E, Moreau C, et al. Contraceptive Use Before and After Abortion: A Cross-Sectional Study from Nigeria and Côte d'Ivoire. *Studies in Family Planning.* 2022;53(3):433-53. <https://doi.org/10.1111/sifp.12208>
- Peipert JF, Madden T, Allsworth JE, Secura GM. Preventing Unintended Pregnancies by Providing No-Cost Contraception. *Obstet Gynecol.* 2012;120(6):1291-7. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4000282/>
- Federación Internacional de Ginecología y Obstetricia. Anticoncepción posaborto: anticonceptivos reversibles de acción prolongada. [en línea]. Dirección URL: <<https://bitly.ws/XnIA>> (Consulta: septiembre 2023).
- Schreiber CA, Sober S, Ratcliffe S, Creinin MD. Ovulation resumption after medical abortion with mifepristone and misoprostol. *Contraception.* 2011;84(3):230-3. <https://doi.org/10.1016/j.contraception.2011.01.013>
- Lencha TT, Gube AA, Gessese MM, Abadi MT. Post-abortion family planning utilization and associated factors in health facilities of Wolaita Zone, Southern Ethiopia: Mixed study. *PLOS ONE.* 2022;17(6):e0267545. <https://doi.org/10.1371/journal.pone.0267545>
- Abebe BA, Abdissa G, Ganfure G, Mossisa M. Postabortion Contraceptive Utilization, Preferences, and Associated Factors among Women Receiving Abortion Care Services in Health Facilities of Ambo Town, Ethiopia. *Int J Reprod Med.* 2022;2022:2681478. <https://doi.org/10.1155/2022/2681478>
- Benson J, Andersen K, Brahmi D, Healy J, Mark A, Ajode A, et al. What contraception do women use after abortion? An analysis of 319,385 cases from eight countries. *Global Public Health.* 2018;13(1):35-50. <https://doi.org/10.1080/17441692.2016.1174280>
- Baynes C, Yegon E, Lusiola G, Achola J, Kahando R. Post-abortion fertility desires, contraceptive uptake and unmet need for family planning: voices of post-abortion care clients in Tanzania. *Journal of Biosocial Science.* 2021;53(6):908-23. <https://doi.org/10.1017/S0021932020000607>



16. Acre VN, Dijkerman S, Calhoun LM, Speizer IS, Poss C, Nyamato E. The association of quality contraceptive counseling measures with postabortion contraceptive method acceptance and choice: results from client exit interviews across eight countries. *BMC Health Services Research*. 2022;22(1):1519. <https://doi.org/10.1186/s12913-022-08851-0>
17. Sebazungu T, Ruzindana K, Kiteesa D, Magriples U. Factors Affecting Immediate Use of Contraception Among Women Hospitalised for Abortion in Two Public Hospitals in Kigali, Rwanda: A Cross Sectional Study. *East Afr Health Res J*. 2023;7(1):20-4. <https://doi.org/10.24248/eahrj.v7i1.704>
18. Veliz MV, Aquino NG, Robles V, Tasayco P, Pelaez A, Benites Y. Análisis de la situación de salud hospitalaria 2022. Lima - Perú: Hospital San Juan de Lurigancho; 2022. Disponible en: <https://mail.hospitalsjl.gob.pe/ArchivosDescarga/Epidemiologia/ASIS/ASIS2022.pdf>
19. Guttmacher Institute. Guttmacher Institute. Embarazo no planeado y aborto en América Latina y el Caribe. [en línea]. Dirección URL: <https://www.guttmacher.org/es/fact-sheet/unintended-pregnancy-and-abortion-latin-america-and-caribbean> (Consulta: septiembre de 2023).
20. Kayi EA, Biney AAE, Doodoo ND, Ofori CAE, Doodoo FNA. Women's post-abortion contraceptive use: Are predictors the same for immediate and future uptake of contraception? Evidence from Ghana. *PLOS ONE*. 2021;16(12):e0261005. <https://doi.org/10.1371/journal.pone.0261005>
21. Asubiojo B, Ng'wamkai PE, Shayo BC, Mwangi R, Mahande MJ, Msuya SE, et al. Predictors and Barriers to Post Abortion Family Planning Uptake in Hai District, Northern Tanzania: A Mixed Methods Study. *EA Health Research Journal*. 2021;5(2):182-92. <https://doi.org/10.24248/eahrj.v5i2.671>
22. Tong C, Luo Y, Li T. Factors Associated with the Choice of Contraceptive Method following an Induced Abortion after Receiving PFPS Counseling among Women Aged 20–49 Years in Hunan Province, China. *Healthcare*. 2023;11(4):535. <https://doi.org/10.3390/healthcare11040535>
23. Bizuneh AD, Azeze GG. Post-abortion family planning use, method preference, and its determinant factors in Eastern Africa: a systematic review and meta-analysis. *Systematic Reviews*. 2021;10(1):172. <https://doi.org/10.1186/s13643-021-01731-4>
24. Hinkosa L, Deti M, Tesfaye T, Bekele D, Diriba A. Postabortion contraceptives uptake and its associated factors among clients visiting abortion care services in public hospitals in West Shewa Zone, Oromia regional state, Ethiopia, 2021. *SAGE Open Medicine*. 2023;11: 20503121231187735, 8 páginas. <https://doi.org/10.1177/20503121231187735>

ANNEX

Annex 1. Knowledge about post-abortion contraception questionnaire (continued on the next page)

Choose the correct alternative in the following questions

Knowledge about contraceptive methods	
Generalities about post-abortion family planning	
1	What are the benefits of using contraceptives after abortion? a) The menstrual period cannot be regularized. b) Avoid an immediate pregnancy. c) The post-abortion warning signs can be prevented (fever, excessive bleeding). d) The couple can choose the contraceptive method.
2	After the manual vacuum aspiration or uterine curettage procedure in case of abortion (complete, incomplete, or retained), When can you begin to use a post-abortion contraceptive method if you don't have complications? a) 7 days after the procedure b) The same day of the procedure. c) 14 days after the procedure. d) I don't know
3	How long after an abortion can a woman get pregnant again? a) 14 days b) 1 month c) 1 year d) I don't know
Contraceptive methods characteristics	
4	For you, which contraceptive method is the most effective? a) Condom b) tubal ligation c) Contraceptive pill d) Rhythm, calendar method
5	Select the correct alternative about condoms: a) They can be used more than one time b) They are placed on the erect penis. c) They don't prevent Sexually Transmitted Diseases. d) They don't prevent unintended pregnancies
6	Which of the following is a long-lasting contraception method? a) Condom b) subdermal implant c) Contraceptive pill d) Rhythm or calendar method



Annex 1. Knowledge about post-abortion contraception questionnaire (continuation)

Choose the correct alternative in the following questions

Knowledge about contraceptive methods	
7	How should contraceptive pills be taken?
	a) They must be taken every time you have sexual relations
	b) They must be taken daily
	c) They must be taken every other day
	d) They must be taken once a month
8	What do you know about the subdermal implant?
	It's a small, flexible rod, placed under the skin of the arm
	b) After placement you would not be able to do your daily activities with normality
	c) It can be placed by any health professional
	d) It can prevent an unintended pregnancy for 5 years
9	What do you know about the intrauterine device (IUD)?
	a) It is a safe method that lasts 5 years
	b) It is a pill whose compound is based on copper
	c) It is a device in the shape of a "T", placed in the uterus, via the vagina
	d) If placed, it can cause cervical cancer
10	Which of the following contraception methods are considered permanent?
	a) Condom, contraceptive pills, rhythm method
	b) Condom, tubal ligation, contraceptive pills
	c) quarterly injection, monthly injection
	d) tubal ligation, vasectomy