

A study on factors associated with spontaneous abortion among post aborted women in Assam.

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Abstract

Objectives : The present study was to assess the various factors associated with spontaneous abortion.

Methods : 50 number of sample were selected by non probability purposive sampling techniques as per inclusion and exclusion criteria using structured interview schedule. The questionnaire consists of details of sociodemographic and obstetrical variables and factors associated with spontaneous abortion.

Result: Out of 50 post aborted women, 20(40%) most of women were from in age group of 18 – 25 years. Most of the post aborted women 18(36%) has secondary education and 46(92%) were homemaker. 28(56%) post aborted women were hindu and 34(68%) lives in urban. Most of the post aborted women 26(52%) belongs to joint family and 38(76%) has family income of Rs 10,001-Rs 20,000 per month.

Most of the post aborted women 42(84%) were multi gravida and 32(64%) were having multi parity. 24(48%) of the post aborted women had their spontaneous abortion in 5 – 8 weeks. 24(48%) of the post aborted women had incomplete spontaneous abortion. 46(92%) of the post aborted women got both the medical and surgical method of treatment. 36(72%) of the post aborted women had no history of spontaneous abortion and 48(96%) had no history of still birth.

The study shows that there was significant association between factors associated with spontaneous abortion such as travelling long distance prior to spontaneous abortion ($p = 0.025$), hypertension ($p = 0.000$), diabetes mellitus ($p = 0.025$), hypothyroidism ($p = 0.025$), history of consumed any medicine for a long time($p = 0.003$), surgical history ($p = 0.003$), history of PCOS ($p = 0.026$) in first trimester whereas there was no significant association between factors with spontaneous abortion in second trimester at level of $p < 0.05$ significance.

Conclusion: The present study result shows that majority of the spontaneous abortion occurred in the first trimester of pregnancy.

Key words: Spontaneous abortion, post aborted women, factors

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Introduction

The women health is accounted to be vital aspect in the family, as women are the soul of family and society. In reproductive age, mostly after marriage, women become pregnant and undergo many physiological, psychological and emotional changes with or without complications.

Improvement of health care facilities and advancement in medical sciences contributed to the quality care and welfare of the pregnant mother result in birth of a healthy baby, in spite of this some of the pregnancies may end up with spontaneous abortion which may affect the mother's health both physically and emotionally and may lead to some psychological disturbance in her family as well.

According to WHO abortion is the expulsion or extraction from its mother of an embryo or fetus weighing 500gm or less when it is not capable of independent survival before twenty two weeks of gestation. Abortion may be either spontaneous or induced. Spontaneous abortion is the loss of pregnancy naturally before the period of viability and referred to as a 'miscarriage'. The induced abortion is referred to the voluntary termination of pregnancy.^{1,2}

Spontaneous abortion may occur as a result of chromosomal abnormalities, advanced maternal age,

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previous early pregnancy loss, several chronic diseases including diabetes and autoimmune disorder. Structural uterine abnormalities, infections such as cervicitis, vaginitis, HIV infection, and syphilis, exposure to environmental contaminant including arsenic, lead, and radiation, alcohol consumption, smoking, and cocaine use are common risk factors of spontaneous abortion.³

According to the family health survey -IV 2015-2016, out of total pregnancies 195470, an average value of 5.7% miscarriage occurs in India and out of these 4.4% occurs in Assam which is relatively less as compared to average value of India.⁴

According to National Family Health Survey- V (NFHS), which has been carried out between 2019–21 in India, miscarriages occur in approximately 7% of all pregnancies among women of reproductive age.⁵ The prevalence of diseases and fatalities among women of reproductive age can be significantly affected by pregnancy loss, especially when it results from miscarriage.⁶ A prior history of pregnancy loss also increases the risk of recurrent pregnancy loss, with the risk increasing after each additional loss.⁷

A study was conducted by Muzaffar U, Rashid S, Salaam S, Yousuf S to examine the pregnancy outcome in patients with history of previous abortions among 140 patients admitted in the department of

Obstetrics and Gynaecology Government Medical College Srinagar, LD Hospital Jammu & Kashmir. The study findings show that patients with history of previous spontaneous abortion are associated with adverse pregnancy outcome. The study concludes that pregnancy outcome in terms of maternal and foetal complications can be improved by giving proper antenatal care.⁸

Materials and Method

Research approach:

In order to achieve the study objectives, Quantitative research approach was adopted.

Research design:

In the present study, non experimental research design was used.

Study setting:

The study was conducted in the observation room of minor OT and ward of obstetrical and gynaecological department of Gauhati Medical College and Hospital of Assam.

Population:

In this study, population consisting of post aborted women with first and second trimester spontaneous abortion attended in the obstetrics and gynaecology department in selected hospitals of Kamrup Metro, Assam.

Sample size: The sample size was 50

Sampling design:

Non probability purposive sampling technique was adopted for the present study.

Criteria for sample selection:

Inclusion criteria:

- Women with one or more spontaneous abortion.
- Women who can understand Hindi and Assamese.
- Women who gave written consent.

Exclusion criteria

- Women with induced abortion.

Variables:

In the present study,

- **Demographical variables:** - It includes age, qualification, occupation, religion, residency, type of family and family income.
- **Obstetrical variables:-** It includes gravida, parity, spontaneous abortion in which weeks, type of spontaneous abortion, method of treatment, history of spontaneous abortion and history of still birth.
- **Research variables:** - It includes the factors associated with spontaneous abortion.

Ethical Consideration:

Permission was obtained from the institutional ethical committee.

- Administrative approval was obtained from the concern authority.
- Verbal and written consent was obtained from all the participants of the study.

Plan for data analysis:

- Data to be entered prospectively in a computerized database and to be analyzed by using the statistical Package for Social Sciences (SPSS)

Result

Table 1: Frequency and Percentage distribution of demographic data N=50

S.No.	Demographic variables	Frequency	Percentage
1	Age(in years)		
	18-25	20	40%
	26-30	12	24%
	31-35	10	20%
	>35	8	16%
2	Qualification		
	Illiterate	2	4%
	Primary education	16	32%
	Secondary education	18	36%
	Higher secondary	12	24%
	Graduation and above	2	4%
3	Occupation		
	Homemaker	46	92%
	Business woman	4	8%
	Employee	0	0
4	Religion		
	Hindu	28	56%
	Muslim	16	32%
	Christian	6	12%
5	Residency		
	Urban	34	68%
	Rural	16	32%

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6	Type of family		
	Nuclear	20	40%
	Joint	26	52%
	Extended	4	8%
7	Family Income (per month)		
	<Rs 10,000	4	8%
	Rs 10,001-Rs 20,000	38	76%
	Rs 20,001-Rs 30,000	6	12%
	>Rs 30,000	2	4%

Table 1 shows that majority of 20(40%) of the post aborted women belongs to the age group of 18 – 25 years. Majority of 18(36%) of the post aborted women had qualification upto secondary education. Majority of 46(92%) of the post aborted women were homemaker. Majority of 28(56%) of the post aborted women were Hindu. Majority of 34(68%) of the post aborted women were from urban. Majority of 26(52%) of the post aborted women belongs to joint family. Majority of 38(76%) of the post aborted women had family income of Rs 10,001-Rs 20,000 per month.

Table 2: Frequency and percentage distribution of obstetrical clinical variables N=50

S.No.	Demographic variables	Frequency	Percentage
1	Gravida		
	Primi	8	16%
	Multi	42	84%
2	Parity		
	Primi	2	4%
	Multi	32	64%
	Grand multipara	0	0
	Nil	16	32%
3	Spontaneous abortion in which weeks		
	1-4 weeks	4	8%
	5-8 weeks	24	48%
	9-12 weeks	8	16%
	13-16 weeks	12	24%
	17-20 weeks	2	4%
4	Type of spontaneous abortion		
	Complete	4	8%
	Incomplete	24	48%
	Inevitable	0	0
	Missed	16	32%
	Septic	0	0
	Threatened	6	12%
5	Method of treatment		
	Medical	0	0
	Surgical	0	0
	Both Medical and Surgical	46	92%
	Nil	4	8%
6	History of spontaneous abortion		
	Nil	36	72%
	One	12	24%
	Two	1	2%
	More than two	1	2%
7	History of still birth		
	Nil	48	96%
	One	2	4%
	Two	0	0

More than two	0	0
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Table 2 shows that majority of 42(84%) of the post aborted women were multi gravida Majority of 32(64%) of the post aborted women were having multi parity. Majority of 24(48%) of the post aborted women had their spontaneous abortion in 5 – 8 weeks. Majority of 24(48%) of the post aborted women had incomplete spontaneous abortion. Majority of 46(92%) of the post aborted women got both the medical and surgical method of treatment. Majority of 36(72%) of the post aborted women had no history of spontaneous abortion. Majority of 48(96%) of the post aborted women had no history of still birth.

Table 3: Frequency and percentage distribution of samples according to factors
N=50

S.No.	Factors	Rating and intervals	Frequency	Percentage
General factors				
1	Travelling long distance prior to spontaneous abortion If yes, specify.....	Yes	4	8%
		• Travelling on bike	4	8%
		No	46	92%
2	Heavy lifting prior to spontaneous abortion If yes, specify.....	Yes	4	8%
		• Pail with water	4	8%
		No	46	92%
3	Any physical strain prior to spontaneous abortion If yes, specify.....	Yes	3	6%
		• Washing excessive cloths	2	4%
		• Pumping tube well vigorously	1	2%
		No	47	94%
Medical Surgical factors				
4	Hypertension	Yes	4	8%
		No	46	92%
5	Diabetes mellitus	Yes	2	4%
		• Type 2 diabetes mellitus	2	4%
		No	48	96%
6	Respiratory diseases	Yes	2	4%
		• Asthma	1	2%
		• Bronchitis	1	2%
		No	48	96%
7	Anemia	Yes	24	48%
		No	26	52%
8	Rh incompatibility	Yes	2	4%
		No	48	96%
9	Hypothyroidism	Yes	2	4%
		No	48	96%
10	Any history of infection or fever during pregnancy If yes, specify.....	Yes	6	12%
		• Mild fever	6	12%
		No	44	88%
11	History of consumed any medicine for a long time If yes, specify.....	Yes	3	6%
		• Tablet Glimepiride and metformin	1	2%
		• Tablet Thyroxine	2	4%
		No	47	94%
S.No.	Factors	Rating and intervals	Frequency	Percentage

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12	Surgical history If yes, specify.....	Yes	15	30%
		• Caesarean section	14	28%
		• Cholecystectomy	1	2%
		No	35	70%
	Obstetrical and Gynaecological factors			
13	Any history of abnormal menstrual cycle If yes, specify.....	Yes	14	28%
		• Dysmenorrhea	5	10%
		• Menorrhagia	5	10%
		• Polymenorrhea	4	8%
		No	36	72%
14	Any history of PCOS	Yes	4	8%
		No	46	92%
15	Did you have any complication during first pregnancy If yes, specify.....	Yes	2	4%
		• Oligohydramnios	1	2%
		• Intra uterine fetal death	1	2%
		No	49	98%
16	Do you have previous history of induced abortion If yes, specify.....	Yes	2	4%
		• Used medical and surgical method	2	4%
		No	48	96%
17	Use of contraceptive methods before conception If yes, specify.....	Yes	16	32%
		• Condom	4	8%
		• Oral contraceptive pill	8	16%
		• Copper T	4	8%
		No	34	68%
18	Any evidence of congenital uterine anomalies	Yes	1	2%
		No	49	98%
19	Any evidence of cervical incompetence	Yes	2	4%
		No	48	96%
20	Sexual contact after conforming the pregnancy	Yes	12	24%
		No	38	76%
	Social factors			
21	Is the pregnancy was confirmed	Yes	48	96%
		No	2	4%
22	Whether Antenatal Care was followed after conforming pregnancy	Yes	44	88%
		No	6	12%
23	Ultrasonography was taken after conforming pregnancy	Yes	38	76%
		No	12	24%
	Life style factors			
24	Did your husband have an habit of smoking	Yes	15	30%
		No	35	70%
25	Did you skip meals during pregnancy? If yes, specify.....	Yes	3	6%
		• Smell aversion	3	6%
		No	47	94%
26	Did you follow regular sleep pattern during pregnancy. If yes, specify.....	Yes	47	94%
		No	3	6%
		• Late night sleeping habit	3	6%
	Psychological factors			
27	Was there was any stressful events occurred prior to spontaneous abortion If yes, specify mild stress/ moderate stress/ severe stress.....	Yes	1	2%
		• Mild stress	1	2%
		No	49	98%

Table 3 shows the **general factors** such as 4(8%) travelling long distance via bike, 4(8%) heavy lifting that is pail with water, 3(6%) physical strain that are washing excessive cloths and pumping tube well

vigorously prior to spontaneous abortion. **Medical surgical factors** such as 4(8%) hypertension, 2(4%) diabetes mellitus, 2(4%) respiratory diseases that are asthma and bronchitis, 24(48%) anemia, 2(4%) Rh

incompatibility, 2(4%) hypothyroidism, 6(12%) had history of mild fever during pregnancy, 3(6%) consumed medicine for a long that are tablet glimepiride and metformin and tablet thyroxine, 15(30%) had history of surgery that caesarean section and cholecystectomy were present among the post aborted women. **Obstetrical and gynaecological factors** such as 14(28%) of post aborted women had history of abnormal menstrual cycle which included dysmenorrhea, menorrhagia and polymenorrhea, 4(8%) had history of PCOS, 2(4%) had history of complication during first pregnancy which included oligohydramnios and intrauterine fetal death, 2(4%) had previous history of induced abortion by using medical and surgical method of treatment, 16(32%) of post aborted women used contraceptive methods

before conception which include condom, oral contraceptive pills and copper T, 1(2%) had evidence of congenital uterine anomalies, 2(4%) had evidence of cervical incompetence and 12(24%) of post aborted women had sexual contact after conforming the pregnancy. **Social factors** such as 48(96%) was confirmed pregnancy, 44(88%) women has followed antenatal care after confirming pregnancy, 38(76%) women was taken ultrasonography after confirming pregnancy. **Life style factors** such as 15(30%) husband of post aborted women had habit of smoking, 3(6%) skip meals during pregnancy due to smell aversion as they were reported 47(94%) followed regular sleep pattern during pregnancy. **Psychological factors** that is 1(2%) post aborted women specify mild stress prior to spontaneous abortion.

Table 4: Factors associated with first and second trimester spontaneous abortion among post aborted women.

N=50

S. No	Factors		Spontaneous abortion in first trimester				Spontaneous abortion in second trimester		
			1-4 weeks	5-8 weeks	9-12 weeks	Chi square, p value, df	13-16 weeks	17-20 weeks	Chi square, p value, df
1	Travelling long distance prior to spontaneous abortion	Yes	0	0	2	$\chi^2 - 7.412$ P value -0.025 (*S) df - 2	2	0	$\chi^2 - 0.389$ P value - 0.533 (NS) df - 1
		No	4	24	6		10	2	
2	Heavy lifting prior to spontaneous abortion	Yes	0	4	0	$\chi^2 - 2.250$ P value -0.325 (NS) df - 2	0	0	.....
		No	4	20	8		12	2	
3	Any physical strain prior to spontaneous abortion	Yes	0	3	0	$\chi^2 - 1.636$ P value -0.441 (NS) df - 2	0	0	.....
		No	4	21	8		12	2	
Medical-Surgical factors									
4	Hypertension	Yes	0	0	4	$\chi^2 - 15.750$ P value -0.000 (*S) df - 2	0	0	.....
		No	4	24	4		12	2	
5	Diabetes mellitus	Yes	0	0	2	$\chi^2 - 7.412$ P value -0.025 (*S) df - 2	0	0	.....
		No	4	24	6		12	2	
6	Respiratory diseases	Yes	0	2	0	$\chi^2 - 1.059$ P value -0.589 (NS) df - 2	0	0	.....
		No	4	22	8		12	2	
7	Anemia	Yes	2	10	4	$\chi^2 - 0.225$ P value -0.894 (NS) df - 2	8	0	$\chi^2 - 3.111$ P value - 0.078 (NS) df - 1
		No	2	14	4		4	2	
8	Rh incompatibility	Yes	0	2	0	$\chi^2 - 1.059$ P value -0.589 (NS) df - 2	0	0	.....
		No	4	22	8		12	2	
9	Hypothyroidism	Yes	0	0	2	$\chi^2 - 7.412$ P value -0.025 (*S) df - 2	0	0
		No	4	24	6		12	2	
10	Any history of infection or	Yes	0	2	2	$\chi^2 - 2.250$	2	0	$\chi^2 - 0.389$

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	fever during pregnancy	No	4	22	6	P value -0.325 (NS) df - 2	10	2	P value - 0.533 (NS) df - 1
11	History of consumed any medicine for a long time	Yes	0	0	3	$\chi^2 - 11.455$ P value -0.003 (*S) df - 2	0	0
		No	4	24	5		12	2	
12	Surgical history	Yes	0	4	6	$\chi^2 - 11.908$ P value -0.003 (*S) df - 2	5	0	$\chi^2 - 1.296$ P value - 0.255 (NS) df - 1
		No	4	20	2		7	2	

S. No	Factors		Spontaneous abortion in first trimester			Chi square, p value, df	Spontaneous abortion in second trimester		
			1-4 weeks	5-8 weeks	9-12 weeks		13-16 weeks	17-20 weeks	Chi square, p value, df
13	Any history of abnormal menstrual cycle	Yes	0	4	2	$\chi^2 - 1.200$ P value -0.549 (NS) df - 2	6	2	$\chi^2 - 1.750$ P value -0.186 (NS) df - 1
		No	4	20	6		6	0	
14	Any history of PCOS	Yes	2	2	0	$\chi^2 - 7.313$ P value -0.026 (*S) df - 2	0	0	.....
		No	2	22	8		12	2	
15	Did you have any complication during first pregnancy	Yes	0	0	1	$\chi^2 - 3.600$ P value -0.165 (NS) df - 2	1	0	$\chi^2 - 0.179$ P value -0.672 (NS) df - 1
		No	4	24	7		11	2	
16	Do you have previous history of induced abortion	Yes	0	2	0	$\chi^2 - 1.059$ P value -0.589 (NS) df - 2	0	0	.....
		No	4	22	8		12	2	
17	Use of contraceptive methods before conception	Yes	0	10	2	$\chi^2 - 3.000$ P value -0.223 (NS) df - 2	4	0	$\chi^2 - 0.933$ P value -0.334 (NS) df - 1
		No	4	14	6		8	2	
18	Any evidence of congenital uterine anomalies	Yes	0	1	0	$\chi^2 - 0.514$ P value -0.773 (NS) df - 2	0	0	.....
		No	4	23	8		12	2	
19	Any evidence of cervical incompetence	Yes	0	2	0	$\chi^2 - 1.059$ P value -0.589 (NS) df - 2	0	0	.....
		No	4	22	8		12	2	
20	Sexual contact after conforming the pregnancy	Yes	0	6	4	$\chi^2 - 3.600$ P value -0.165 (NS) df - 2	2	0	$\chi^2 - 0.389$ P value -0.533 (NS) df - 1
		No	4	18	4		10	2	
Social factors									
21	Is the pregnancy was confirmed	Yes	4	22	8	$\chi^2 - 1.059$ P value -0.589 (NS) df - 2	12	2	.....
		No	0	2	0		0	0	
22	Whether Antenatal Care was followed after conforming pregnancy	Yes	4	18	8	$\chi^2 - 3.600$ P value -0.165 (NS) df - 2	12	2	.....
		No	0	6	0		0	0	
23	Ultrasonography was taken after conforming pregnancy	Yes	2	18	4	$\chi^2 - 2.250$ P value -0.325	12	2
		No	2	6	4		0	0	

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						(NS) df-2			
	Life style factors								
24	Did your husband have an habit of smoking	Yes	1	8	3	$\chi^2 - 0.188$ P value -0.911 (NS) df-2	3	0	$\chi^2 - 0.636$ P value -0.425 (NS) df-1
		No	3	16	5		9	2	
25	Did you skip meals during pregnancy	Yes	0	0	0	.....	3	0	$\chi^2 - 0.636$ P value -0.425 (NS) df-1
		No	4	24	8		9	2	
26	Did you follow regular sleep pattern during pregnancy	Yes	3	24	7	$\chi^2 - 5.029$ P value -0.081 (NS) df-2	11	2	$\chi^2 - 0.179$ P value -0.672 (NS) df-1
		No	1	0	1		1	0	

S. No	Factors		Spontaneous abortion in first trimester			Chi square, p value, df	Spontaneous abortion in second trimester		Chi square, p value, df
			1-4 weeks	5-8 weeks	9-12 weeks		13-16 weeks	17-20 weeks	
27	Was there was any stressful events occurred prior to spontaneous abortion.	Yes	0		0	.....	1	0	$\chi^2 - 0.179$ P value -0.672 (NS) df-1
		No	4	24	8		11	2	

*S – significant at $p \leq 0.05$, NS – Not significant

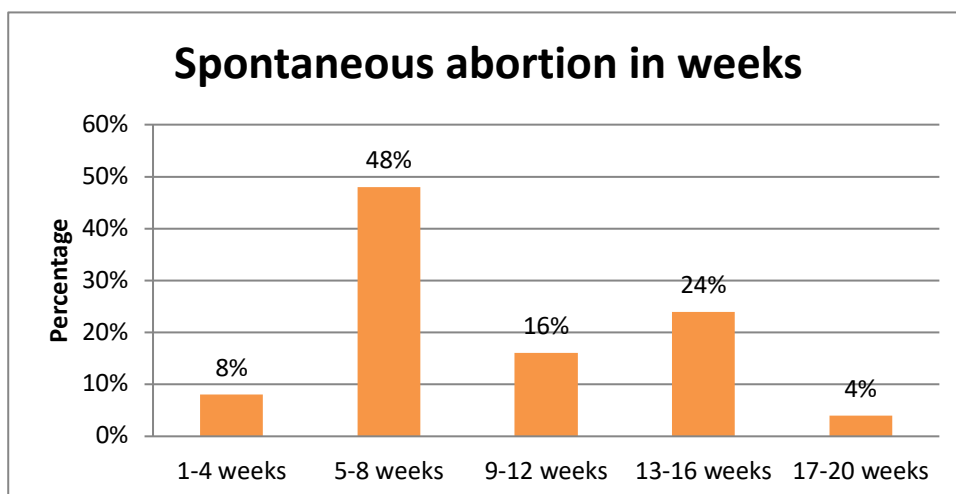
The data presented in table 4 shows that there is significant association between factors associated with spontaneous abortion such as **travelling long distance prior to spontaneous abortion ($p = 0.025$)**, **hypertension ($p = 0.000$)**, **diabetes mellitus ($p = 0.025$)**, **hypothyroidism ($p = 0.025$)**, **history of consumed any medicine for a long time($p = 0.003$)**, **surgical history ($p = 0.003$)**, **history of PCOS ($p = 0.026$)** with spontaneous abortion in first trimester whereas there was no significant association between factors with spontaneous abortion in second trimester at level of $p < 0.05$ significance.

Table 5: Frequency and percentage distribution of samples according to spontaneous abortion in trimester wise. N=50

	Spontaneous abortion in first trimester				Spontaneous abortion in second trimester		
	1-4 weeks	5-8 Weeks	9-12 weeks	Total	13-16 weeks	17-20 weeks	Total
Frequency	4	24	8	36	12	2	14
Percentage	8%	48%	16%	72%	24%	4%	28%

Table 5 depicts that majority 36(72%) of spontaneous abortion occurred in first trimester where 24(48%) of spontaneous abortion occurred in 5th – 8th weeks of pregnancy.

Figure:1 Percentage distribution of samples according to spontaneous abortion in weeks



DISCUSSION:

Out of 50 post aborted women, 20(40%) most of women were from in age group of 18 – 25 years. Most of the post aborted women 18(36%) has secondary education and 46(92%) were homemaker. 28(56%) post aborted women were hindu and 34(68%) lives in urban. Most of the post aborted women 26(52%) belongs to joint family and 38(76%) has family income of Rs 10,001-Rs 20,000 per month.

Most of the post aborted women 42(84%) were multi gravida and 32(64%) were having multi parity. 24(48%) of the post aborted women had their spontaneous abortion in 5 – 8 weeks. 24(48%) of the post aborted women had incomplete spontaneous abortion. 46(92%) of the post aborted women got both the medical and surgical method of treatment. 36(72%) of the post aborted women had no history of spontaneous abortion and 48(96%) had no history of still birth.

The present study shows the general factors such as 4(8%) travelling long distance via bike, 4(8%) heavy lifting that is pail with water, 3(6%) physical strain that are washing excessive cloths and pumping tube well vigorously prior to spontaneous abortion. Medical surgical factors such as 4(8%) hypertension, 2(4%) diabetes mellitus, 2(4%) respiratory diseases that are asthma and bronchitis, 24(48%) anemia, 2(4%) Rh incompatibility, 2(4%) hypothyroidism, 6(12%) had history of mild fever during pregnancy, 3(6%) consumed medicine for a long that are tablet glimepiride and metformin and tablet thyroxine, 15(30%) had history of surgery that caesarean section and cholecystectomy were present among the post aborted women. Obstetrical and gynaecological factors such as 14(28%) of post aborted women had history of abnormal menstrual cycle which included dysmenorrhea, menorrhagia and polymenorrhea, 4(8%) had history of PCOS, 2(4%) had history of complication during first pregnancy which included oligohydramnios and intrauterine fetal death, 2(4%)

had previous history of induced abortion by using medical and surgical method of treatment, 16(32%) of post aborted women used contraceptive methods before conception which include condom, oral contraceptive pills and copper T, 1(2%) had evidence of congenital uterine anomalies, 2(4%) had evidence of cervical incompetence and 12(24%) of post aborted women had sexual contact after conforming the pregnancy. Social factors such as 48(96%) was confirmed pregnancy, 44(88%) women has followed antenatal care after confirming pregnancy, 38(76%) women was taken ultrasonography after confirming pregnancy. Life style factors such as 15(30%) husband of post aborted women had habit of smoking, 3(6%) skip meals during pregnancy due to smell aversion as they were reported 47(94%) followed regular sleep pattern during pregnancy. Psychological factors that is 1(2%) post aborted women specify mild stress prior to spontaneous abortion.

The study shows that there was significant association between factors associated with spontaneous abortion such as travelling long distance prior to spontaneous abortion (p = 0.025) , hypertension (p = 0.000) , diabetes mellitus (p = 0.025), hypothyroidism (p = 0.025), history of consumed any medicine for a long time(p = 0.003), surgical history (p = 0.003), history of PCOS (p = 0.026) in first trimester whereas there was no significant association between factors with spontaneous abortion in second trimester at level of p < 0.05 significance.

Present study findings are consistent with the study conducted by Singh S and Swain D (2022) to identify the potential factors associated with spontaneous abortion and to implement a home based post abortion care counselling to lower post abortion complication in a selected rural health care of Odisha. The result shows that major risk factors identified in the enrolled patients were history of hypertensive disorders (23.93%), bacterial infection (24.78%), uterine fibroid (22.2%), cervical incompetence (13.7%), thyroid disease (19.65%), gestational diabetes mellitus (18.80%), PCOD (11.8%), immunological factors (10.5%) and clotting factors (9.4%). Other

conditions such as uterine septum (0.47 %) and bicornuate uterus (0.47 %), and genetic factors (03.41%) were identified among minor number of patients.⁹

Another study support the findings of present study conducted by Bama, T (2012) to assess the factors contributing to pregnancy loss during first and second trimester of pregnancy among post-abortion mothers admitted to the postnatal wards at institute of obstetrics and gynaecology, Chennai. The study findings reported that there are certain factors contributing to pregnancy loss were spouse age, physical strain, pregnancy immediately after IUCD removal, consanguineous marriage, BMI > 25 and poor antenatal care. Finding of the study shows statistical significance (p=.0.001) of pregnancy loss occurs in younger age groups of consanguineous marriage among multigravida.¹⁰

Conclusion

The present study result shows that majority of the spontaneous abortion occurred in the first trimester of pregnancy and there were several factors associated with spontaneous abortion in first trimester. The findings of the study highlight the need for improving knowledge regarding spontaneous abortion among the women. Nurse as a resource person needs to give health education and counselling to all eligible women about risk factors associated with spontaneous abortion and its preventable measures in obstetrical and gynaecological department of hospital and in community settings

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