

Knowledge and Preference of Mothers Delivering at AL-Kadhumyia Teaching Hospital Regarding Caesarean Section and Normal Vaginal Delivery

Huda Adnan Habib*, Maysaloun Muhammed Abdulla**, Selwa Elias Yacoub***

ABSTRACT :

BACKGROUND:

Caesarean section rates are progressively rising in many parts of the world. One suggested reason is increasing requests by women for caesarean section in the absence of clear medical indications.

OBJECTIVE:

To determine the medical and non medical reasons behind the caesarean section. To identify the mothers preference to the mode of delivery and reasons behind this preference.

MATERIALS AND METHODS:

A cross sectional study of 480 mothers was interviewed. The data was collected using a questionnaire form includes information under two main headings: 1) Information related to the mother; these include demographic and some obstetrical information, obstetrical 2) Knowledge of mothers regarding reasons behind their caesarean section. 3) Information related to mother preference.

RESULTS:

The majority of mothers 317(66%) were delivered by Caesarean section, the majority of Caesarean section mothers (41%) were of (36-45) years of age, (47.3%) completed primary education., (89%) of them reported medical reasons behind their Caesarean section, (25.9%) of mothers with medical reasons reported a history of Caesarean section as the main medical reason. Regarding the non medical reasons the majority of mothers (45.7%) reported Fear of vaginal delivery as the main non medical reason. The majority 384(80%) of mothers prefer NVD while only (20%) reported their preference to C-section

CONCLUSION:

The caesarean section rate was high, history of Caesarean section were the main medical reason behind caesarean section, fear of vaginal delivery was the main non medical reason behind caesarean section. Majority of mothers prefer NVD than C-section

KEYWORDS: caesarean section, medical reasons, non medical reasons, mother preferences.

INTRODUCTION:

Pregnancy & delivery are considered as normal physiological state women. Of all deliveries approximately 10% are considered high risk, some of which may require caesarean section⁽¹⁾. A Caesarean section (C-section) is a surgical procedure to deliver one or more babies. It is usually performed when a vaginal delivery would put the baby's or mother's life or health at risk⁽²⁾. Recent studies reaffirm earlier world health organization (WHO) recommendation about optimal C-section rates, the best outcomes of mothers & babies appear to occur with C-section

rates of 5% to 10%, rates above 15% seem to do more harm than good⁽³⁾. In the last few decades, the C-section rates have increased dramatically in the developed world⁽¹⁾. Iraq in a survey⁽⁴⁾ held in 2006 indicated that 20% of births were delivered by C-section, another study⁽⁵⁾ held in Iraq in 2010 shows that the C-section rate was (62.2%). Caesarean section increases the health risks for mothers & babies, as well as the cost, compared with normal deliveries⁽⁶⁾. Many of the women expressed difficulty in fully understanding why they had needed an operative delivery, typically they suggested that either they or the baby had failed to achieve normal delivery. The indication related to the size of the baby, fetal position & concern about fetal compromise but few women were clear about the precise reason for operative delivery⁽⁷⁾. The proliferation of C-section deliveries on the past 20 years has been attributed

*Department of Community Medicine/AL-Kindy College of Medicine/Baghdad University.

** Department of Community Medicine/ College of Medicine/AL-Nahrain University.

*** Department of Community Medicine/AL-Kindy College of Medicine/Baghdad University.

predominantly to non obstetric factors, including increase use of birth technology, fear of litigation, financial incentives, and physician preference. In addition some researchers have reported that women are requesting C-section delivery, which is thought partly to account for high C-section rate⁽⁸⁾. Women's childbirth experiences have an influence on her future preferred mode of delivery^(9,10). Antenatal preparation for childbirth aims to build woman confidence in their ability to give birth and to care for their babies⁽⁵⁾.

The purpose of the study is to identify the knowledge of mothers regarding the main reasons behind their C-section, reasons behind the mother preference to certain mode of delivery regardless their delivery experiences.

SUBJECTS AND METHODS:

Time and Place: A cross-sectional study was carried out during the period from the 1st of January - 28th of March, 2009, in obstetrics and gynecological department of AL-Kadhumyia Teaching Hospital in Baghdad where mothers who are newly delivered were expected to be found.

METHOD:

A convenient sample of 480 mothers of reproductive age (15-49 years age), who had newly delivered in AL-Kadhumyia Teaching Hospital were included in the study. The data was collected using a standard questionnaire which was filled by a direct interview with each mother who had newly derived their babies in the hospital. The purpose of the study was explained to the mother's prior to the interview and no one refused to participate. The final format of the questionnaire includes information under two main headings: 1) Information related to the mother; these include general information: (the age, level of education, occupation and number of gravidity, the sixth delivered baby and the antenatal care (ANC) attendance). 2) Knowledge of mothers regarding reasons behind their caesarean section. 3) Mothers preferences to certain type of delivery regardless their delivery experience.

Statistical Methods:

The data collected was entered the computer using SPSS version 14.0 and were handled using descriptive statistics (Frequencies and Percentages) and were analyzed using the chi-square (X^2) test to determine the association between variables. $P < 0.05$ was considered as a cut-off value for significance.

RESULTS:

1. The sample characteristics:

Table (1) shows the association between some

sociodemographic and obstetrical characteristic and the type of delivery; the majority (41%) of C-section mothers were of (36-45) years of age, (47.3%) completed primary education, (87.4%) were unemployed, (38%) were multigravida, (60.6%) having male baby in their present delivery and the majority (59.2%) of them attending the antenatal care visit for at least three visits and more. Table (1) also shows that the majority of mothers who delivered by normal vaginal delivery (NVD) (79.1%) were of age (26-35), (50%) had completed secondary school, (36.2%) non employed, the majority (46%) were of gravid 4 and more, (66.9%) had a female baby and the majority (71.3%) had less than three antenatal care visit.

Statistical analysis shows significant statistical association between C-section and the age of mothers, education, occupation, multigravidity, having male baby and increasing the number of the antenatal care visit ($p < 0.05$).

2. The caesarean section rate:

Table (2) shows the C-section rate in the studied sample, the majority of mothers 317(66%) were delivered by C-section while 34% were delivered by NVD.

3. Medical and non medical reasons behind caesarean section:

Table (3) shows the distribution of mothers with C-section according to reasons behind their C-section, the majority of mothers 89% reported medical reasons while only 11% reported nonmedical reasons. Regarding the medical reasons behind C-section; table (3) shows that the majority of mothers (25.9%) reported a history of previous C-section as the main medical reason followed by malpresentation and cephalopelvic disproportion with (17%) and (14.2%) respectively. Regarding the non medical reasons table (3) shows that the majority of mothers (45.7%) reported Fear of vaginal delivery as the main non medical reasons followed by (31.4%) who reported security reasons (including to choose good timing) as the second main reason.

On studying the association between the no. of antenatal care visit and the general knowledge of the mothers regarding the presence of more than one medical reasons behind the cesarean section delivery; table (4) shows that the majority of the mothers (95.3%) who attend antenatal care for three times and more reported their knowledge compared to (68.7%) of mothers who attended the ANC for less than 3 times. Statistical analysis shows a significant statistical association between

the knowledge of the mothers and the no. of ANC visits ($X^2=36.9$, $df=1$, $p<0.0000$).

4. Mothers preference to the type of delivery regardless their delivery experience:

On asking mothers about their preference to certain delivery regardless their delivery experience, table (5) shows that the majority 384(80%) reported NVD as the most delivery preferred, while only (20%) reported their preference to C-section, no mother reporting more than one reason. Regarding the reasons behind preference C-section table (5) shows that the majority of mothers (30.2%) reported "fear of labour pain" as the main reason followed by (47.9% and 21.9%) who reported "it is safer for the baby" and "bad experience with NVD" respectively. Table (5) also shows that the majority of mothers (38.3%) who prefer NVD reported positive experience of NVD as the main reason for their preference followed by (31.25% and 30.2%) who reported "fast recovery" and "it is natural" as the main reasons respectively.

DISCUSSION:

Our results show that the strong associations were found between the prevalence of caesarean section and the mothers age of 35 years and more, multigravidity, having male baby and attending the antenatal care for more than three visits; this may be explained by the fact that woman over the age of 35 is more likely to have intervention during labour such as an epidural or assisted delivery. Virtually all studies agree that a higher maternal age is likely to increase the likelihood of caesarean section delivery^(11, 12).

The finding that most C-section mothers were multigravida was similar to the finding that reached by a study held in United State⁽¹³⁾ which reported most mothers were multiparous. It was inconsistent with the finding in a study held in United Kingdom⁽¹⁴⁾ which reported that most of C-section sample were primigravida and of less than 35 years of age. The finding that most of mothers with C-section in the present study completed primary school which could be explained by the fact that most of low educated mothers tends to have home deliveries which may be associated bad management that may end with C-section. On the other hand mothers who completed more than secondary school may tend to visit the ANC more frequent, being more aware of the early warning sign of pregnancy that made mothers seeking medical help. Moreover educated mothers more aware of the real medical indication of C-section and may have more chance to take part in decision regarding the non necessary non medical indication of C-section, this finding

was similar to a study conducted in Brazil⁽¹⁵⁾.

Regarding the association between the high rate of caesarean section rate among mothers having a male baby, many studies shows the same association which was explained by the fact that male baby were more likely to be delivered by caesarean section and continued to predict the risk of cesarean section for fetal distress^(16,17,18).

This study shows significant association between the C-section rate and increase the no. of antenatal care visits, this could be explained by fact that most mothers when had at least one ANC visit reflect a self selection for example woman with high risk pregnancy and identified as risk group are more likely to advice to have more visits, more consultation and more investigation and subsequent visits will help physician to identify high risk pregnancy mothers which may indicate subsequent decision of type of labour including the C-section as part of management⁽¹⁹⁾. A study in India and Britin^(20, 21) reported that the higher the number of antenatal visits, the greater the tendency of women to have cesarean section with significant association between ANC and cesarean births.

the C-section rate among the mothers in the studied sample during the period of the study was (66%) which is consider high as compared with optimal WHO recommendation for C-section but this finding cannot be generalized to the country level. This high rate may be due to the fact that most of mothers in our studied sample was of primary school education and unemployed which may lead to low socio economic status that made mothers less interested in attending the antenatal care and attending traditional birth attending for delivery with subsequent labour complication which may indicate C-section as a management. Many studies shows a trend of rising C-section delivery rates, as in study held in in the EMR and Arab region^(20, 22, 23), study in China⁽¹⁹⁾, Pakistan⁽²⁴⁾, Tehran⁽²⁵⁾ and In Brazil⁽⁶⁾.

This study revealed that the majority of mothers reported medical reasons behind C-section with history of C-section being the main reason followed by malpresentation and cephalopelvic disproportion. This was in consist to studies held in Unite Kingdom, Pakistan and Iran^(13,24, 25) in which they reported fetal distress followed by history of C-section were the main medical reasons respectively. Regarding the main non-medical reasons behind C-section in the present study, fear of vaginal delivery followed by security reasons. This finding consists with the finding in Tehran⁽²⁵⁾. Regarding the significant association between the

CAESAREAN SECTION OR NORMAL VAGINAL DELIVERY

no. of antenatal care visit and the general knowledge of the mothers regarding the presence of more than one medical reasons behind the cesarean section delivery, this is supposed to be part of the health education that the mother received during the antenatal care visit⁽¹⁹⁾.

Mungrue et.al⁽²⁶⁾ reported that the majority of the participants had a low level of knowledge about C-section; they found an association between the level of knowledge of C-section and the educational level of respondents. Respondents who had the highest score for level of knowledge also had the highest level of education.

Regarding the preference to the mode of delivery, this study shows that most mothers prefer vaginal delivery and held the view that it is safer for the baby and it is natural, indeed, this desire for

vaginal birth has been expressed by women in developing and developed countries^(27, 28, 29), many studies reported the same preferences to NVD^(30, 31, 32).

The finding that mothers prefer C-section emphasizes the need for health professionals to educate patients as to the actual risks that are associated with either mode of delivery and should be part of client education at the antenatal clinic⁽²⁶⁾.

Another study shows that most of the women studied wanted caesarean section to be included in antenatal health education topics. However, studies may be required to determine the content of the C-section educational messages since untested information about the risks of caesarean delivery may scare women from the operation when it is actually indicated⁽³⁰⁾.

Table 1: Distribution of mothers according to some sociodemographic and obstetric characteristics and type of delivery.

Maternal age	C-section No. (%)	NVD No. (%)	Total	%	Chi-square & P value
18-25	90 (28.4)	24 (14.8)	114	23.7	$X^2=97.5$
26-35	104 (32.8)	129 (79.1)	233	48.5	$P \leq 0.000$
36-45	123 (41)	10 (6.1)	133	27.7	
total	317	163	480	100	
Education					
>primary	48 (15.2)	20 (12.3)	68	14.2	$X^2=36.5$
primary	150 (47.3)	48 (29.4)	198	41.2	$P > 0.000$
secondary	74 (23.3)	82 (50.3)	156	32.5	
>secondary	45 (14.2)	13 (8.0)	58	12.1	
total	317	163	480	100	
Occupation					
employed	40 (12.6)	60 (36.8)	105	21.9	$X^2=38.2$
Non employed	277 (87.4)	103 (63.2)	375	78.1	$P > 0.000$
Total	317	163	480	100	
gravidity					
1	103 (32.5)	16 (9.8)	119	24.8	$X^2=31.6$
2-4	120 (38.0)	72 (44.2)	192	40	$P \leq 0.000$
>4	94 (29.5)	75 (46.0)	169	35.2	
total	317	163	58	100	
Baby sex					
female	125 (39.4)	109 (66.9)	234	48.7	$X^2=32.4$
male	192 (60.6)	54 (33.1)	246	51.3	$P \leq 0.00$
total	317	163	480	100	
ANC visit					
1-2	80 (40.8)	102 (71.3)	182	53.7	$X^2=31$
≥ 3	116 (59.2)	41 (28.6)	157	46.3	$P \leq 0.00$
total	196	143	339	100	

Table 2: The prevalence of caesarean section.

Type of delivery	Frequency	Percent
NVD	163	34
C-section	317	66
Total	480	100

CAESAREAN SECTION OR NORMAL VAGINAL DELIVERY

Table 3: The distribution of mothers according to the reasons behind caesarean section.

Reasons behind C-section	Frequency	Percent
medical	282	89
Non-medical	35	11
Total	317	100
Medical Reasons		
History of C-section	73	25.9
Malpresentation	48	17
Cephalic disproportion	40	14.2
Lack of progress in labour	34	12
Hypertensive disorder	31	11
Fetal distress	27	9.6
Failed induction	17	6
Ante partum hemorrhage	7	2.5
Old primiparus	5	1.8
Total	282	100
Non- Medical Reasons		
Fear of vaginal delivery	16	45.7
Security reasons (including to choose good timing)	11	31.4
To avoid delivery pain	5	14.3
To obtain tubal ligation	3	8.6
Total	35	100

Table 4: The association between the number of antenatal visit and knowledge of mothers regarding medical reasons of cesarean section

No. of antenatal care visit	knowledge of mothers regarding medical reasons of C-section			
	Yes No. %	No %	No.	Total
1-2	97 (68.7)	44 (31.3)		141(100)
≥3	323 (95.3)	16(4.7)		339(100)
Total $\chi^2=63.9, p<0.000$	420	60		480

Table 5 : Distribution of sample according to mother preference to delivery type and reasons behind the preference.

Mother preference to type of delivery	Frequency	Percent
C-section	96	20
NVD	384	80
Total	480	100
Reasons to prefer C-section		
Safer for the baby	46	47.9
Fear of labour pain	29	30.2
Bad experience with NVD	21	21.9
Total	96	100
Reasons to prefer NVD		
Faster recovery	120	31.25
It is natural	116	30.2
Positive experience with NVD	147	38.3
Total	384	100

CONCLUSION:

The caesarean section rate was high, history of C-section were the main medical reason behind caesarean section followed by malpresentation and cephalopelvic disproportion. Most of mothers preferred normal vaginal delivery more than C-section.

REFERENCES:

1. Kushtagi P., Guruvare S. Documenting Indications of Caesarean Deliveries. *Postgrad. Med.J.* 2008; 54:52-53.
2. Caesarean Section; Introduction & Indications. *Internets sit*, <http://emedicine/ Medscape.com>, 2009.
3. Althabe F., Belizam J.F. Caesarean Section: The paradox. *The Lancet*, 2006;368:1472-147.
4. Utilization of services: Caesarean sections at Delivery. *Internets sit*, http://www.who.int/making_pregnancy_safer/countries/irq, 2010.
5. JabirM. Risks of rising Cesarean section rates and means to decrease them. *Internets sit*, <http://www.gfmer.ch/SRH-Course -2010/assignments/ pdf/ Caesarean- Jabir- 2010>.
6. Belizan J.M, Althabe F., Barros F.C. , Alexander S. Rates & Implications of Caesarean Section in Latin America : Ecological Study . *BMJ*, 1999;319:1379-1402.
7. Murphy D.J, Pope C., Frost J., Liebling R.E .Women's Views on the Impact of Operative Delivery in the Second Stage of Labour: Qualitative Interview study. *BMJ*, 2003;3:1132.
8. Gamble J.A, Cready D.K. women's request for a Caesarean Section: A critique of literature. *Birth*, 2001;27:256-63.
9. Pang M.W.,Leung.T.N.,LautT.K.,HongChung T.K. Impact of First Childbirth on Changes in Women Preference for Mode of Delivery: Follow up of a Longitudinal Observational Study. *Birth*, 2008; 35:121-28.
10. Castro A. Increase in Caesarean Section May Reflect Maternal Control not Women's Choice. *British Medical Journal*, 1999;319:1397-1402.
11. Lampinen R, Vehviläinen-Julkunen K and Kankkunen P. A Review of Pregnancy in Women Over 35 Years of Age. *The Open Nursing Journal*, 2009;3:33-38.
12. Bell J.S., Campbell D.M., Graham W.J., Penney G.C., RyanM., HallM.H. Do obstetric complications explain high caesarean section rates among women over 30? A retrospective analysis. *BMJ* 2001;322: 894.
13. Riberio U.S.Rise in Primary Caesarean in U. State 1999-2001: Cross Sectional Analysis.*B.M.J.* 2005;330:71-72.
14. Amoa A.B., Kluflo C.A., Grace S.A., Kariwinga G., WurrF.A . Case-Control Study of Primary Caesarean Section at Post Moresby General Hospital. *PNG Med.J.* 1997;40:119-26.
15. Behague D.P., Victora C.G., Barros F.C. Consumer Demand for Caesarean Section in Brazil.*B.M.J.* 2002;324:1-6.
16. Lieberman E., Lang J.M, CohenA.P., Frigoletto Jr F.D., AckerD., Rao R.The association of fetal sex with the rate of cesarean section. *American Journal of Obstetrics & Gynecology*, 1997;179: 667-71.
17. Gordon C. S. and Wellcome S. A population study of birth weight and the risk of caesarean section: Scotland 1980–1996. *BJOG: An International Journal of Obstetrics & Gynaecology*,2000;107: 740-44.
18. Saleh S.S. The changing trend in the rate of caesarean section at a teaching hospitalS. S. Saleh. *J Obstet.& Gynaecol.* 2003;23:146-49.
19. SufangG.,Padmadas S.S.,FengminZ.,Brown J.J.,Stones R.W. Delivery Setting and Caesarean Section Rate in China. *Bulletin of the WHO*; 857:755-765.
20. Mishra U.S., Ramanathan M. Delivery Related Complications and Determinations of Caesarean Section Rate in India. *Health Policy and Planning.* 2002;17:90-98.
21. Petroua S.,Kupekb E., Vausec S., l Mareshc M. Antenatal visits and adverse perinatal outcomes: results from a British population-based study. *European journal of obstetrics, gynecology and reproductive biology* , 2003;106:40-49.
22. Khawaja M., Jurdi R., Hospital-based caesarean section in the Arab region: an overview. *Eastern Mediterranean health journal*, 2009;15.
23. Jurdi R. and Khawja M.. Cesarean Section in Arab Region. *Health Policy plan*; 2004;19:101-10.
24. Ahmad N., Mahboob R. A Study of Caesarean Section Birth in a Teaching Hospital of Tehran: 1999-2003.*East. Mediterr. Health J.*, 2007;13:457-60.
25. Moni A., Riazi K.,Ebrahimi A.,Ostovan N. Caesarean Section Rates in Teaching Hospital of Tehran :1999-2003.*Eastern Mediterr. Health J.*, 2007;13:457-60.

26. Mungrue K., Nixon Y., Dookwah S.D, Greene K., Mohammed H. Trinidadian women's knowledge, perceptions, and preferences regarding cesarean section: How do they make choices? *International Journal of Women's Health* 2010;2:387–91.
27. Aziken M, Omo-Aghoja L, Okonofua F. Perceptions and attitudes of pregnant women towards caesarean section in urban Nigeria. *Acta Obstet Gynecol Scand.* 2007;86:42–47.
28. Angeja AC, Washington AE, Vargas JE, Gomez R, Rogas I, Caughey AB. Chilean women's preferences regarding mode of delivery: which do they prefer and why? *Br J Gynaecol.* 2006 Nov; 113:1253–58.
29. Chong ES, Mongelli M. Attitudes of Singapore women towards caesarean and vaginal deliveries. *Int J Gynaecol Obstet.* 2003;80:189–94.
30. Yassaee F. and Mohseni B. Role of Mothers Preference on Type of Delivery. *Middle East Journal of Nursing,* 2007;1.
31. Adageba R.K., Danso K.A., Adusu-Donkor A., Ankobea-Kokroe F., Anokye K., Nkrumah K. & Anokye K. Awareness and Perceptions of and Attitudes towards Caesarean Delivery among Antenatal. *Ghana Med J.* 2008;42.
32. Hildingsson I, Radestad I, Rubertsson C, Waldenström U. Few women wish to be delivered by caesarean section. *BJOG,* 2002;109:618-23.