Original Article

PREFERENCE, OUTCOME AND COST OF CAESAREAN SECTIONS: COMPARISON BETWEEN PUBLIC AND PRIVATE TERTIARY HOSPITALS

Dr. Nazia Sabnam[1], Md. Ziaul Islam[2]

ABSTRACT

Background: To compare preference, outcome and cost of caesarean sections between public and private tertiary hospitals.

Methods: This comparative cross sectional study was conducted among 152 conveniently selected women who underwent CS. Data were collected by face to face interview and record reviewing by using semi-structured questionnaire and check list, ethical issues were maintained. Total cost was estimated by direct and indirect cost related to CS, analysis done by SPSS software. The study was conducted in Obstetrics and Gynaecology department of Dhaka Medical College & Hospital and Holy Family Red Crescent Medical College Hospital from January to December, 2018.

Results: Mean monthly family income of women was Tk.19668.75 (±14115.02) in public and Tk. 55472.22 (±25044.17) in private hospital. Provider preference was higher in public (78.8%) while self-preference was higher in private (37.5%) hospital ($p<0.05$). Majority i.e. 70% and 72.2% of women in public and private hospital respectively were healthy. But majority i.e. 58.3% had complications of new born in private compared to public (31.3%) hospital ($p<0.05$). In private hospital, mean total cost (Tk.52776.07±15841.93), direct cost (Tk.50826±15321.92) and indirect cost (Tk. 2890.91±3752.38) of CS was significantly higher compared to mean total cost (Tk.10149.2±4298.46), direct cost (Tk.8320.45±4028.74) and indirect cost (Tk.1844.87±1154.80) in public hospital (t-test, $p<0.01$). By self-preference, majority i.e. 17(63%) of women had highest cost (Tk. >5000) in private hospital ($p<0.05$) while majority i.e. 10 (58.8%) of women had lowest cost (Tk.4000-10000) in public hospital.

Conclusion: In private hospital total cost was about five times higher compared to public hospital though maternal outcome was almost same and neonatal outcome was better in public hospital. Appropriate regulations need to reduce preference of CS and difference of total cost.

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Keywords*:* Preference, Outcome, Cost, Caesarean Section, Public & Private Hospital.

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1. *Lecturer (Dental Public Health), Sir Salimullah Medical College, Dhaka. Ex-student of MPH (Community Medicine), National Institute of Preventive and Social Medicine (NIPSOM), Mohakhali, Dhaka-1212.*
2. *Professor and Head, Department of Community Medicine, National Institute of Preventive and Social Medicine (NIPSOM), Mohakhali, Dhaka-1212.*

Correspondence: *Nazia Sabnam, E-mail:* nazia.sabnam@gmail.com

INTRODUCTION

Caesarean section is defined as the delivery of a fetus through surgical incisions made through the abdominal wall and the uterine wall.[1] It is performed on the basis of some medical indications for the safety of mother and new born in both public and private hospitals. A study in Brazil revealed that the prevalence of caesarean delivery was 29.9% in public sector and 86.2% in private sector.[2]

Many factors are responsible for preference of CS from both patient perspective and provider perspective. Though CS is performed for the wellbeing of mother and fetus but as a surgical procedure variety of short term and long term complications may arise. In a study in Saudi Arabia shown most occurring adverse maternal outcome of CS was blood transfusion (3.72%) followed by ICU admission (0.63%), HELLP syndrome (0.51%), hysterectomy

(0.30%) and most occurring adverse fetal outcome was IUGR followed by IUFD, ICU admission.[3]

Cost of caesarean sections includes direct, indirect and total cost. Direct cost includes all cost of patient which was directly related to treatment of caesarean section i.e. travel cost, food cost, drug cost, consultation fees, investigation cost, hospital cost, attendant's cost etc. In private hospital specialists do operation on contractual basis so direct cost become about double said by Sabnom in a study.[4]

Indirect cost is some cost incurred by patient and patient's family that are not directly related to treatment purposes. It may include cost of work day loss of the patient and family members, informal payment like tips etc. Cost for caesarean sections sometimes become very crucial issue. In a study by Nahar and Costello estimated that 79% of households in Bangladesh did not have sufficient money to pay for delivery and they had to borrow from friends and relatives.[5] The overuse of caesarean section is therefore a real public health concern because maternal & neonatal health risk may occur said by Feng X L.[6] On the basis of above stated realities this study was carried out to reveal information about preference of caesarean sections, its outcome, cost and to compare these factors between public and private tertiary hospitals.

METHODS

This comparative cross sectional study was conducted among 152 women who underwent CS in Dhaka Medical College Hospital (public) and Holy Family Red Crescent Medical College Hospital (private) in Dhaka city during the period of January to December, 2018. By convenience sampling technique, 80 women from DMCH and 72 women from HFRMCH were included in this study. After taking informed written consent data were collected by face to face interview and reviewing medical records of each women by using a pre-tested semi-structured questionnaire and check list respectively. Estimation of total cost was done by direct and indirect cost related to CS. Ethics was maintained strictly at different stages of this study. After data collection data were checked thoroughly for any inconsistency and incompleteness. Then analysis done by using SPSS software. Descriptive statistics were presented by mean, frequency, standard deviation, proportion in table and graph and inferential statistics were presented by chi-square, t-test, ANOVA, logistic regression and correlation.

RESULTS

Mean (±SD) age of women was 25.25(±4.662) years in public hospital compared to 26.97(±4.717) years in private hospital. In public hospital majority i.e. 48 (60.0%) of women studied up to secondary level, most of them i.e. 64 (80%) and 74 (92.5%) were housewives and Muslim respectively. On the other hand, majority i.e. 45 (62.5%) of women of private hospital studied up to higher secondary and above, majority of them i.e. 47 (65.3%) were housewives and most of them i.e. 69 (95.8%) were Muslim. Mean (±SD) personal income and family income of women was Tk. 5250 (±3770.184) and Tk. 19668.75 (±14115.02) in public hospital while it was Tk.17272.73 (±4076.54) and Tk. 55472.22 (±25044.17) respectively among women of private hospital (Table-1).

Table-1: Socio-demographic characteristics of women

Characteristics	Public	Private
Age (Mean±SD) years	25.25(±4.662)	26.97(±4.717)
Education		
Primary	26 (32.5%)	2 (2.8%)
Secondary	48 (60.0%)	25 (34.7%)
Higher secondary & above	6 (7.5%)	45 (62.5%)
Occupation		
Service	3 (3.8%)	11 (15.3%)
Student	3 (3.8%)	9 (12.5%)
Housewife	64 (80%)	47 (65.3%)

Religion		
Islam	74 (92.5%)	69 (95.8%)
Hindu	6 (7.5%)	3 (4.2%)
Monthly personal income (Tk.)		
Mean (±SD)	5250 (±3770.184)	17272.73(±4076.54)
Monthly family income (Tk.)		
(Mean±SD)	19668.75(±14115.02)	55472.22(±25044.17)
Family type		
Nuclear	32 (40%)	36 (50%)
Joint	48 (60%)	36 (50%)

In public hospital, 17 (21.3%) and 63 (78.8%) of women had self and provider preference respectively. In private hospital, 27 (37.5%) and 45 (62.5%) of women had self and provider preference respectively. This difference of women by reason of preference between hospitals was statistically significant ($p<0.05$). The chance of self-preference of CS was 2.224 times higher among women of private hospital compared to public hospital ($p<0.05$) (Table-2).

Table-2: Comparison of reasons of preference for CS by hospital

Reason	Public hospital f (%)	Private hospital f (%)	Total f (%)	Significance	OR
Self-preference	17 (21.3)	27 (37.5)	44 (28.9)	χ^2= 4.865	2.224
Provider preference	63 (78.8)	45 (62.5)	108 (71.1)	df= 1	
Total	80 (100)	72 (100)	152 (100)	p=0.027	

*Reference category: Public hospital

Mean (±SD) duration of treatment of CS was 3.88(±0.862) days in public hospital compared to 5.67(±1.636) days in private hospital and this difference between two hospitals was statistically significant ($p<0.01$) (Table-3).

Table-3: Comparison of duration of treatment of women by hospital

Hospital	Duration (Days) of treatment			Statistics	Significance
	3-6 f(%)	7-10 f (%)	Total f (%)		
Public	78 (97.5)	2 (2.5)	80 (100)	Mean(±SD) =3.88±0.862	χ^2= 15.441 df= 1 p=0.000
Private	55 (76.38)	17 (23.61)	72 (100)	Mean(±SD) =5.67±1.636	

Regarding maternal outcome of CS, majority i.e. 56 (70%) and 52 (72.2%) of women in both public and private hospital respectively had healthy outcome. Regarding neonatal outcome, majority i.e. 55 (68.8%) of women had healthy outcome in public hospital but majority i.e. 42 (58.3%) of women had complications of new born in private hospital. This difference of women by neonatal outcome between hospitals was statistically significant ($p<0.01$) and chance of any complication of new born was 3.080 times higher in private hospital compared to public hospital ($P<0.01$) (Table-4).

Table-4: Comparison of outcome of caesarean sections by hospital

	Hospital	Outcome			Significance	OR
		Healthy f (%)	Complications f (%)	Total f (%)		
Maternal	Public	56(70.0)	24 (30.0)	80(100)	χ^2= 0.091 df= 1 p=0.763	
	Private	52(72.2)	20 (27.7)	72(100)		
Neonatal	Public	55(68.7)	25 (31.3)	80(100)	χ^2= 11.277 df= 1 p=0.001	3.080
	Private	30(41.7)	42 (58.3)	72(100)		

*Reference category: Public hospital

In public hospital majority i.e. 62 (77.5%) of women had their total direct cost TK. 3000-10000 followed by 16 (20%) had TK. 10001-20000. On the other hand, in private hospital majority i.e. 38(52.8%) of women required direct cost more than TK. 50000 followed by 30 (41.7%) required Tk. 30001-50000. This difference of women by direct cost between hospitals was statistically significant ($p<0.01$) (Table-5).

Table-5: Comparison of direct cost (Tk.) of women by hospital

Hospital	Direct cost (Tk.)						Statistics	Significance
	3000-10000 f (%)	10001-20000 f (%)	20000-30000 f (%)	30001-50000 f (%)	>50000 f (%)	Total f (%)	Mean(±SD)	
Public	62(77.5)	16(20)	1(1.3)	1 (1.3)	0 (0.0)	80(100)	8320.45 (±4028.748)	χ^2= 144.999 df= 4 p=0.000
Private	0 (0.0)	0 (0.0)	4(5.6)	30(41.7)	38(52.8)	72(100)	50826 (±15321.92)	

In public hospital majority i.e. 56 (71.8 %) of women had total indirect cost TK. 1001-5000 followed by 20 (25.6%) TK. (100-1000). On the other hand, in private hospital majority i.e. 24 (54.5%) of women had total indirect cost TK. 100-1000 followed by 9 (20.5%) TK. (1001-5000). This difference of women by indirect cost between hospitals was statistically significant ($p<0.01$) (Table-6).

Table-6: Comparison of indirect cost (Tk.) of women by hospital

Hospital	Indirect cost (Tk.)					Statistics Mean(±SD)	Significance (Fisher's exact)
	100-1000 f (%)	1001-5000 f (%)	5001-10000 f (%)	10001-15000 f (%)	Total f (%)		
Public	20(25.6)	56(71.8)	2 (2.6)	0 (0.0)	78(100)	1844.87 (±1154.807)	Value: 34.123 df=3 p=0.000
Private	24(54.5)	9 (20.5)	8(18.2)	3 (6.8)	44(100)	2890.91 (±3752.383)	

In public hospital majority i.e. 45 (56.3%) of women had total cost Tk. 4000-10000 while majority i.e. 42 (58.3%) had total cost Tk. >50000 in private hospital. This difference of women by total cost between hospitals was statistically significant (p<0.01) (Table-7).

Table-7: Comparison of total cost (Tk.) of women by hospital (n=152)

Hospital	Total cost (Tk.)						Statistics Mean(±SD)	Significance
	4000-10000 f (%)	10001-20000 f (%)	20001-30000 f (%)	30001-50000 f (%)	>50000 f (%)	Total f (%)		
Public	45(56.3)	33(41.3)	1(1.3)	1 (1.3)	0 (0.0)	80(100)	10149.2 (±4298.469)	χ^2= 144.929 df= 4 p=0.000
Private	0(0.0)	0 (0.0)	4(5.6)	26(36.1)	42(58.3)	72(100)	52776.07 (±15841.93)	

Majority i.e. 40 (50%) of women of public hospital used family income while majority i.e. 50 (70.8%) of women of private hospital had savings as source of fund to maintain treatment cost (Figure1).

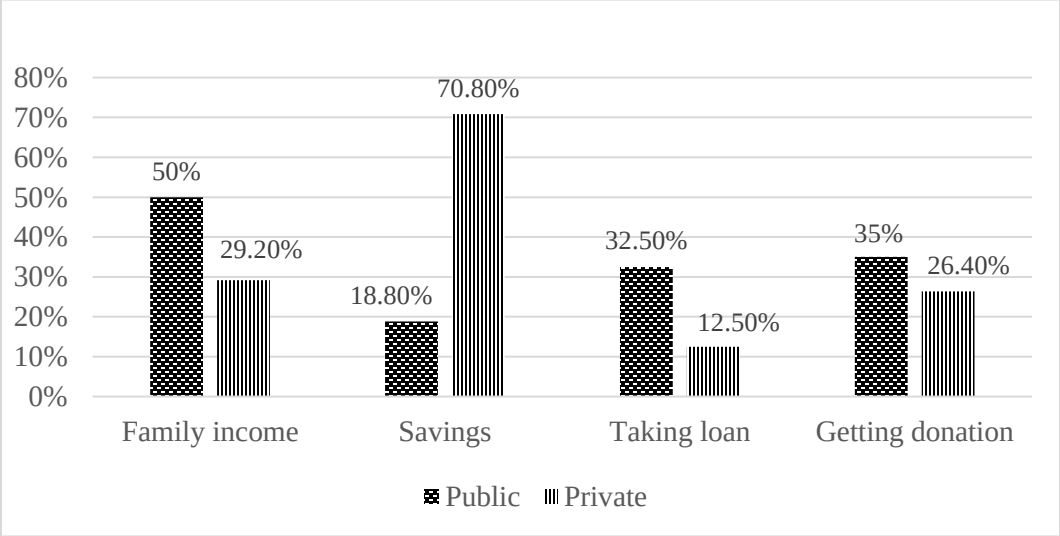

Figure-1: Comparison of women by source of fund between hospitals

In public hospital majority i.e. 6(100%), 3(100%), 3(100%), 32 (50%) of women who were unemployed, service holder, student and housewives respectively had total cost Tk. 4000-10000. Among businessman majority i.e. 50% had cost Tk. 10001-20000. This difference of occupation with total cost was statistically significant ($p<0.05$). In private hospital majority i.e. 3(60%), 9(81.8%), 5(55.6%) and 25(53.2%) of women who were unemployed, service holder, student and housewives respectively had total cost Tk. >50000.

By monthly family income majority i.e. 14 (58.3%), 18 (54.5%), 12 (54.5%), 1 (100%) of all income group had total treatment cost within 4000-10000 Tk. in public hospital. On the other hand, in private hospital, majority i.e. 23(79.3%) and 19 (47.5%) of women of income group Tk.50000-100000 and Tk. 21000-50000 respectively had treatment cost Tk. >50000. Among women of income group Tk.11000-20000, 1(50%) had total cost within Tk.30001-50000 and 1(50%) had cost within Tk.20001-30000. This difference of total cost by family income was statistically significant in private hospital ($p<0.01$) (Table-8).

Table-8: Comparison of total cost of CS by selected socio-demographic attributes between public and private hospitals

Hospital	Attributes	Total cost (Tk.)						Significance
		4000-10000 f(%)	10001-20000 f(%)	20001-30000 f(%)	30001-50000 f(%)	>50000 f(%)	Total f(%)	
Public	**Occupation**							Fisher's exact=26.372 df=12 p=0.016
	Unemployed	6(100)	0 (0.0)	0(0.0)	0 (0.0)	0 (0.0)	6(100)	
	Service	3(100)	0 (0.0)	0(0.0)	0 (0.0)	0 (0.0)	3(100)	
	Student	3(100)	0 (0.0)	0(0.0)	0 (0.0)	0 (0.0)	3(100)	
	Business	1 (25.0)	2 (50.0)	0(0.0)	1 (25.0)	0 (0.0)	4(100)	
	Housewife	32(50.0)	31(48.4)	1(1.6)	0 (0.0)	0 (0.0)	64(100)	
	Monthly family income (Tk.)							Fisher's exact=9.022 df=9 p=1.00
	5000-10000	14(58.3)	10(41.7)	0(0.0)	0 (0.0)	0 (0.0)	24(100)	
	11000-20000	18(54.5)	13(39.4)	1(3.0)	1 (3.0)	0 (0.0)	33(100)	
	21000-50000	12(54.5)	10(45.5)	0(0.0)	0 (0.0)	0 (0.0)	22(100)	
	51000-100000	1(100)	0 (0.0)	0(0.0)	0 (0.0)	0 (0.0)	1(100)	
Private	**Occupation**							Fisher's exact=3.550 df=6 p=0.713
	Unemployed	0 (0.0)	0 (0.0)	0 (0.0)	2 (40.0)	3 (60.0)	5(100)	
	Service	0 (0.0)	0 (0.0)	0 (0.0)	2(18.2)	9(81.8)	11(100)	
	Student	0 (0.0)	0 (0.0)	0 (0.0)	4(44.4)	5(55.6)	9(100)	
	Housewife	0 (0.0)	0 (0.0)	4(8.5)	18(38.3)	25(53.2)	47(100)	
	Monthly family income (Tk.)							Fisher's exact=15.89
	5000-10000	0 (0.0)	0 (0.0)	0 (0.0)	1(100)	0 (0.0)	1(100)	
	11000-20000	0 (0.0)	0 (0.0)	1(50.0)	1(50.0)	0 (0.0)	2(100)	

	21000-50000	0 (0.0)	0 (0.0)	2(5.0)	19(47.5)	19(47.5)	40(100)	df=6 p=0.003
	51000-100000	0 (0.0)	0 (0.0)	1(3.4)	5 (17.2)	23(79.3)	29(100)	

By preference of caesarean section, total cost was within Tk. 4001-10000 for majority i.e. 10 (58.8%) and 35 (55.6%) of women who had self-preference and provider preference respectively in public hospital. In private hospital, total cost was Tk. > 50000 for majority i.e. 17 (63%) of women who had self-preference. Who had provider preference, treatment cost was Tk. >50000 and Tk. 30001-50000 for 25 (55.6%) and 20 (44.4%) of women respectively. This difference of total cost by preference in private hospital was statistically significant ($p<0.05$) (Table-9).

Table-9: Comparison of total cost by preference of CS between hospitals

Hospital	Preference	Total cost (Tk.)						Significance
		4000-10000 f(%)	10001-20000 f(%)	20001-30000 f(%)	30001-50000 f(%)	>50000 f(%)	Total f(%)	
Public	Self-preference	10(58.8)	6(35.3)	1(5.9)	0(0.0)	0(0.0)	17(100)	Fisher's exact=3.644 df=3 p=0.369
	Provider preference	35(55.6)	27(42.9)	0 (0.0)	1 (1.6)	0(0.0)	63(100)	
Private	Self-preference	0 (0.0)	0 (0.0)	4(14.4)	6 (22.2)	17(63)	27(100)	Fisher's exact=8.494 df=2 p=0.01
	Provider preference	0 (0.0)	0 (0.0)	0 (0.0)	20(44.4)	25(55.6)	45(100)	

By type of hospital, mean direct (Tk.50286.00±3752.383), indirect (Tk.2890.91±3752.383) and total (Tk.52776.07±15841.939) cost was higher in private hospital in comparison to mean direct (Tk.8320.45±4028.748), indirect (Tk. 1844.87±1154.807) and total (Tk.10149.20±4298.469) cost of women of public hospital. These differences were statistically significant (T-test, p= 0.000) (Table-10).

Table-10: Comparison of different types of mean treatment cost by hospital

Type of cost	Type of hospital		Significance
	Public Mean cost (±SD)	Private Mean cost (±SD)	
Direct cost	8320.45±4028.748	50286.00±3752.383	t= -23.919 df=150, p=0.000
Indirect cost	1844.87±1154.807	2890.91±3752.383	t= -2.284 df=120, p=0.000
Total cost	10149.20±4298.469	52776.07±15841.939	t= -23.146 df=150, p=0.000

By short term maternal outcome, the mean cost was highest among women who had postpartum bleeding (Tk. 17067.5) in comparison to postpartum eclampsia (Tk. 4235) and other complications in public hospital. On the other hand, in private hospital, the mean cost was highest among the women who had anaemia (Tk. 90156) in comparison to headache (Tk. 37839.75) and other complications. This difference of mean cost between short term maternal outcome was statistically significant in private hospital (ANOVA, $p<0.05$) (Table-11).

Table-11: Comparison of CS by short term maternal complications

Short term complication	Public	Significance	Private	Significance
	Mean treatment cost(±SD)		Mean treatment cost(±SD)	
Wound infection	8850 (±3241.538)	F=0.565 df=9 p=0.804	0 (±0.0)	F=2.906 df=6 p=0.05
Postpartum eclampsia	4235 (±0.0)		90000 (±0.0)	
Intrapartum bleeding	8545(±296.985)		47517.5 (±19337.249)	
Postpartum bleeding	17067.5 (±19894.449)		0 (±0.0)	
Anaemia	8665 (±2998.133)		90156 (±0.0)	
Septicemia	5295 (±0.0)		0 (±0.0)	
Pain in stitched area	6838.33 (±1411.394)		51592.25 (±12025.714)	
Hypertension	9728.33 (±6546.880)		54184.5 (±15403.925)	
Headache	11020 (±1817.572)		37839.75 (±12388.498)	
Drug adversities	7615 (±1951.615)		61362.25 (18004.537)	

In public hospital it was revealed that duration of treatment of CS had partial positive correlation with total cost. On the other hand, in private hospital, it was revealed that monthly personal income, monthly family income and duration of treatment of CS had partial positive correlation with total cost and it was statistically significant (Table-12).

Table-12: Correlation of total cost (Tk.) of CS with selected attributes

Attributes	Total cost of caesarean section (Tk.)			
	Public		Private	
	r	p	r	p
Monthly personal income (Tk.)	-0.479	0.230	0.707*	0.015
Monthly family income (Tk.)	-0.066	0.560	0.372**	0.001
Treatment duration of CS (Days)	0.063	0.578	0.439**	0.000

* Correlation is significant at the 0.05 level (2-tailed); ** Correlation is significant at the 0.01 level (2-tailed)

A linear association was present between monthly family income and total cost of caesarean section. Both are positively realted when monthly family income increases, total cost also increases in case of private hospital (R^2=0.138) (Figure-2).

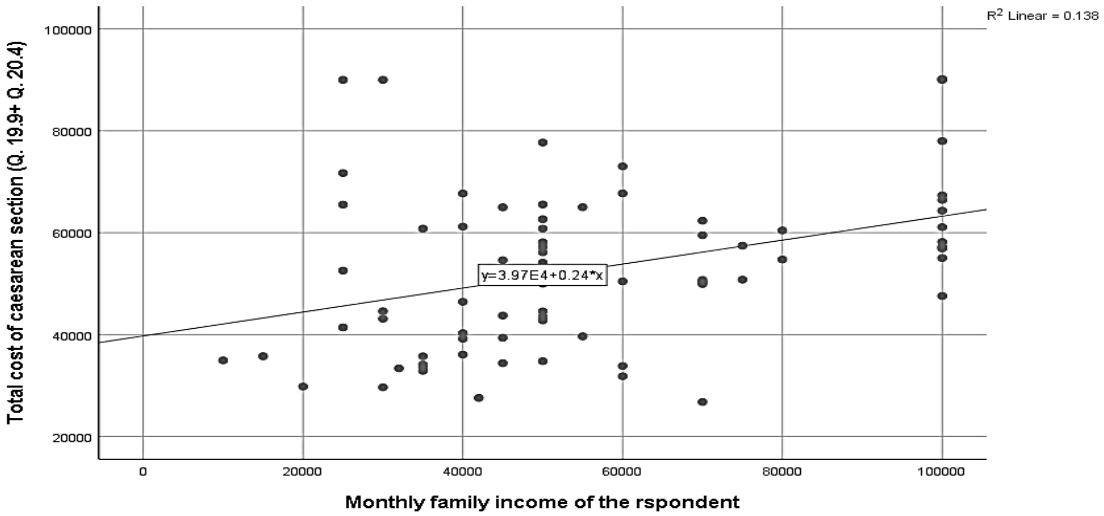

Figure-2: Total cost of CS and monthly family income in private hospital

DISCUSSION

This comparative cross sectional study was conducted in one public and one private tertiary hospital in Dhaka city with the objective to compare preference, outcome and cost of caesarean sections. Study result revealed, majority i.e. 32 (40%) and i.e. 35 (48.61%) of women in public and private hospital respectively were in the age group 24-29 years. There was similarity with another study finding which showed majority of the women in both government (86.4%) and non-government (90.6%) hospitals were in the age group 20-34 years.[7] Among total 152 women, majority i.e.73 (48%) had studied up to secondary level. Another study finding showed similarity with this study where among 479 women of CS, majority i.e. 265 (55.32%) had educational qualification up to secondary level.[8] Majority i.e. 64 (80%) and 47 (65.3%) of women in both public and private hospital respectively were housewives. Similarity was found with another study result which showed majority i.e. 70 (87.5%) and 31 (62%) of women in public and private hospital were housewives.[4] Most i.e. 143 (94.03%) of women were Muslims and the rest i.e. 9 (5.97%) were Hindus in this study which is similar with another study where 87.8% women of CS were Muslim and 12.13% were from other religion.[8]

In DMCH majority i.e. 33 (41.3%) were from income group Tk.11000-20000 and in HFRMCH majority i.e. 40 (55.6%) were from income group Tk. 21000-50000. Another study showed similarity where majority i.e. 49 (61.25%) had income Tk. 10001-20000 and majority i.e. 31 (62%) had income Tk. 30001-50000 in public and private hospital respectively.[4] Difference of women by educational qualification, monthly personal income and family income between hospitals were statistically significant ($p<0.01$). The variation of occupation and monthly family income by total cost in public and private hospital respectively were statistically significant ($p<0.05$).

Majority i.e. 40 (50%) of the women choose DMCH because they were referred there, 21 (26.3%) for effective treatment, 14 (17.5%) for complicated condition, 4 (5.0%) for specialized treatment provided by physician and 1 (1.3%) for low cost of treatment. Majority i.e. 27(37.5%) chose HFRCMCH due to specialized treatment provided by physician, 19 (26.4%) for effective treatment, 14 (19.4%) for complicated condition, 7 (9.7%) for better quality of services and 5 (6.9%) were referred. This difference of women by reason of preferring hospital was statistically significant ($p<0.01$). Another study findings regarding CS in public and private tertiary hospital showed majority i.e. 28 (35%) choose public hospital for available doctors, another 28 (35%) for better treatment facilities and majority i.e. 21 (42%) preferred private hospital for available doctors.[4]

Among total 152 women majority i.e. 108 (71.1%) had provider preference of CS and the rest 44 (28.9%) had self-preference. Self-preference was higher in private

(37.5%) compared to public (21.3%) hospital and provider preference was higher in public (78.8%) compared to private (62.5%) hospital. There was similarity with another study finding in Beijing which revealed majority i.e. 365 (81.1%) had provider preference and 85 (18.9%) had self-preference of CS.[9] The variation of preference of CS by direct, indirect and total cost was statistically significant in case of private hospital ($p<0.05$). Regarding self-preference of CS, majority in both public and private hospital i.e. 9 (50%) and 14 (51.9%) of women respectively preferred CS to avoid complications during labour. Rest women i.e. 5 (27.8%), 4 (22.1%) and 1 (5.6%) in public hospital preferred to avoid foetal complications, according to husband and family members, to avoid reproductive tract complications respectively. Rest women in private hospital i.e. 9 (33.3%), 4 (14.8%), 3 (11.1%) and 3 (11.1%) preferred CS to avoid foetal complications, according to husband and family members, to avoid reproductive tract complications, to avoid delivery pain respectively. Another study result revealed majority i.e. 35 (41.2%) had self-preference of CS to avoid foetal complications.[9]

According to provider, elective CS was the indication for majority i.e. 23.8% of women in public hospital followed by PROM (16.3%), foetal distress (16.3%), APH (13.8%), tender uterine scar (10%), obstructed labour (7.5%), pre-eclampsia (5%), eclampsia (5%), severe oligohydromnios (7.5%), GDM (3.8%), malpresentation (3.8%), non-progress of labour (2.5%), bronchial asthma (2.5%) and hepatitis (1.3%). In private hospital majority i.e. 51.4% of women had elective CS as indication followed by foetal distress (16.7%), PROM (12.5%), GDM (5.6%), APH (5.6%), pre-eclampsia (4.2%), tender uterine scar (4.2%), Hypertension (2%), malpresentation (2%), severe oligohydromnios (2%), bronchial asthma (2%), multiple pregnancy (1.4%) and hepatitis (1.4%). A study regarding clinical indication of CS showed indication according to provider was difficult labour (24%) followed by elective CS (23.3%).[3] There was some discrepancy between these findings because the compared study was carried out in Saudi Arabia in the year of 2014, but the present study was carried out in Dhaka in the year 2018.

Mean (±SD) duration of treatment was 3.88 (±0.862) and 5.67 (±1.636) days in public and private hospital respectively ($p<0.05$). Dissimilarity found with another study where mean duration of post-operative stay was 4-7 days in government hospital and 2-3 days in non-government hospital.[7] Majority of women had healthy outcome in both public & private hospital, 56 (70%) & 52 (72.2%) respectively. In DMCH women had wound infection (16.7%), headache (16.7%), pain in stitched area (12.5%), hypertension (12.5%), intrapartum bleeding (8.3%), PPH (8.3%), anaemia (8.3%), drug related complications (8.3%), septicaemia (4.2%) and postpartum eclampsia (4.2%) as short term complications. In HFRMCH, women had pain in stitched area (20%), hypertension (20%), headache (20%), drug related complications (20%), intrapartum bleeding (10%), postpartum eclampsia (5%) and anaemia (5%) as short term complications. Another study result revealed wound infection 17 (45.9%) was the most common morbidity.[7] From this dissimilarity it can be realized that CS procedure has become safer so wound infection is reduced now and advancement of medical knowledge and technology was the probable cause behind it.

Majority i.e. 55 (68.8%) of the women had healthier new born in public hospital whereas in private hospital majority i.e. 42 (58.3%) had short term complications, chance of complication was higher in private hospital compared to public hospital ($p<0.01$). In DMCH, majority of neonate had LBW (40 %) followed by infection (24%), birth asphyxia (20%), prematurity (12%), death (8%), cyanosis (4%), jaundice (4%), IUGR (4%) and convulsion (4%) as short term complications. In HFRMCH, majority neonate had jaundice (52.4%) followed by infection (19%), prematurity (14.3%), birth asphyxia (9.5%), LBW (4.8%), IUGR (4.8%), death (4.8%) and cyanosis (2.4%) as short term complications. There was dissimilarity with another study finding where IUGR was the most frequent adverse foetal outcome.[3] This difference indicates ANC service is effectively used by the women which contributes to reduce prevent IUGR and neonatal mortality.

The average direct cost was Tk. 8320.45 (±4028.748) and Tk. 50826 (±15321.926) in public and private hospital respectively. Another study revealed average direct cost was Tk. 5222.38 (±4662.806) and Tk. 30133.8 (±11872.439) in public and private hospital respectively.[4] The small difference of direct cost in between these studies is due to 5 years gap of time. Mean indirect cost was Tk.1844.87 (±1154.807) and Tk. 2890.91 (±3752.383) in public and private hospital respectively. Another study revealed average indirect cost was Tk. 2045.72 (±1042.126) and Tk. 3946.94 (±1097.746) in public and private hospital respectively.[4] It can be seen that average indirect cost in both type of hospital is reduced in present study. The average total cost was Tk. 10149.2 (±4298.469) and Tk. 52776.07 (±15841.939) in public and private hospital respectively. This finding was similar with another study where majority had total cost within Tk. 1001-10000 in public hospital and majority incurred the highest range (Tk. 30001-48000) of total cost in private hospital.[4] The difference of direct, indirect and

total cost of women by hospitals were statistically significant in this study ($p<0.01$).

Majority i.e. 32(57.1%) and 13 (54.2%) of women who were healthy and had short term complications respectively had lowest cost (Tk. 4000-10000) in public hospital. But majority i.e. 30 (57.5%) and 12 (60%) of women who were healthy and had complications respectively had highest cost (Tk.>50000) in private hospital. Another study stated that patient who incurred higher cost were healthy in public hospital but who incurred higher cost in private hospital were not healthy.[4] This difference of findings indicates healthy outcome can be achieved by incurring lowest cost in public hospital compared to private hospital where all types of cost were higher with less difference of outcome.

CONCLUSION

Preference of CS sometimes leads to crucial outcome and burden of cost. Public hospital was preferred by majority of women as they were referred there and majority preferred private hospital to get specialized treatment provided by physician. The chance of self-preference was more than two times higher in private hospital compared to public hospital. Chance of any complication of new born baby was three times higher in private hospital compared to public hospital. Total cost was about five times higher in private hospital compared to public hospital though maternal outcome is almost same.

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