Socio Demographic Determinants of Abortion: A Cross Sectional Retrospective Study

Agniwesh[1], Dhanakar Thakur[2], Anil Kumar Singh[3], Rashmi R. Prasad[4], Ajay Kumar Agarwal[5], Sakshi Agarwal[6]

[1]Associate Professor, Department of FMT, Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh, India
[2]Associate Professor, Department of Medicine, Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh, India
[3]Assistant Professor, Department of Community Medicine, Santosh Medical College, Ghaziabad, Uttar Pradesh, India
[4]Assistant Professor, Department of Obstetrics and Gynaecology, Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh, India
[5]Professor, Department of Community Medicine, Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh, India
[6]Tutor, Department of Biochemistry, Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh, India

Abstract:
Objectives: The present study was to investigate the socio-demographic determination of abortion and was to correlate of age, religion, community and education with abortion and parity with abortion.
Methods: A total of 205 cases of abortion were enrolled in the Department of Obstetrics and Gynaecology, RMCH, Bareilly during a period from August 2019 to February 2021. Data was collected by using some questionnaire like as religion, community, education and gravida in prescribed Performa.
Results: Maximum abortion 42.44%, in Hindu (42.95%) and in Muslim (37.04%)were in 26-28 years age group, maximum cases (62.93%) were from urban community, maximum cases (32.19%) in women educated up to high school, maximum cases (48.29%) in gravida 3, (46.34%) in women having two lived child.
Conclusions: It is concluded that to reduce abortion rate, level of education be raised and safety of every delivered baby be secured and active family planning advices during second gravida be provided.
Keywords: Abortion, Gravida, Parity, lived child.

Introduction

Abortion is defined as the loss of product of conception (whether induced or spontaneous) before 28 completed weeks of gestation. [1,2] Legally, abortion (miscarriage) means the premature expulsion of the foetus from the mother's womb at any time of pregnancy before full term of pregnancy is completed. [3] The termination or expulsion of an unintended pregnancy, i.e. induced abortion, is a common obstetrical experience across the world.[4,5] Many women turn to abortion to terminate their unwanted pregnancies. [6,7] Prevalence of induced abortion, estimates 25 and 40 per women aged 15-49 years annually. [8,9]

Residence, parity, educational status, antenatal care (ANC) utilization, place of delivery, maternal nutritional status and maternal obstetric factors were significantly associated with abortion.[10, 11, 12]

In India about 6 million abortions take place every year, out of which 4 million are induced and 2 million are spontaneous.

Safe abortion services protect women's right to health.[13] Article 12 of the international Covenant, Economic, Social and cultural Rights (1966) provides for the right to "the highest attainable standard of health" The Programme of Action adopted at the United Nations International Conference on Population and Development in Cairo in 1994 states " Government should deal with the health impact of unsafe abortion as a major public health concern." [14] Though there are studies conducted on the socio-demographic determinant of abortion, information is scanty. Therefore we aimed to investigate the socio-

demographic determinants of abortion among reproductive aged females.

Material and Methods: After obtaining approval from Institutional Ethics Committee, RMCH, Bareilly, U.P. (IEC/13/2021/MAR), this Cross Sectional study which was conducted in the Department of Obstetrics and Gynaecology with the Department of Community Medicine, Internal Medicine and Forensic Medicine at the Rohilkhand Medical College and Hospital, Bareilly, UP. from August, 2019 to February 2021 for a period of one year and seven months after the approval from the Institutional Ethical Committee. A total of 205 cases of abortion cases during this period at the Department of Obstetrics and Gynaecology, RMCH, Bareilly were studied. Gravida is defined as number of times that a woman has been pregnant Parity is defined as the number of times that she has given birth to a foetus with a gestational age of 24 weeks or more regardless of whether the child was alive or stillborn.

The outcome variable for this study was abortion while the explanatory variable of interest were age, educational, religious affiliation and place of residence.

Inclusion Criteria: All abortion cases done at the Department of Obstetrics and Gynaecology, RMCH, Bareilly.

Exclusion Criteria: Period of gestation more than 20 weeks confirmed by last menstrual period (LMP), clinical examination, Ultrasonography.

Questionnaire was used for data collection as in prescribed Performa.

Statistical Analysis

All data were analysed using SPSS version 21. All data was tabulated and percentages were calculated.

Results:

Table 1: Correlation of Age Group with the Religion

Age group	Hindu	Muslim	Sikh	Total	Chi-square P-value
20-22 yrs	13 07.34% 81.25%	03 11.11% 18.75%	00 00.00% 00.005	16 07.80% 100.00%	17.073 0.381
23-25 yrs	29 16.38% 90.63%	03 11.11% 09.37%	00 00.00% 00.00%	32 15.61% 100.00%	
26-28 yrs	76 42.94% 88.37%	10 37.04% 11.49%	01 100.00% 01.14%	87 42.44% 100.00%	
29-31 yrs	29 16.38% 85.29%	05 18.52% 14.71%	00 00.00% 00.00%	34 16.58% 100.00%	
32-34 yrs	17 09.60% 89.47%	02 07.41% 10.53%	00 00.00% 00.00%	19 09.27% 100.00%	
35-37 yrs	11 06.22% 91.67%	01 03.70% 08.33%	00 00.00% 00.00%	12 05.85% 100.00%	
38-40 yrs	01 00.57% 33.33%	02 07.41% 66.67%	00 00.00% 00.00%	03 01.46% 100.00%	
41-43 yrs	01 00.00% 00.00%	01 03.70% 100.00%	00 00.00% 00.00%	01 00.49% 100.00%	
44-46 yrs	02 00.57% 100.00%	00 00.00% 00.00%	00 00.00% 00.00%	01 00.49% 100.00%	
Total	177 100.00% 86.34%	27 100.00% 13.17%	01 100.00% 00.49%	205 100.00% 100.00%	

Table No. 1 shows that in total cases amongst Hindu 177, maximum abortion 76(42.94%) were in 26-28 age group in Muslims out of total cases 27, maximum 10 (37.04%) were in 26-28 years age group and in sikh out of total cases 1 maximum 1(100.00%) were also in 26-28 years age group.

Table 2: Correlation of Age Group with the Community

Age group	Urban	Rural	Total	Chi-square P-value
20-22 yrs	11 08.53% 68.75%	05 06.58% 31.25%	16 07.80% 100.00%	7.840 .449
23-25 yrs	20 15.50% 62.50%	12 15.79% 37.50%	32 15.61% 100.00%	
26-28 yrs	56 43.41% 64.37%	31 40.79% 35.63%	87 42.44% 100.00%	
29-31 yrs	22 17.54% 64.71%	12 15.79% 35.29%	34 16.585 100.005	

32-34 yrs	12 09.30% 63.16%	07 09.21% 36.84%	19 09.22% 100.00%	
35-37 yrs	07 05.43% 58.33%	05 06.58% 41.67%	12 05.85% 100.005	
38-40 yrs	00 00.00% 00.00%	03 03.95% 100.00%	03 01.46% 100.00%	
41-43 yrs	01 00.78% 100.00%	00 00.00% 00.00%	01 00.49% 100.00%	
44-46 yrs	01 00.00% 00.00%	01 01.31% 100.005	01 00.49% 100.00%	
Total	129 100.00% 62.93%	76 100.00% 37.07%	205 100.00% 100.00%	

Table No 2 **:-** shows the correlation of age group of aborting women with the place of residence that the maximum cases of abortion were from urban area 129 (62.93%) and only 76 (37.07%) were from rural area. Maximum cases in the urban area were 56 (43.41%) and in the rural area 31 (40.79%) were in 26-28 years age group.

Table 3: Correlation of Age with Education of Aborted Women

Age group	Education of pregnant women						
	Illiterate	Up to primary school	Up to middle school	Up to high school	Up to intermediate	Graduate and above	Total
20-22 yrs age group	02 07.41% 12.50%	01 14.29% 06.25%	02 07.14% 12.50%	03 04.55% 18.75%	04 07.41% 25.00%	04 17.39% 25.00%	16 07.80% 100.00%
23-25 yrs age group	02 07.41% 06.25%	00 00.00% 00.00%	04 14.29% 12.50%	10 15.15% 31.25%	09 16.67% 28.13%	07 30.43% 21.87%	32 15.61% 100.00%
26-28 yrs age group	10 37.04% 11.49%	04 57.14% 04.60%	11 39.29% 12.64%	30 45.45% 34.48%	25 46.30% 28.74%	07 30.43% 08.05%	87 42.44% 100.00%
29-31 yrs age group	03 11.11% 08.82%	02 28.57% 05.88%	04 14.29% 11.76%	13 19.70% 38.24%	09 16.67% 26.47%	03 13.04% 08.82%	34 16.59% 100.00%
32-34 yrs age group	04 14.81% 21.05%	00 00.00% 00.00%	02 07.14% 10.53%	06 09.09% 31.58%	06 11.11% 31.58%	01 04.35% 05.26%	19 09.27% 100.00%
35-37 yrs age group	04 14.81% 33.33%	00 00.00% 00.00%	04 14.29% 33.33%	02 03.03% 16.67%	01 01.85% 08.33%	01 04.35% 08.33%	12 05.85% 100.00%
38-40 yrs age group	02 07.41% 66.67%	00 00.00% 00.00%	00 00.00% 00.00%	01 01.15% 33.33%	00 00.00% 00.00%	00 00.00% 00.00%	03 01.46% 100.00%
41-43 yrs age group	00 00.00% 00.00%	00 00.00% 00.00%	00 00.00% 00.00%	01 01.15% 100.00%	00 00.00% 00.00%	00 00.00% 00.00%	01 00.49% 100.00%
44-46 yrs age group	00 00.00% 00.00%	00 00.00% 00.00%	01 03.57% 100.00%	00 00.00% 00.00%	00 00.00% 00.00%	00 00.00% 00.00%	01 00.49% 100.00%
Total	27 100.00% 13.17%	07 100.00% 03.41%	28 100.00% 13.66%	66 00.00% 32.19%	54 100.00% 26.34%	23 100.00% 11.22%	205 100.00% 100.00%

Table No. 3 shows correlation of age with the educational status of pregnant women, in total maximum abortion 66 (32.19%) were in women educated up to high school.

Maximum abortion (25%) among 20-22 yrs age group was among women educated up to intermediate and graduate and above, Maximum abortion (31.25%), (34.48%), (38.24%) among 23-25, 26-28, 29-31 years age group respectively, were in women educated up to high school; Maximum (31.58%) were in 32-34 years age group among women educated up to high school and up to intermediate, in 35-37 years age group maximum

Agniwesh *et al.*   **International Journal of Pharmaceutical and Clinical Research**

abortion (33.33%) were amongst illiterate and educated up to middle school, in 38-40 years age group maximum abortion (66.67%) were amongst illiterate, in 41-43 years age group maximum abortion (100.00%) were amongst women educated up to high school, in 44-46 years age group maximum abortion (100.00) were amongst women educated up to middle school.

Table 4: Correlation of Age Group with Gravida:-

Age group	Gravida of women							
	1	2	3	4	5	6	8	Total
20-22 yrs age group	02 06.67% 12.50%	06 14.29% 37.50%	06 06.06% 37.50%	02 04.44% 12.50%	00 00.00% 00.00%	00 00.00%	00 00.00%	16 07.80% 100.00%
23-25 yrs age group	01 33.33% 03.13%	07 6.67% 21.88%	19 19.19% 58.38%	04% 08.89% 12.50%	01%08.33% 03.13%%	00 00.00%	00 00.00%	32 15.61% 100.00%
26-28 yrs age group	00% 00.00 00.00%	20 7.62% 22.99%	52 52.53% 59.77%	13 28.89% 14.94%	02 16.67% 02.30%	00 00.00%	00 00.00%	87 42.44% 100.00%
29-31 yrs age group	00 00.00% 00.00%	05 1.90% 14.71%	15 15.15% 44.12%	11 24.44% 32.35%	03 25.00% 08.82%	00 00.00%	00 00.00%	34 16.59% 100.00%
32-34 yrs age group	00 00.00% 00.00%	03 07.14% 15.79%	05 05.05% 26.32%	09 20.00% 47.37%	01 08.33% 05.26%	00 00.00%	01100.00% 05.26%	19 09.27% 100.00%
35-37 yrs age group	00 00.00% 00.00%	00 00.00% 00.00%	02 02.02% 16.67%	04 08.89% 33.33%	04 33.33% 33.33%	02 66.67% 16.67%	00 00.00%	12 05.85% 100.00%
38-40 yrs age group	00 00.00% 00.00%	00 00.00% 00.00%	00 00.00% 00.00%	01 02.22% 33.33%	01 08.33% 33.33%	01 33.33% 33.33%	00 00.00%	03 01.46% 100.00%
41-43 yrs age group	00 00.00% 00.00%	01 02.38 100.00%	00 00.00% 00.00%	00 00.00% 00.00%	00 00.00% 00.00%	00 00.00%	00 00.00%	01 00.49% 100.00%
44-46 yrs age group	00 00.00% 00.00%	00 00.00% 00.00%	00 00.00% 00.00%	01 02.22% 100.00%	00 00.00% 00.00%	00 00.00%	00 00.00%	01 00.49% 100.00%
Total	03100.00% 01.46%%	42 100.0% 20.49%	99 100.00% 48.29%	45 100.00% 21.95%	12 100.00% 05.85%	03 100.00% 01.46%	01100.00% 00.49%	205 100.00% 100.00%

Table No.4 shows correlation of age group with gravida, maximum (48.29%) was amongst women with gravida 3. In gravida 1 maximum cases (66.67%) were in 20-22 years age group, gravida 2,3 and 4 maximum cases (47.62%), (52.53%) and (28.89%) respectively were in26-28 years age group, in gravida 5 and 6 maximum cases (33.33%) and(66.67%) respectively were in 35-37 years age group and in gravida 8 maximum (100.00%) cases were in 32-34 years age group.

Table 5: Correlation of Age Group with the Number of Life Children of Aborted Women

Age group	Number of lived children						
	0	1	2	3	4	5	Total
20-22 yrs age group	02 40.00% 12.50%	07 11.11% 43.75%	06 06.32% 37.50%	01 03.03% 06.25%	00 00.00% 00.00%	00 00.00% 00.00%	16 07.80% 100.00%
23-25 yrs age group	01 20.00% 03.13%	10 15.87% 31.25%	19 20.00% 59.38%	02 06.06% 06.25%	00 00.00% 00.00%	00 00.00% 00.00%	32 15.61% 100.00%
26-28 yrs age group	02 40.00% 02.30%	29 46.03% 33.33%	45 47.37% 51.72%	10 30.30% 11.49%	01 12.50% 01.15%	00 00.00% 00.00%	87 42.44% 100.00%
29-31 yrs age group	00 00.00% 00.00%	09 14.29% 26.47%	12 12.63% 35.29%	12 36.36% 35.29%	01 12.50% 02.94%	00 00.00% 00.00%	34 16.59% 100.00%
32-34 yrs age group	00 00.00% 00.00%	07 11.11% 36.84%	06 06.32% 31.58%	04 12.12% 21.05%	02 25.00% 10.53%	00 00.00% 00.00%	19 09.27% 100.00%

35-37 yrs age group	00 00.00% 00.00%	00 00.00% 00.005	05 05.26% 41.67%	03 09.09% 25.00%	04 50.00% 33.33%	00 00.00% 00.00%	12 05.85% 100.00%
38-40 yrs age group	00 00.00% 00.00%	00 00.0% 00.00%	02 02.11% 66.67%	00 00.00% 00.00%	00 00.00% 00.00%	01 100.00% 33.33%	03 01.46% 100.00%
41-43 yrs age group	00 00.00 00.00%	01 01.59% 100.00%	00 00.00% 00.00%	00 00.00% 00.00%	00 00.00% 00.00%	00 00.00% 00.00%	01 00.49% 100.00%
44-46 yrs age group	00 00.00% 00.00%	00 00.00% 00.00%	00 00.00% 00.00%	01 03.03% 100.00%	00 00.00% 00.00%	00 00.00% 00.00%	01 00.49% 100.00%
Total	05 100.00% 02.44%	63 100.00% 30.73%	95 100.00% 46.34%	33 100.00% 16.10%	08 100.00% 03.90%	01 100.00% 00.49%	205 100.00% 100.00%

Table No.5 shows correlation of age group with women aborted having live children; maximum cases (46.34%) were among women having 2 live children.

Discussion:

Correlation of Age Group with the Religion:-

In our study we found maximum abortion (42.44%) were in 26-28 yrs age group and maximum abortion amongst Hindu and Muslim were also in 26-28 years age group (42.95% and 37.04% respectively) but age group wise distribution of abortion in Hindu was maximum (91.67%) in 35-37 years age group and in Muslim (100.00%) in 41-43 years age group. Chae et al, Geelhoed et al., Oye-Adeniran et al. [15, 16, and 17] found abortions more common among 20-34 years age group. in contrast Singh et al [5] found it more common among women aged 20-24 years age group. Mote et al [18], Santos et al [19] found higher abortion rate among older ($\geq$ 34 years), Adjei et al [20], Bonnen et al [21],Ibrahim and Onwudiegwu [22], Lema et al [23], Tesfaye et al [24] found high rate of abortion among less than 20 years age group. This variation may be due to demographic variations.

Correlation of Age Group with the Community:-

In our study we found 62.93% cases were from the urban community and 37.07% from the rural community, maximum cases (43.41%), (40.79%) were from urban and rural community respectively in 26-28 years age group. similar findings were observed by Ahiadeke et al, Chae et al, Geelhoed et al, Mote et al, Pallikadavath and Stones et al, Sundaram et al [25, 15, 16, 18, 26, 27]. Small family norm and availability of resources in urban area may be contributing factor of higher abortion rate in urban area.

Correlation of Age Group with Educational Status of Aborted Women:-

In our study we found maximum abortion (32.19%) among women educated up to high school, maximum abortion (37.04%, 57.14%, 39.29%, 45.45%, 46.30% 30.43%) in 26-28 years age group in illiterate, up to primary school, up to middle school, up to high school, up to intermediate and graduate and above respectively. Similar findings of abortion more common amongst educated women or girls were observed by Ahiadeke et al, Bonnen et al, Chae et al, Geelhoed et al, Mote et al, Oye-Adeniran et al, Pallikadavath & Stones, [25, 21, 15, 16, 16, 17, 26,]

Correlation of Age Group with the Gravida of Aborted Women:

We found 48.29% aborted cases were amongst women with gravida 3 and maximum cases (52.53%) were in age group 26-28 years, minimum abortion cases 01.46% were in gravida 1 and 6, while maximum cases in gravida 1 were 66.67% were in 20-22 years age group, in gravida 2 maximum cases 37.50% were in 20-22 years age group; in gravida 4 maximum cases were in 32-34 years age group; in gravida 5 and 6 maximum cases 33.33% and 66.67% respectively were in 35-37 years age group. Similar findings were observed by Pallikadavath and Stones et al [26] Maximum abortion was in gravida 3 and then decline, may be due to Family Planning with two child norm in India

Correlation of Age Group with Live Child of Aborted Women:

We found maximum abortion (46.34%) was among women with two life child, may be due to two child norm in India. In contrast Llboudo et al [28] found maximum abortion (62.83%) amongst nulliparous women, which might be ascribed the vila different social norms prevalent in that continent.

Conclusions

Maximum abortion cases were found in 26-28 years age group who were less educated (primary to secondary) irrespective of religion though the chances of abortion increases with the rise of maternal age (41-43 years age group) which were primarily increased than the previous studies due to the increase age of conception.

Maximum number of abortion cases was also found in urban community. Abortion cases was maximum in number in the 3rd gravida in 26-28 years age group but with the higher gravida and age it increases

further, suggesting that aged pregnant women aborted more frequently. Hence, it is concluded that to reduce abortion rate, level of education be raised and safety of every delivered baby be secured and active family planning advices during second gravida be provided.

References:

1. Singh S, Maddow-Zimet I. Facility-based treatment for medical complications resulting from unsafe pregnancy termination in the developing world: A review of evidence from 26 countries; BLOG. International Journal of Obstetrics & Gynaecology; 2012; 123 (9) : 1489-1498.

2. Say L, Chou D, Gemmill A, Tunc¸alp O¨, Moller A-B, Daniels J, et al. Global causes of maternal death: a WHO systematic analysis. The Lancet Global Health. 2014; 2(6):e323–e333.

3. ReddyKSN, The Essentials of Forensic Medicine and Toxicology, 29th edi. (Published by K. Suguna Devi, Hyerabad, 2020: 380.

4. Appiah-agyekum, Abortion in Ghana: Experiences of University students; Health Science Journal 2014; 8(4): 531-540.

5. Singh S, Remez L, Sedgh G, Kwok L, Onda T.Abortion worldwidw2017;Uneven Progress and Unequal Access, New York: Guttmacher Institute 2017.

6. Singh S, Wulf D, Hussain R, Bankole A, Sedgh G. Abortion Worldwide: A Decade of Uneven Progress. New York: Guttmacher Institute; 2009.

7. Shah I, Ahman E. Unsafe abortion: Global and Regional Incidence, Trends, Consequences, and Challenges. J Obstet Gynaecol Can. 2009; 31(12): 1149-1158.

8. Sedgh G, Rossier C, Kaboré I, Bankole A, Mikulich M. Estimating Abortion Incidence in Burkina Faso using Two Methodologies. Stud Fam Plann. 2011; 42(3):147–154.

9. Rossier C, Guiella G, Ouedraogo A, Thieba B. Estimating Clandestine Abortion with the Confidant's Method – Results from Ouagadougou, Burkina Faso. Soc Sci Med. 2006; 62(1):254–266.

10. Powell-Griner E, Trent K. Sociodemographic Determinants of Abortion in the United States. Demography. 1987; 24(4):553–561.

11. . Bose S, Trent K. Socio-demographic Determinants of Abortion in India: A North–South Comparison. Journal of Biosocial Science. 2006; 38(2): 261–282.

12. Misago C, Fonseca W, Correia L, Fernandes LM, Campbell O. Determinants of Abortion Among Women Admitted to Hospitals in Fortaleza, North Eastern Brazil. International journal of epidemiology. 1998; 27 (5): 833–839.

13. Smith GC, Fretts RC. Still birth, The Lancet 2007; 370:1715-1725.

14. World Health Organization. The Prevention and Management of Unsafe Abortion. Report of a Technical Working Group. World Health Organization Geneva, 1992 9WHO/MSM/92.5

15. Chae S, DesaiS, Crowell M, Sedgh G, Singh S. Characteristics of Women Obtaining Induced Abortion in Selected Low and Middle-Income Countries; PLoS ONE; 2017; 12 (3): 1-19.

16. Geelhoed DW, Nayembil D, Asare K, SchagenV, Leeuwen JH, Roosmalen V. Contraception and Induced Abortion in Ghana; Tropical Medicine and International Health, 2002; 7 (8): 708-716.

17. Oye-Adeniran BA, Adewole IF, Umoh AV, Fapohunda OR, Iwere N. Characteristics of Abortion Seekers in South-western Nigeria, African Journal of Reproductive Health; 2004 8(3): 81-91.

18. Mote CV, Otupiri E, Hindin M. Factors Associated with Induced Abortion Among Women in Hohoe, Ghana, African Journal of Reproductive Health; 2010; 14 (4) : 115-121.

19. Santos AP, Coelho, Ede A, Gusmao ME, Silva DO, Marques PF, Almeida MS. Factors Associated with Abortion in Women of Reproductive Age, Rev. Bras. Ginecol. Obstet.; 2016; 38(6) : 273-279.

20. Adjei G, Enuameh Y, Asante KP, Baiden F, Nettey OEA, Abubakari S, Mahama E, Gyaase S, Owusu-Agyei S. Predictors of Abortions in Rural Ghana: A Cross Sectional Study; BMC Public Health 2015; 15 : 202.

21. Bonnen KI, Tuijje DN, Rasch V. Determinants of First and Second Trimenester Induced Abortion- results from A Cross-Sectional Study Taken Place 7 years after Abortion Law Revision in Ethiopia; BMC Pregnancy Childbirth; 2014; 14: 416.

22. Ibrahim IA, Onwudiegwu U. Sociodemographic Determinants of Complicated Unsafe Abortion in Semi-urban Nigerian town; a four year review. West Indian Med. J., 2012; 61(2): 163-167.

23. Lema VM, Rogo KO, Kamau RK. Induced Abortion in Kenya: Its Determinants and Associated Factors; East Afr. Med. J., 1996, 73 (3): 164-168.

24. Tesfaye T, Hambisa MT, Semahegn A. Induced Abortion and Associated Factors in Health Facilities of Guraghe Zone, Southern Ethiopia; Journal of Pregnancy; 2014: 1-8.

25. Ahiadeke C. Incidence of Induced Abortion in Southern Ghana; International Family Planning Perspectives, 2001; 27 (2) : 96-101.

26. Pallikadavath S, Stones RW. Maternal and Social Factors Associated with Abortion in India: A Population-Based Study, International

Family Planning Perspectives; 2006; 32 (3): 120-125.

27. Sundaram A, Juarez F, Bankole A, Singh S. Factors Associated with Abortion Seeking and Obtaining a Safe Abortion in Ghana; Studies in Family Planning, 2012; 43 (4): 273-286.

28. Llboudo PGC, SomdaSMA, Sundby J. Key Determinants of Induced Abortion in Women Seeking Post Abortion Care in Hospital Facilities in Ouagadougou, Burkina Faso, International Journal of Women Health: 2014; 6: 565-572.