

WOMAN'S SATISFACTION WITH VAGINAL BIRTH AFTER CAESAREAN SECTION AND CAESAREAN SECTION AFTER VAGINAL BIRTH

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Abstract:

Study aim was to assess woman's satisfaction with vaginal birth after caesarean section (VBAC) and caesarean section after vaginal birth (CSAVD). **Methods:** A descriptive study was carried out at Postpartum Inpatient Ward and Labor and Delivery Unit of Mansoura University Hospital on 60 postpartum women, thirty of them had vaginal birth after a previous cesarean section and thirty had a cesarean section after vaginal birth. Their age ranged between 20 to 35 years, can read and write, and delivered a single full term live neonate. Two tools were used for data collection; a structured interview questionnaire to assess woman's general characteristics and Mackey scale to assess woman's childbirth satisfaction. **Results:** Most of women (93.3%) in the VBAC group were satisfied with their childbirth experience compared to 43.3% in the CSAVD group ($p < 0.001$, $X^2 = 18.266$). **Conclusion:** Most women in the VBAC group were more satisfied with their childbirth experience compared to those in the CSAVD group. **Recommendation:** The maternity hospitals should encourage obstetricians and maternity nurses to counsel women with a previous CS to undergo VBAC trial in absence of contraindications.

Key word: childbirth satisfaction, cesarean birth, vaginal birth after cesarean section

Introduction:

Cesarean section (CS) was introduced in clinical practice as a life saving procedure for both the mother and the fetus^(1,2,3). Despite the known risks of this procedure⁽⁴⁾, the rate is much higher than the acceptable rate of 10–15% recommended by the World Health Organization⁽⁵⁾.

A major concern in maternal and child health is the increased number of cesarean births being performed annually. The national United States cesarean section rate is much higher than the accepted rate⁽⁶⁾ that was reached 32.8% in 2010⁽⁷⁾.

In Egypt, the overall rate of delivery by CS was 47.25% in 2010⁽⁸⁾. This rate is higher than other rates quoted from different parts of the world, both in the developed and developing countries⁽⁹⁾. One of the leading causes of the higher cesarean section rate for women with a

previous cesarean section is the lack of counseling the eligible women for VBAC trial^(8,10).

In Egypt, VBAC has been found to be safe with 90% success rate without complications⁽¹¹⁾. This is due to social and cultural norm of vaginal birth and low socio-economic status. The trial of labor after CS should be considered in woman who has no contraindications to normal labor and delivery and to reverse rising cesarean rate and its complications^(12,13).

Maternal satisfaction is multidimensional and influenced by both medical and social factors. Whereas the medical factors seem relatively streamlined, the social factors are varied. Satisfaction with the mode of delivery is a useful predictor and influences the future management and provision of healthcare^(14,15).

Women's preference and their perceptions concerning their obstetric interventions is much valuable; information is lacking on the experiences and perceptions concerning vaginal delivery compared with caesarean birth, This information deficit is the main reason for conducting this study aiming to assess woman's satisfaction with vaginal birth after caesarean section (VBAC) and caesarean section after vaginal birth.

Research questions:

- (i) Does woman's satisfaction with childbirth experience differ in women who had VBAC than those who had CSAVD?
- (ii) What woman's preferences for their mode of next delivery?

Subjects and Method:

Study Design:

A descriptive study design was utilized

Study Setting:

The current study conducted at Postpartum Inpatient Ward and Labor and Delivery Unit of Mansoura University Hospital.

Subjects:

Contributed to this study 60 postpartum women who were attended the predetermined study setting between of February to December 2014. Participants were selected through purposive sampling technique based on the following inclusion criteria: had vaginal birth at the current time after a previous caesarean section or had a caesarean section at the current time after vaginal birth at the last time, aged between 20 to 35 years, can read and write, had two deliveries including the current time, delivered a single full term live neonate, free from obstetric or psychiatric problems on current pregnancy, agree to share in this study.

Sample size:

The sample size calculated using Simple Interactive Statistical Analysis online. With a power of 80% and at α level

of 0.05, a minimum of 60 cases had to be included for both groups to assess woman's satisfaction.

Where P1 is percentage of women who delivered vaginally after previous caesarean section (74%), P2 is percentage of women who delivered by caesarean section after previous vaginal delivery (41%), α is confidence level (Probability of incorrectly rejecting the null hypothesis that there is no difference in the percentage values). An Alpha of 5% corresponds to a 95% Confidence Interval; β is β error level (Probability of incorrectly failing to reject the null hypothesis that there is no difference in the percentage values. Assuming no difference when a real difference exists, Beta of 50% is used in most sample calculations of sampling error and n is the sample size for each group (www.dss research.com).

The total sample was equally divided into two groups n=30 per each group. Group one delivered vaginally after one previous caesarean section (VBAC) and group two who delivered by caesarean section after vaginal delivery (CSAVD). Purposive sampling technique employed to recruit participants based on the predetermined inclusion criteria.

Tools of Data Collection:

To achieve the aim of this study, two tools were used for data collection.

Tool I: a Structured Interview Questionnaire

It was designed by the researcher based on reviewing the related literatures. It entails three parts as follows

Part I: concerned with the socio-demographic characteristics of the participants (e.g., name, age, telephone number, education level, occupation, residence and family income).

Part II: related to the participants obstetric history such as number of abortions and mode of previous delivery.

Part III: designed to collect details of current delivery such as duration of labor

stages, mode of delivery...etc.

Tool II: Mackey Childbirth

Satisfaction Rating Scale:

Mackey Childbirth Satisfaction Rating Scale consists of 5 sub dimensions; general satisfaction, satisfaction with self, baby, nurse and physician. It consists of 34 items. It was modified by the researcher by omitting eight items from the original version (number 2, 4, 7, 9, 11, 12, 13, 34) because of repetition and those were inconvenient for the local policy of the assigned setting and 3 items were added to achieve the study aim of determining the preferred mode of delivery on the next delivery. Each item was scored as satisfied = 1, to some degree = 2, not satisfied = 3.

Ethical Considerations:

- Ethical approval obtained from the Research Ethics Committee of the Faculty of Nursing-Mansoura University.
- The study aim explained to the enrolled puerperal women and their consents obtained.
- All ethical issues considered in dealing with the collected data.
- The enrolled women did not force to share her perceptions, however they had the right to withdraw from the study at any time, and their data were confidential.

Pilot Study:

After preparing the tools, a pilot study was conducted on 10% of the predetermined sample size (n=6) three women per each group. Aim of the pilot study was to confirm that the questions consistently delivered to the women and that they carry the intended meaning that were designed to achieve. It also helped to estimate the time needed to complete the questionnaire. The results of the pilot study indicated that the statements of the questionnaire were clear and relevant. The pilot sample was excluded from the study sample.

Field work:

- During the study period, the researcher attended the predetermined settings from 9 am to 2 pm for three days per week.
- The researcher met each participant of both groups, introduced herself to each one, a full explanation about the aim, and scope of the study was given to obtain women's consent.
- During the hospitalization period, each participant filled in the structured interview questionnaire at the first postpartum day through an individual interview with the researcher (it took 10-15 minutes per each woman). At the same day, women received a detailed explanation of all Mackey Childbirth Satisfaction Rating Scale items. Eligible participants received one copy of Mackey Childbirth Satisfaction Rating Scale to fill in at the seventh postpartum day and their answers provided to the researcher by telephone conversations.

Limitations of the study:

Two limitations met the researcher during the field work phase.

1. The flow rate of vaginal birth after cesarean section at MUH was low thus led the researcher to consume more time to collect the required sample size.
2. Although satisfaction with the childbirth experience was addressed in many published articles, however articles that addressed the two modes of delivery specifically weren't adequate.

Statistical analysis:

After data were collected, coded, organized, categorized, and then transferred into especially designed formats. The statistical analysis of data was done by using SPSS program (statistical package for social science) version 20.0. The data was tabulated and presented. The description of the data was done in form of mean and standard deviation for quantitative data, frequency

and proportion for qualitative data. For quantitative data t- Test was used to compare between two groups. For qualitative data (frequency and proportion), Chi- square test was used. Statistical significant difference was considered at $P < 0.05$, and highly significant difference at $P < 0.001$.

Results:

Table (1): This table shows the frequency distribution of the socio-demographic variables among the VBAC and CSAVD groups. It is obvious that, there were no statistical significant differences regarding the socio-demographic variables among the both groups ($p > 0.05$). It was found that the mean age of the VBAC group was slightly lower than that of the CSAVD group (27.3 ± 5.7 versus 27.8 ± 4.9 respectively). Concerning education level of the studied groups, it is clear that the primary/preparatory education was the highly distributed among the VBAC and CSAVD groups (63.3% and 73.3% respectively).

As regards occupation, it is clear that house wives were more than working women in the VBAC and CSAVD groups (80% versus 73.3% respectively). Women from rural origin were more than those from urban origin (80% versus 66.7%) respectively among the VBAC and CSAVD groups. Women who reported enough income of the CSAVD group were more than those of the VBAC group (60% versus 56.7% respectively).

Table (2): This table describes the frequency distribution of the obstetric history items among the VBAC and CSAVD groups. It is clear that, the history of abortion was slightly higher in the VBAC group compared to that in the CSAVD group (33.3% versus 30% respectively). Difference observed was not statistically significant ($p = 0.781$). However, the mode of previous delivery was 100% vaginal birth compared to 0% for CS among the CSAVD, conversely

100% had CS compared to 0% delivered vaginally among the VBAC group with a highly statistically significant difference among the both groups ($p < 0.001$). Failure of labor progress was the highly distributed indication of previous CS (36.7%), followed by PROM and Abruptio placenta with the same frequency (23.3%) leaving the nuchal cord to represent the least indication of previous CS (16.7%).

Table (3): This table describes woman's overall satisfaction with previous and current labor experience among the VBAC and CSAVD groups. It is clear that 40% of women were satisfied with their labor experience (CS) for previous delivery, however after current experience (vaginal delivery) 93.3% of women were satisfied with their labor experience among VBAC group. Among CSAVD group nearly three quarters (73.3%) of subjects were satisfied with vaginal experience for the previous delivery while after CS trial in the current delivery the rate of satisfaction with delivery experience decreased to 43.3%. Differences observed between the two groups were statistically significant ($p < 0.001$, $X^2 = 15.830$ & 18.266 respectively) for previous and current delivery.

Figure (1): illustrates the woman's preferred mode for next delivery among the VBAC and CSAVD groups. It is obvious that after experiencing the two modes of delivery the majority of women (86.7%) in the VBAC group preferred vaginal delivery with 13.3% only of these women preferred cesarean section, compared to 63.3% preferred vaginal delivery and 36.7% preferred cesarean section among the CSAVD group. Differences observed between the two groups were Statistically significant ($X^2 = 4.356$ & $P = 0.037$).

Table 1. Frequency distribution of the sociodemographic variables among the VBAC and CSAVD groups

Sociodemographic variables	VBAC		CSAVD		Chi square test	
	N	%	n	%	X ²	P
Age						
<30 years	18	60	17	56.7	0.069	0.793
>30 years	12	40	13	43.3		
Mean ±SD	27.3	±5.7	27.8	±4.9	0.341*	0.734
Educational level						
Primary/Preparatory school	19	63.3	22	73.3	0.693	0.405
Secondary school/University	11	36.7	8	26.7		
Working status						
Housewife	24	80	22	73.3	0.373	0.542
Work	6	20	8	26.7		
Residence						
Rural	24	80	20	66.7	1.346	0.243
Urban	6	20	10	33.3		
Income						
Not enough	13	43.3	12	40	0.069	0.793
Enough	17	56.7	18	60		
* Student's t test						

Table 2. Frequency distribution of the obstetric history items among the VBAC and CSAVD groups

Obstetric history items	VBAC		CSAVD		Chi square test	
	N	%	n	%	X ²	P
Abortion						
No	20	66.7	21	70	0.077	0.781
Yes	10	33.3	9	30		
Mode of previous delivery						
Vaginal delivery	0	0	30	100	60.00	<0.001**
Caesarean section	30	100	0	0		
Indication of previous Caesarean section						
Failure of labor progress	11	36.7				
Nuchal cord	5	16.7				
Premature rupture of membrane (PROM)	7	23.3				
Abruptio placenta	7	23.3				

** Highly significant

Table 3. Woman's satisfaction with overall previous and current labor experience among the VBAC and CSAVD groups

State of satisfaction	VBAC		CSAVD		Chi square test	
	N	%	N	%	X ²	P
Previous delivery						
Satisfied	12	40	22	73.3	15.830	<0.001**
To some extent	16	53.3	2	6.7		
Dissatisfied	2	6.7	6	20		
Current delivery						
Satisfied	28	93.3	13	43.3	18.266	<0.001**
To some extent	0	0	10	33.3		
Dissatisfied	2	6.7	7	23.3		

** Highly significant.

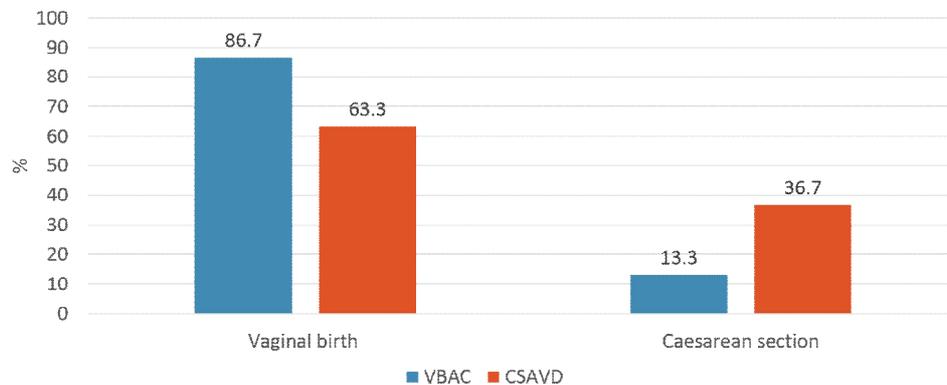


Figure 1. The woman's preferred mode of delivery for the next delivery experience among VBAC and CSAVD groups ($X^2= 4.356, p= 0.037$)

Discussion:

This study aimed to assess women's satisfaction with vaginal birth after caesarean section and caesarean section after vaginal birth. The present study findings revealed that there are no statistically significant differences regarding participants' general characteristics, between the VBAC and CSAVD groups. As well as such study findings revealed that the VBAC group was more satisfied with the overall childbirth experience than the CSAVD group. Accordingly, the first study question was answered "Does woman satisfaction with childbirth experience

differ in women who had VBAC than those who had CSAVD?"

Mohamed et al. (2011) (16) supported the present study finding in their comparative study that was conducted to assess the effect of previous delivery experience and sociodemographic factors on maternal satisfaction with delivery experience. Such study targeted 300 Egyptian postnatal women; equally divided into three groups, one group delivered vaginally after cesarean section, another group had cesarean section after vaginal delivery, and the third group had primary cesarean birth without previous childbirth experience. They had concluded

that postnatal women in the VBAC group were significantly more satisfied with their childbirth experience, compared to those whom had CS after a previous vaginal birth or those whom had primary cesarean section.

O'Herlihy.(2005)⁽¹⁷⁾ conducted a prospective a questionnaire-based study on one hundred forty women, equally divided into VBAC and CSAVD groups. Women in both groups were satisfied with their respective mode of delivery, but would opt for vaginal delivery in their next pregnancy. VBAC women attributed their satisfaction with vaginal delivery to experience minimal pain postnatal and had felt better prepared for delivery while the dissatisfaction reported in the same group was attributed to the physical stress of labor and inadequacy of analgesia. In contrary with the present study finding, Edward and Davies.(2001)⁽¹⁸⁾ reported that 50% of women previously delivered by cesarean section would opt for a repeat CS and attributed their option to avoid a prolonged labor, regardless of whether they had previously delivered vaginally.

Such agreement between the study finding and Mohamed et al. (2011)⁽¹⁶⁾ finding regarding the likeliness of the women to achieve greater satisfaction may be explained by the less discomfort experience following a vaginal birth compared to the traumatic pain experience post cesarean section which may led to a negative influence on the birth experience, and this led to the recommendation of offering a trial of vaginal delivery to all women previously had a cesarean section and not obstetrically contraindicated (O'Herlihy, 2005)⁽¹⁷⁾.

Regarding the preferred mode of delivery, the current study finding revealed that after experiencing the two modes of delivery the majority of women in the VBAC group preferred vaginal delivery for the next delivery, corresponding to that the CSAVD group preferred vaginal

delivery than CS for the next delivery. Such study finding is consistent with Bako et al. (2014)⁽¹⁹⁾; they found that the majority of women reported a preference for VBAC after a primary CS. This stand is welcomed in contemporary obstetric practice with the growing concern over rising CS rate reported in most centers.

In another way, the present study findings agreed with O'Herlihy.(2005)⁽¹⁷⁾ they did not find that women who had undergone previous cesarean section on a previous pregnancy were more likely to prefer a further cesarean delivery. Moreover, Aslam et al. (2003)⁽²⁰⁾ reported that, a similar preference for VBAC has also been reported in the UK among women with the experience of both CS and vaginal delivery.

Additionally, large studies have supported the efficacy and safety of VBAC after one CS and reliable figures of success rate and complications are available for counseling women (Mozurkewich and Hutton 2000⁽²¹⁾, Cahill et al. 2006⁽²²⁾, Olagbuji et al. 2010⁽²³⁾). Yet, in contrast with the findings of Gamble and Creedy (2001)⁽²⁴⁾, nor were women who had undergone previous cesarean more likely to be dissatisfied following their first vaginal delivery. These observations tend to confirm the well- documented national differences in attitudes to modes of delivery.

Such study finding may be explained by that some women see vaginal delivery as the natural method of childbirth and even more appealing to them as the faster recovery after a vaginal delivery when compared to CS, but some women may prefer cesarean section due to fear of labor pain. The current study results suggest that a trial of vaginal delivery should be offered to all women previously delivered via cesarean section in whom without obstetrical contraindications.

Conclusion:

The finding of this study reflect that, most of women among VBAC group were satisfied with their current labor experience compared to those among the CSAVD group. Differences observed between the two groups were statistically significant. Regarding the preferred mode of delivery, the majority of women in the VBAC group preferred vaginal delivery for the next delivery, corresponding to that the CSAVD group preferred vaginal delivery than CS for the next delivery. Differences observed between the two groups were statistically significant for the next delivery experience .

Recommendations:

Based on the findings of this study, the following recommendations are suggested:

1. Maternity nurses should spend more time with the women who previously delivered by CS to counsel them about the option for VBAC trial; including maternal and fetal benefits and risks.
2. Maternity nurses should involve the parturient women in decision making; providing the women with simple explanation about the performed procedures as it may affect their level of satisfaction..

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