

Predictors of choice of abortion method among women attending abortion clinic in a government hospital in Nepal

Basnet B,¹ Adhikari S,² Mandal PK,³ Thapa S,⁴ Acharya DK⁵

¹Bidhya Basnet, Teaching Assistant, Department of Midwifery, Biratnagar Nursing Campus, Biratnagar, Morang; ²Sunaina Adhikari, Senior Instructor, Department of Maternal Health, College of Nursing, BP Koirala Institute of Health Sciences, Dharan, Sunsari; ³Punam Kumari Mandal, Assistant Professor, Department of Community Health Nursing, Biratnagar Nursing Campus, Biratnagar, Morang; ⁴Sheela Thapa, Assistant Professor, Department of Nursing, School of Nursing and Midwifery, Karnali Academy of Health Sciences, Chandannath, Jumla; ⁵Devaka Kumari Acharya, Associate Professor, Department of Adult Health, Maharajgunj Nursing Campus, Kathmandu Nepal.

Abstract

Background: Abortion has long been a method of terminating an unintended pregnancy globally and can be provided through either medical or surgical ways. Factors affecting the choice of abortion method appear to be numerous and complex.

Objectives: This study aimed to identify the predictors of choice of abortion methods among women attending abortion clinic.

Methods: A cross sectional analytical study conducted in Paropakar Maternity and Women's Hospital, Thapathali among 132 clients, at nine weeks of gestation. Samples were selected using consecutive sampling technique. Data were collected for the period of one month (27th February to 27th March 2016) using a semi structured questionnaire. Descriptive and Inferential statistics (bivariate analysis, multivariate analysis) were used to find the predictors of choice of methods of abortion and final model was selected.

Results: Among the women attending for abortion 68 (51.5%) had chosen surgical over medical method of abortion. Eight to nine weeks of gestation (OR: 6.043, 95% CI: 1.636-22.316), predetermined choice on surgical method of abortion (OR: 13.871, 95% CI: 2.419-79.528) and inconvenient to revisit the clinic (OR: 4.299, CI: 9(1.127-16.397) were found to be the predictors of choice of abortion methods.

Conclusion: Predetermined choice of particular method, period of gestation and revisit to the clinic are the major predictors of choice of surgical over medical method of abortion. The choice of abortion methods is influenced by various factors so offering the choice will help in developing the women centered abortion care.

Key words: Abortion; Choice; Medical; Surgical.

Access this article online

Website: www.jkmc.com.np

DOI: <https://doi.org/10.3126/jkmc.v12i3.64347>

HOW TO CITE

Basnet B, Adhikari S, Mandal PK, Thapa S, Acharya DK. Predictors of choice of abortion method among women attending abortion clinic in a government hospital in Nepal. J Kathmandu Med Coll. 2023;12(3):129-34.

Submitted: Jul 23, 2021

Accepted: Sep 05, 2023

Published: Oct 21, 2023

Address for correspondence

Ms. Bidhya Basnet
Teaching Assistant, Department of Midwifery,
Biratnagar Nursing Campus,
Biratnagar, Morang, Nepal.
E-mail: bidhyabasnet01@gmail.com

INTRODUCTION

Unintended pregnancy is a major public health problem globally and are known to have adverse consequences to mother and the child. Abortion, as a method of terminating an unintended pregnancy,¹ accounts for 7% of maternal mortality in Nepal.² Medical Abortion (MA) is safe and effective alternative to surgery and is acknowledged by World Health Organisation (WHO) in its model list of essential medicines.^{3,4}



This work is licensed under a Creative Commons Attribution-Non Commercial 4.0 International License.

Copyright © 2023 Journal of Kathmandu Medical College (JKMC)

ISSN: 2019-1785 (Print), 2091-1793 (Online)

In a 2010 Ethiopian study among 414 women, 251 (61.2%) preferred MA over Manual Vacuum Aspiration (MVA).⁵ Conversely, a Nepali study among 3164 women in the same year reported 2556 (81%) opting for MVA.⁶ Studies reveal women's method preferences based on characteristics such as avoiding surgery, naturalness, women's control, time concerns, and side effect concerns.^{5,7-9} Government of Nepal (GoN) legalised abortion in 2002 and initiated services in 2004.¹⁰ In 2009, GoN introduced MA, providing women with a choice between medical and surgical abortion procedures.¹¹ A woman opting for abortion, should have the freedom to select from various methods available.¹² Offering choices enable women to receive patient centred abortion care.¹³ There is dearth of information as far as women's experiences, perspective, and preferences are concerned. Hence, researchers are interested in identifying the predictors of choice of abortion methods.

METHODOLOGY

An analytical cross-sectional study design was adopted to identify predictors of choice of abortion methods among women attending Comprehensive Abortion Care (CAC) Unit of Paropakar Maternity and Women's Hospital (PMWH) for abortion, during a period of four weeks from 2016 February 27 to 2016 March 27. The sample size formula, $n = z^2pq/e^2$ was used. Considering $p = 0.5$ (50%); $z = 1.96$ at 95% confidence level; $q = 1-p$; and $e = 0.05$ at 5% margin of error, the sample size calculated was 385. As, the registered monthly flow of cases at PMWH for abortion was around 154, after the finite population correction method, $n_0 / \{1 + (n_0 - 1) / N\}$ the value came to be 110. Adding 20% for non-response rate, the sample size was calculated to be 132. Consecutive sampling technique was followed to select 132 women.

The inclusion criteria of this study were women clinically determined to be eligible for both surgical and medical abortion who were up to nine weeks of pregnancy, not having two Caesarean section and other medical conditions like known allergy to mifepristone, misoprostol, no confirmed or suspected ectopic pregnancy, inherited porphyria, chronic adrenal disease, age not below 16 years (as they required consent from their parents).

Semi-structured and interview-based questionnaire was developed on the basis of the review of literature and consultation with experts. The developed questionnaire consisted of the following sections: socio-demographic information, reproductive characteristics, abortion-related characteristics, predetermined choice, method

attributes, and abortion counselling. Pretesting was done in the CAC unit itself as the clients at the clinic were non-repetitive and those were excluded from the study. Study was conducted after obtaining approval from the Institutional Review Committee (IRC) of Institute of Medicine (IOM), Tribhuvan University (Ref. 232(6-11-E)2/072/073), and approval from PMWH. Written informed consent was taken from the respondents after explaining the components of study and informed consent. Privacy was ensured by collecting data from each respondent separately in a separate room and confidentiality was maintained by coding the questionnaire.

Women were interviewed after their clinical assessment and before counselling by nurses and doctors of the CAC unit. It took about 15-20 minutes to interview each woman and the women were made comfortable throughout the data collection period as keeping in consideration to the sensitivity of the questions being asked.

Data entry and analysis were done in IBM SPSS Statistics for Windows, version 20 (IBM Corp., Armonk, N.Y., USA). The different variable used and analysed in the study were socio-demographic information, reproductive characteristics, abortion-related characteristics, predetermined choice, method attributes, and abortion counselling. Descriptive, bivariate, and multivariate logistic regression analysis were done. Variables that were significant at 5% level of significance in bivariate analysis had been analysed by multivariate logistic regression. Hosmer-Lemeshow goodness-of-fit was applied at 95% Confidence Interval (CI) to fit the model (0.620).

RESULTS

Mean age of the women was 30.5 ± 6.4 years and ranged from 17 years to 47 years. Similarly, 80 (60.6%) of them were educated more than school leaving certificate (SLC) and 65 (40.9%) of women were working. Majority (128, 97.0%) of the respondents were married. Similarly, 77 (58.3%) were at the gestational age of 6-7 weeks (Table 1).

Findings revealed that all 132 (100%) of the women were aware of both methods of abortion. Only about five percent (7, 5.3%) of the women knew that they could have choice between the two methods up to nine weeks and 63 days. Whereas 41 (31.1%) women had previous abortion and among the women who had undergone abortion, most 29 (70.7%) had undergone surgical abortion. Most (97, 73.5%) of the women had

predetermined choice of abortion method before visiting the clinic. Among the women, who had predetermined choice, 50 (51.5%) of the women had their choice on surgical method (Table 2).

In this study half 66 (50.0%) of the women coming for abortion had a little fear of surgery and 82 (62.1%) of the women did not prefer privacy and control. Similarly, 83 (62.9%) of the women were not bothered to show their private parts to doctors or nurses. Likewise, revisit to the clinic caused inconvenience to most (45, 65.9%) of the women. Most (85, 64.4%) of the women wanted to get rid of their current pregnancy and could not wait for few days. Most (99, 75.0%) of the women were not bothered by bleeding duration and seeing blood clots. Most (92, 69.7%) of the women could endure painful cramping. Likewise, 85 (64.4%) were able to endure side effects like nausea and vomiting. For most (84, 63.6%) women, natural feelings did not matter while going through the process of abortion (Table 3). Likewise, 68 (51.5%) women had chosen surgical over medical method of abortion (Table 4).

In final logistic model, period of gestation, predetermined choice on the methods, and revisit to the clinic was found to be significantly associated with the choice of abortion method. Odds of choosing a surgical method was six times (OR: 6.043; CI: 1.636-22.316) more at eight to nine weeks of gestation as compared to women at gestational age below eight weeks.

Similarly, the women with predetermined choice on surgical method was nearly 13 times (OR: 13.871 CI: 2.419-79.528) more likely to choose surgical method and this association was statistically significant ($p=0.003$). Likewise, the women who were not convenient to revisit the clinic were four times (OR: 4.299 CI: 1.127-16.397) more likely to choose surgical methods than women who were convenient to revisit the clinic (Table 5).

Table 1: Socio-demographic characteristics of women (N = 132)

Socio-demographic characteristics	n (%)
Age in years	
<20	3 (2.3)
20-39	117 (88.6)
≥40	12 (9.1)
Mean ± SD: 30.5 ± 6.4 years	
Educational status	
Illiterate	7 (5.3)
Up to SLC	45 (34.1)
More than SLC	80 (60.6)
Primary occupation	
Service	23 (17.4)
Business	13 (9.8)
Agriculture	12 (9.1)
Daily wages	6 (4.6)
Homemaker	65 (49.2)
Others	13 (9.8)
Marital status	
Unmarried	4 (3.0)
Married	128 (97.0)
Period of gestation (in weeks)	
<6	11 (8.3)
6-7	77 (58.3)
8-9	44 (33.3)

Table 2: Abortion-related characteristics of women (N = 132)

Awareness on abortion method	n (%)
Knowledge on duration up to which women can have choice (N = 132)	
Nine weeks or 63 days	7 (5.3)
Other response	11 (8.3)
Don't know	114 (86.4)
Past chosen abortion method (n = 41)	
Surgical method	29 (70.7)
Medical method	12 (29.3)
Predetermined choice of method for current abortion (n = 97)	
Medical	50 (51.5)
Surgical	47 (48.5)

Table 3: Method attributes of women (N = 132)

Method attributes	n (%)
Fear of surgery	
A little bit/Somewhat	66 (50.0)
A lot	66 (50.0)
Showing of private parts	
Does not bother	83 (62.9)
Bothers a lot	49 (37.1)
Privacy and control	
Does not prefer privacy and control	82 (62.1)
Prefer privacy and control	50 (37.9)
Revisit to the clinic	
Cause inconvenience	45 (34.1)
Does not cause inconvenience	87 (65.9)
Duration of abortion	
Want to get rid of it right away	85 (64.4)
Able to wait for few days	47 (35.6)
Bleeding duration and seeing of clots	
Bother a lot	33 (25.0)
Not much bothered	99 (75.0)
Endure painful cramping	
Can't endure painful cramping	40 (30.3)
Can endure painful cramping	92 (69.7)
Side-effects like nausea and vomiting	
Not able to endure nausea and vomiting	47 (35.6)
Able to endure nausea and vomiting	85 (64.4)
Natural feeling	
Natural feeling does not matter	84 (63.6)
Natural feelings matter	48 (36.4)

Table 4: Choice of abortion method among women (N = 132)

Choice of method chosen	n (%)
Surgical	68 (51.5)
Medical	64 (48.5)

Table 5: Predictors of choice of abortion method (N = 132)

Characteristics	COR (95% CI)	AOR (95% CI)	p-value
Ethnicity: Others than Brahmin/Chhetri	2.86 (1.36-6.04)	2.25 (0.58-8.69)	0.23
Education: Up to SLC	3.32 (1.53-7.19)	2.28 (0.58-8.96)	0.23
Period of gestation: 8-9 weeks	3.28 (1.51-7.12)	6.04 (1.63-22.31)	0.007
Predetermined choice of method: Surgical over medical	6.1 (2.53-14.71)	13.87 (2.41-79.52)	0.003
Privacy and control: Does not concern	4.26 (2-9.07)	1.30 (0.30-5.65)	0.72
Showing private parts: Does not bother	3 (1.43-6.26)	2.42 (0.66-8.83)	0.17
Revisit to the clinic: Cause inconvenience	4.08 (1.85-8.98)	4.29 (1.12-16.39)	0.03
Duration of abortion: Want to get rid of it right away	4.79 (2.2-10.44)	0.39 (0.67-2.36)	0.31
Side-effects like nausea and vomiting: Not able to endure	2.18 (1.04-4.54)	1.55 (0.41-5.84)	0.51
Natural feelings: Does not matter	2.81 (1.35-5.88)	2.21 (0.58-8.46)	0.24

Note: COR = Crude odds ratio; AOR = Adjusted odds ratio; p-value <0.05 = significant.

DISCUSSION

The present study showed that mean age of the women with standard deviation was 30.5 ± 6.4 years and varies from 17 to 47 years. Majority (116, 87.9%) were from Kathmandu valley and about five percent (7, 5.3%) were illiterate. The primary occupation of nearly half of the women was homemaker (65, 49.2%) and 128 (97.0%) were married. Similarly, in a study conducted in 2012 at same centre (Maternity Hospital at Thapathali), the characteristics of women attending the abortion were the median age being 27 years, 29% of the client were illiterate, and 97% of the client were married.¹⁴ This finding in terms of literacy is not similar, this may be because of small sample size. Only 41 (31.1%) of the women in this study had previous abortion and is consistent with the study conducted by Shochet and Trussell (2008) among United States (US) women where approximately one-third of the participants (34%) had undergone previous abortion.¹⁵

In this study, 68 (51.5%) of the women had chosen surgical and 64 (48.5%) of the women had chosen medical method of abortion which is in contrast to the findings conducted in Nepal in 2010 where only 19% had chosen medical method⁶ whereas National Demographic Health Survey 2016 showed that 72% had chosen medical abortion.¹⁶ These findings show the users of medical abortion are increasing gradually in Nepal.

In bivariate analysis, ethnicity was found to be significantly associated with the choice of abortion method. In reference to the women who belonged to Brahmin/Chhetri, women who belonged to ethnicity other than that were two times more likely to choose surgical method of abortion (COR: 2.86, 1.361-6.040). It was also supported by the findings from the study

in Nepal, where Janajati women, were less likely (OR = 0.64; 95% CI = 0.48–0.86) to choose medical method of abortion as compared to the upper Hindu caste.⁶ This might be due to the fact that the study was conducted in Kathmandu valley and majority of the population in Kathmandu valley belong to ethnicity other than Brahmin/Chhetri. This might also be because the services of this government hospital are mostly utilised by underprivileged group and the study was conducted only in a government hospital.

Study conducted in Nepal in 2010 showed that women who were illiterate or had medium level education were more likely to choose surgical method of abortion than women with higher level education⁶ and this finding is consistent with the present study where women with education less than SLC are more likely to choose surgical method of abortion. Whereas in a study conducted in Vietnam, educational level was not significant with the uptake of different abortion methods.¹³ This might be because the medical abortion is newly introduced in Nepal and women with higher education are more competent in accepting the new methods.

In this study, age was not found to be significant with choice of method of abortion and a study conducted in Nepal also shows that there was no significant association between age and the abortion procedure chosen.⁶ Whereas the study conducted in Vietnam showed a significant association ($p < 0.05$) between age and method of choice.¹⁷

Multivariate analysis shows women who were at gestational age of eight to nine weeks were six times (OR = 6.043; CI = 1.636–22.316) more likely to choose surgical method of abortion which is contradictory to the study conducted in Vietnam where the gestational age was not significant in the final adjusted model¹⁷ and similar to the study conducted in Ethiopia where gestational age was associated with method of choice.⁵ In this study women with predetermined choice on surgical method were

thirteen times (OR = 13.871; CI = 2.419–79.528) more likely to choose surgical method of abortion latter which is contrast to the finding conducted in Nepal where women who had decided on MVA prior to receiving information only 29% switch to medical method.⁶ The results clearly indicated that the women knew what method they would like to use and they ended up getting that particular method. In this study, those women who felt inconvenient to revisit the clinic were four times (OR = 4.299; CI = 1.127–16.397) more likely to choose surgical method of abortion which is consistent with the findings of the study conducted in US, where 51 women who preferred few visits to a clinic were likely to opt for surgical method of abortion.⁵

Small sample size and single-centre study were the major limitations of this study

CONCLUSION

From the findings of this study, it can be concluded that predetermined choice of particular method, period of gestation, and revisit to the clinic were found to be significant and hence the major predictors of choice of surgical over medical method of abortion. Similarly, the factors affecting choice of methods are diverse and complex. Providers need to be sensitive and incorporate these factors while providing choices to women. Offering women choice will help her in receiving the women centred abortion care.

ACKNOWLEDGMENT

The authors would like to express sincere gratitude to the IRC of Institute of Medicine, Tribhuvan University and Paropakar Maternity and Women's Hospital for providing the ethical clearance to carry out this study. The authors are also indebted to the valuable support received from the Professors Nira Pandey and Shyam Thapa.

Conflict of interest: None.

Source(s) of support: None.

REFERENCES

1. Singh S, Sedgh G, Hussain R. Unintended pregnancy: Worldwide levels, trends, and outcomes. *Stud Fam Plann.* 2010 Dec;41(4):241-50. [[PubMed](#) | [Full Text](#) | [DOI](#)]
2. Pradhan A, Subedi BK, Barnett S, Sharma SK, Puri M, Paudel P, et al, Louise Hulton. 2010., Nepal maternal mortality and morbidity study 2008/2009. Family Health Division, Department of Health Service, Ministry of Health and Population, Government of Nepal, Kathmandu, Nepal. [[Full Text](#)]
3. Panta OB, Bhattarai D, Parajuli N. Medical abortion versus manual vacuum aspiration in a hilly district hospital of eastern Nepal: A comparative study. *Kathmandu Univ Med J.* 2013;11(43):206-9. [[PubMed](#) | [Full Text](#) | [DOI](#)]
4. Comprehensive abortion care: An integrated reference manual Kathmandu: National health training centre; 2015.65p.

5. Woldetsadik MA, Sendekie TY, White MT, Zegeye DT. Client preferences and acceptability for medical abortion and MVA as early pregnancy termination method in Northwest Ethiopia. *Reprod Health*. 2011;8:19. [[PubMed](#) | [Full Text](#) | [DOI](#)]
6. Tamang A, Tuladhar S, Tamang J, Ganatra B, Dulal B. Factors associated with choice of medical or surgical abortion among women in Nepal. *Int J Gynaecol Obstet*. 2012 Sep;118:552-6. [[PubMed](#) | [Full Text](#) | [DOI](#)]
7. Harvey SM, Beckman LJ, Satre SJ. Choice of and satisfaction with methods of medical and surgical abortion among US clinic patients. *Fam Plann Perspect*. 2001 Sep-Oct;33(5):212-6. [[PubMed](#) | [Full Text](#) | [DOI](#)]
8. Saha R, Shrestha NS, Koirala B, Kandel P, Shrestha S. Patients choice for method of early abortion among comprehensive abortion care (CAC) clients at Kathmandu Medical College Teaching Hospital (KMCTH). *Kathmandu Univ Med J (KUMJ)*. 2007 Jul-Sep;5(3):324-9. [[PubMed](#) | [Full Text](#)]
9. Henshaw RC, Naji SA, Russell IT, Templeton AA. Comparison of medical abortion with surgical vacuum aspiration: Women's preferences and acceptability of treatment. *BMJ*. 1993 Sep 18;307(6906):714-7. [[PubMed](#) | [Full Text](#) | [DOI](#)]
10. Thapa S. Abortion law in Nepal: The road to reform. *Reprod Health Matters*. 2004 Nov;12(24 Suppl):85-94. [[PubMed](#) | [Full Text](#) | [DOI](#)]
11. Upreti M. Abortion law reform in Nepal. *Int J Gynaecol Obstet*. 2014 Aug 1;126(2):193-7. [[PubMed](#) | [Full Text](#) | [DOI](#)]
12. World Health Organisation. Clinical practice handbook for safe abortion. 2014. [[PubMed](#) | [Full Text](#)]
13. Hyman AG, Castleman L. Woman-centered abortion care. Reference Manual. Chapel Hill (NC): Ipas. 2005. [[Full Text](#)]
14. Thapa S, Neupane S, Basnett I, Read E. Women having abortion in urban Nepal: 2005 and 2010 compared. *Kathmandu Univ Med J (KUMJ)*. 2012 Jul-Sep;10(39):8-13. [[PubMed](#) | [Full Text](#) | [DOI](#)]
15. Shochet T, Trussell J. Determinants of demand: Method selection and provider preference among US women seeking abortion services. *Contraception*. 2008 Jun;77(6):397-404. [[PubMed](#) | [Full Text](#) | [DOI](#)]
16. Ministry of Health and Population [Nepal], New ERA, and ICF International Inc. 2012 Nepal Demographic and Health Survey 2011. Kathmandu Nepal: Ministry of Health and Population, New ERA, ICF International. Calverton, Maryland. [[Full Text](#)]
17. Ngo TD, Free C, Le HT, Edwards P, Pham KH, Nguyen YB, et al. Service users' attributes associated with the uptake of medical versus surgical abortion at public health facilities in Vietnam. *Int J Gynaecol Obstet*. 2014 Jun;125(3):247-52. [[PubMed](#) | [Full Text](#) | [DOI](#)]