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Research Article

Social and Demographic Determinants of Mode of Delivery among Pregnant Women Visiting Gynecology Department of Jinnah Hospital Lahore, Pakistan

Maaz Ahmad[1], Malik Qistas Ahmad[2]*, Chaudhry Saad Sohail[1], Muhammad Abdullah[1], Allahyar[1], Tamoor Sohail[3], Anum Jamal[4], Nida Jamil[4], and Muhammad Arsalan Arshad[5]

[1]*Department of Internal Medicine, Allama Iqbal Medical College, Pakistan*

[2]*Department of Internal Medicine, King Edward Medical University, Pakistan*

[3]*Central Park Medical College, Pakistan*

[4]*Department of Internal Medicine, Fatima Jinnah Medical University, Pakistan*

[5]*Department of Internal Medicine, Army Medical College, Pakistan*

***Corresponding author**

Malik Qistas Ahmad, Department of Internal Medicine, King Edward Medical University, Lahore, Punjab, Pakistan; Tel: 1-520-895-8400; Email: kistasmalic@yahoo.com

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Keywords

- Pregnant
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- Demographic factors
- Cesarean
- Mode of delivery
- Spontaneous vaginal delivery

Abstract

Objective: The aim of our study is to identify the various social and demographic factors influencing the decision made by women about their mode of delivery.

Material and Methods: We conducted a cross sectional study in the Gynecology department of Jinnah Hospital Lahore which is a 1200 bedded tertiary care hospital in Lahore, Pakistan. Duration of study is 1 month.

Results: 78.7% preferred spontaneous vaginal delivery (SVD) because of fear, pain, limited activity associated with Cesarean section and also because SVD is a natural and conventional method. 15.5% preferred Cesarean section and 5.8% had no idea about choice.

Conclusions: The main findings of the study are the strong correlation between age, income per capita, number of previous SVD and C-section and the choice of mode of delivery. Other factors that influence the choice of mode of delivery include education, social trends, and mal-presentation. Fear of episiotomy and family suggestion has no significant effect on the choice of mode of delivery.

ABBREVIATIONS

SVD: Spontaneous Vaginal Delivery; C-section: Cesarean section; WHO: World Health Organization

INTRODUCTION

There are different modes of delivery influenced by various social and demographic factors such as age, circumstances, social trends and ethnicity [1]. C-section is a surgical delivery through an abdominal and uterine incision whereas spontaneous vaginal delivery (SVD) is a natural delivery through mother's birth canal [2]. Over the time C-section is becoming more common than SVD because of the fear of pain, episiotomy, and lacerations associated with SVD. C-section is considered a safer mode for the baby, with no influence on postpartum sexual life and no associated pain [3]. An inverse relationship has been established between the prevalence of C-section and maternal mortality, infant mortality, and neonatal mortality rates [4]. C-section is also preferred because of low perceived behavior, improper subjective norms [5] and labor dystocia [6].

Several other factors contribute to an increase in C-section including nutrition, increasing rates of induction of labor, use of electronic fetal heart rate monitoring, defensive obstetrics practice, patient's demand [7], and malposition/ malpresentation [8]. Incidence of C-section is higher in high income countries [9]. Even in developing countries the rates of C-section are greater in private hospitals as compared to the public sector hospitals [10]. A positive correlation has been found between C-section and the number of times of deliveries [11]. As maternal age increases, chances of C-section also increase [12]. Flaws in antenatal surveillance and ineffective referral chain are some of the causes of high percentage of C- section [13]. C-section can be carried out in half an hour while normal SVD may take 11-12 hours to

progress [14]. However, drug dependent women present the lower rates of C-section [15].

The rate of C-section was just 5% in 1970's and has gradually increased up to 32% in 2007 in USA [16]. A study was conducted on 1491 deliveries in Pakistan, out of which 669 were C-sections and the major reasons of C-section were previous C-section, fetal distress, non-progression of labor, malpresentation, placental abruption, and placenta previa [17].

However, C-section in first pregnancy is associated with somewhat risks of subsequent infertility [18]. Taking into account the maternal and perinatal mortality rates, World Health Organization (WHO) recommendation for C-section is 10-15% [19]. In spite of growing proportion of C-section deliveries worldwide, it has been suggested that C-section deliveries should only be carried out when there are necessary indications [20].

MATERIALS AND METHODS

Study design

Cross sectional study.

Study setting

The study was conducted in the Gynecology Department of Jinnah Hospital Lahore; Pakistan which is a 1200 bedded tertiary care hospital affiliated with AllamaIqbal Medical College, Lahore, Pakistan.

Duration of study

1 month (April 2017 - May 2017)

Sample size

155 pregnant women

Sampling technique

Non probability / purposive

Sample selection

Inclusion criteria: Pregnant women in 3rd trimester who were attending Gynecology Department of Jinnah Hospital Lahore, Pakistan, and gave consent were included.

Exclusion criteria: Pregnant women in the third trimester and those who can't speak for themselves or didn't give consent were excluded.

Data collection procedure: Patients who agreed to participate were included in the study with an informed consent taken. Self-designed questionnaires consisting of closed ended questions were filled by surveyor themselves. Aim of study was explained to each subject and proper instructions were given. The statements were read out before each of them individually. The Ethics Committee of Allama Iqbal Medical College, Lahore gave the ethical approval for the study.

Data analysis procedure: Data was entered and analyzed in SPSS version 17. Mean and standard deviation was calculated for numerical variables. Results were recorded as frequencies, percentages, mean and standard deviations, and shown in the form of bar, graphs, pi-charts and tables.

RESULTS

This study included 155 pregnant women in third trimester of which 131(84.5%) were below 30 years of age and 24(15.4%) were 30-45 years of age (Table 1). 45(29%) were uneducated and 110(70.96%) were educated (Table 2). 149(96.1%) were house wives and 6(3.9%) were associated with teaching profession. Among pregnant women, 110(70.9%) were multiparous and 45(29%) were nulliparous. Among multiparous, 58(37.5%) were having SVD as the last mode of delivery and 52(33.5%) were having C-section as the last mode of delivery (Figure 1). 123(79.4%) women believed SVD was a safer mode of delivery for them, 20(12.9%) believed C-section as a safer mode of delivery, and 12(7.7%) were having no idea (Figure 2). 119(76.8%) believed SVD a safer mode of delivery for baby, 22(14.2%) believed C-section safe for their baby, and 14(9%) were having no idea (Figure 3). Among complications of previous pregnancy, 1(0.6%) were having premature baby, 19(12.3%) women were with significant past obstetric history, 7(4.5%) were having pregnancy associated with diseases like hypertension, diabetes mellitus, and 30(19.4%) were with other complications such as preeclampsia and eclampsia (Figure 4). Among pregnant women, 24(15.5%) were having a baby with breech presentation, 79(51%) were having cephalic presentation and 52(33.5%) were having no idea (Table 3). Doctor's advice in 48(31%) cases was SVD, in 50(32.3%) cases C-section, and no advice in 56(36.1%) (Table 4). 122(78.7%) preferred SVD (Graph 5) because of fear of pain, limited activity associated with C-section, and also because SVD is a natural and conventional method. 24(15.5%) preferred C-section (Graph 5) depending upon complications, doctor's advice and previous c-section. 10(6.5%) women believed SVD had an adverse effect on postpartum sexual life, 57(36.8%) believed C-section had an adverse effect, 4(2.6%) believed both had adverse effect, and 84(54.2%) were having no idea (Table 5). In 126(81.3%) cases, family suggestion regarding mode of delivery was SVD, in 11(7.1%) cases it was C-section, and no suggestion in 18(11.6%) cases (Table 6). Social trend regarding mode of delivery in 101(65.2%) cases was SVD, in 41(26.5%) cases was C-section, and women were having no idea about social trends in 13(8.4%) cases (Table 7).

DISCUSSION

The current study was a cross sectional descriptive study, which aimed to investigate factors influencing the choice of mode of delivery. The results of our study closely corresponds to results found in study by El-Aziz et al, [3]. In our research, 78.7% women preferred SVD because it is a conventional method, recovery is quick and similar results were shown by another research where 66.3% women preferred SVD because of similar reasons [3]. Among pregnant women, 45.7% women were having secondary education and 25% were primigravida as compared to a study of Niger Delta University in which 39.9% were secondarily educated and 24.4% were primigravida [12]. Among the women 15.5% were having breech presentation corresponding to a value of 12% of a study conducted in America [4]. Women with previous 1 C-Section had a 73% chance to get C-section for future delivery while women with previous 2 C-sections had a 95% chance to get C-section later on. 36.8% pregnant women in our study believed that C-section had an adverse effect on postpartum

Table 1: Age versus Previous C-section.

Age	Previous C section					Total
	0	1	2	3	3 above	
15-20	17	2	0	0	0	19
20-25	41	15	4	1	0	61
25-30	25	8	11	5	2	51
30 above	14	5	5	0	0	24
Total	97	30	20	6	2	155

Chi Square test

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	38.131[a]	25	.045
No. of Valid Cases	155		

Age versus Previous SVD

Age	Previous SVDs				
	0	1	2	3	3 above
15-20	18	1	0	0	0
20-25	32	13	6	6	4
25-30	28	12	4	4	3
30 above	7	1	5	2	8
Total	85	27	15	12	15

Table 2: Level of education of study subjects.

Education	Frequency	Percent
None	45	29.0
Primary	18	11.6
Secondary	70	45.2
Tertiary	22	14.2
Total	155	100.0

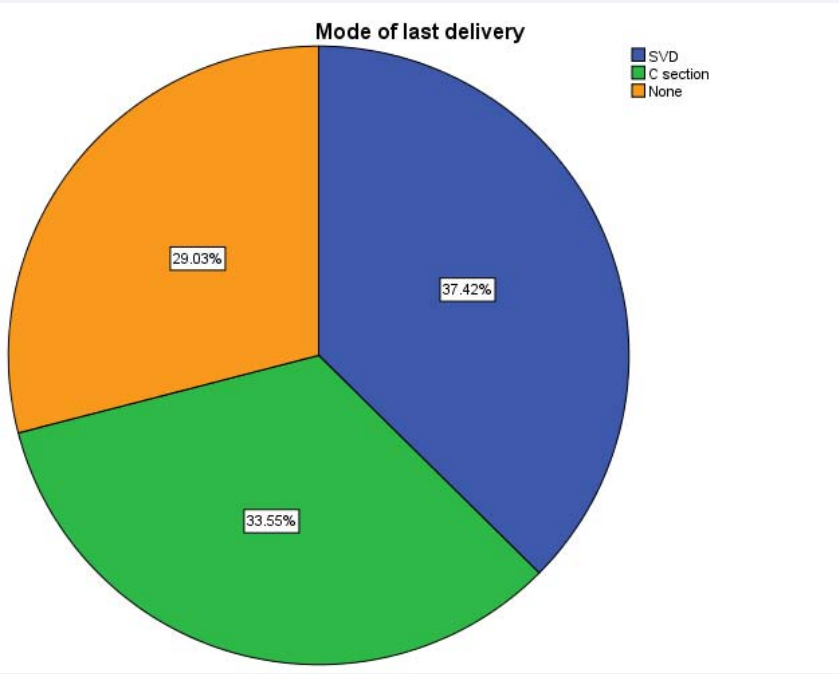

Figure 1 Proportion of different modes of last delivery in study subjects.

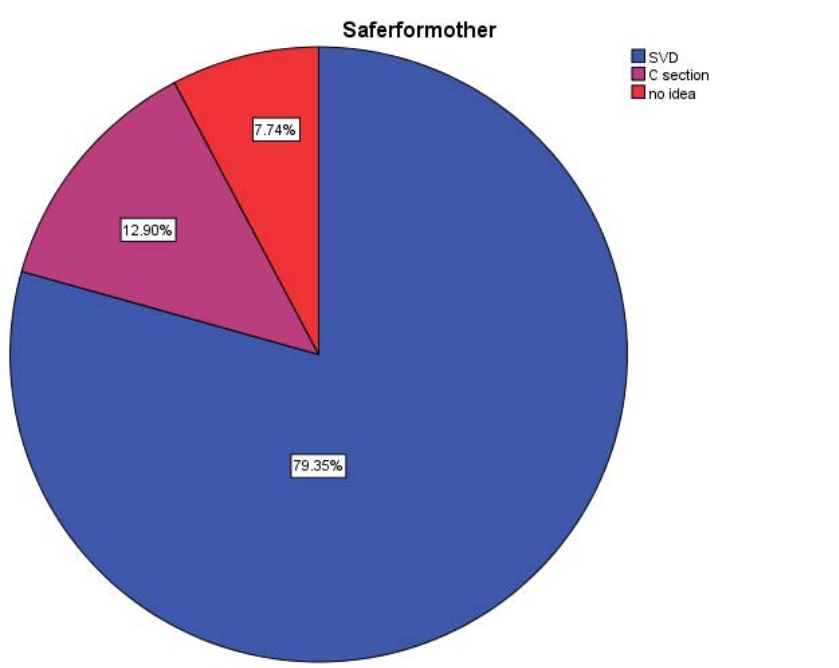

Figure 2 Proportions of study subjects considering different modes of delivery as safer for them.

Table 3: Presentation of baby as reported by study subjects.

Presentation		Frequency	Percent
	Breech	24	15.5
	Cephalic	79	51.0
	No idea	52	33.5
	Total	155	100.0

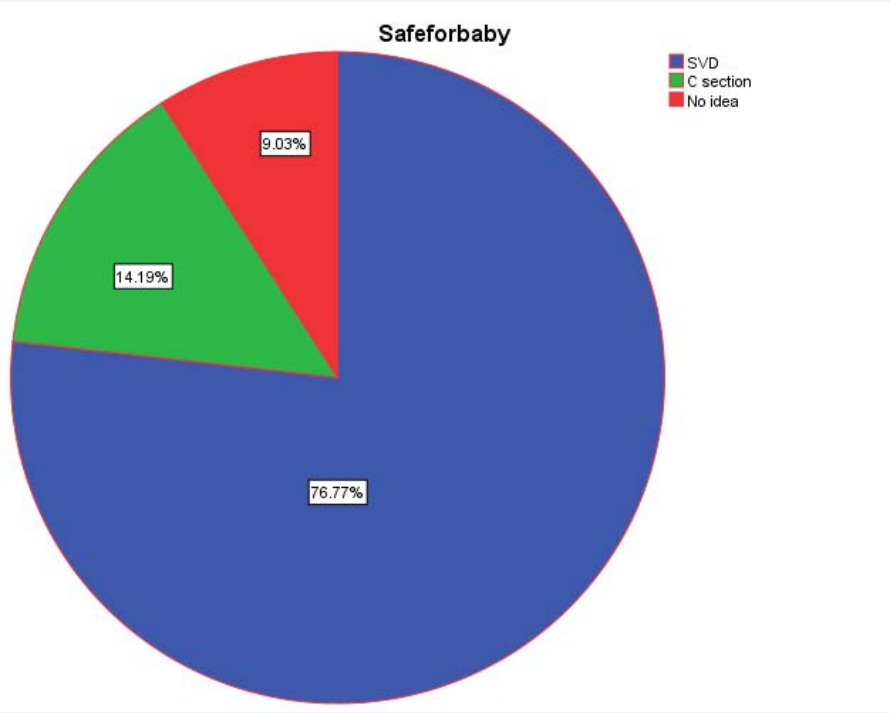

Figure 3 Proportions of subjects considering different modes of delivery as safer for their baby.

Table 4: Cross tabulation between Consultant advice and previous C-section.

Consultant advice		Previous C Section				
		.00	1.00	2.00	3.00	3 Above
	SVD	38	6	2	2	0
	C section	17	14	13	4	2
	No idea	41	10	5	0	0
Total		97	30	20	6	2

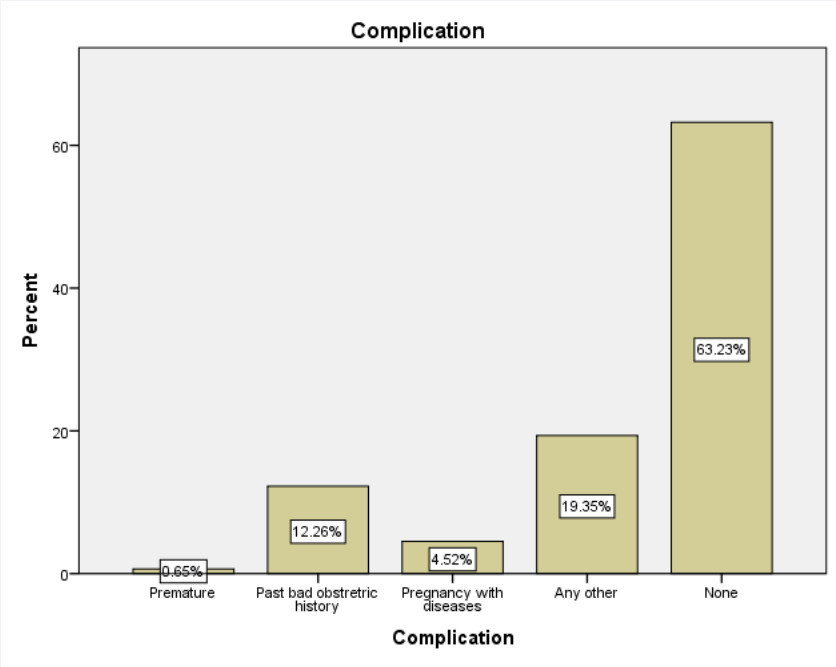

Figure 4 Percentage of different complications of previous pregnancy in study subjects.

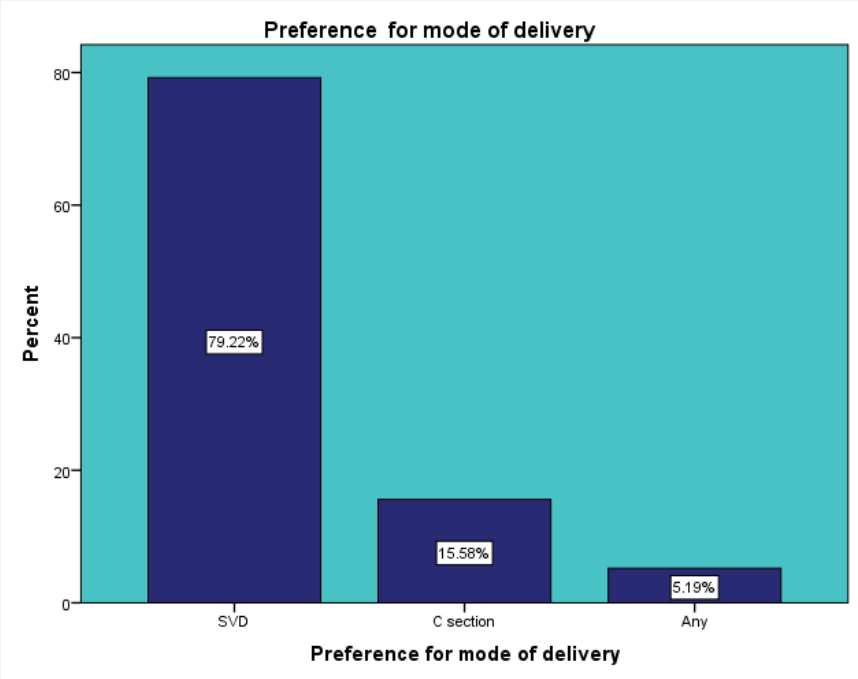

Figure 5 Percentages of subjects with preference for different mode of delivery.

Table 5: Adverse effects on post-partum sexual life.

Adverse effects		Frequency	Percent
Valid	SVD	10	6.5
	C section	57	36.8
	Both	4	2.6
	No idea	84	54.2
	Total	155	100.0

Table 6: Family Preference and proportion of study subjects.

Family preference	Frequency	Percent
SVD	126	81.3
C section	11	7.1
No idea	18	11.6
Total	155	100.0

Table 7: Social trend proportion of study subjects.

Social trend		Frequency	Percent
Valid	SVD	101	65.2
	C section	41	26.5
	No idea	13	8.4
	Total	155	100.0

sexual life which is exactly the same %age as in a study conducted in Turkey [16]. According to 65.2% women, SVD is a common mode of delivery in their surroundings and according to 26.5% women C-Section is a common mode of delivery. Another study showed that in 60.21% cases SVD was common mode of delivery while in 15.53% cases C-section was common. 14.2% women in our research believed that C-Section is safer for their baby that contradicts to a study conducted in Turkey where 59.4% pregnant ladies considered C-Section safer for their babies [16].

Our study has some limitations regarding finding a relationship between lack of knowledge and education of pregnant women about the choice of mode of delivery. Similarly, we couldn't ascertain a difference between complications related to previous modes of delivery and choice of the mode for a future delivery.

The current study gives an insight into some of the factors that influence a woman's choice of mode of delivery. Further studies to ascertain impact of socioeconomic variables like education and medical awareness on perinatal physiology are recommended.

CONCLUSION

Strong association between age, income per capita, no. of previous SVD and C-section, and the choice of mode of delivery are the main findings of our study. Other factors that influence the choice of mode of delivery are education, social trends, and mal-presentation. Fear of having an episiotomy and family suggestion have no significant effect on choice of the mode of delivery. There was not enough evidence to find an association between complications of previous mode of delivery and education of pregnant women on choice of mode delivery.

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