

PRIMIGRAVIDA MOTHERS' KNOWLEDGE AND ATTITUDE TOWARDS VAGINAL DELIVERY AND CAESAREAN SECTION

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ABSTRACT

Background: Pregnancy is a normal physiological phenomenon and normal vaginal delivery is defined as the natural and spontaneous method of labour and delivery. However, as first time mother, primigravida mothers might have concern towards mode of delivery. This study aims to assess the primigravida mothers' knowledge and attitude towards vaginal delivery (VD) and caesarean section (CS).

Materials and Methods: A cross-sectional study design was used in this study. One hundred and five primigravida mothers were recruited using non-probability, purposive sampling between January and February 2016. Data was collected using a self-administered questionnaires adopted with permission from Nisar et al. (2009) on knowledge and attitude towards VD and CS. Data was analyzed using the SPSS version 22 for descriptive and inferential analysis.

Results: Most of the participants knows that CS is mandatory for breech presentations (75.2%, n=79). In addition, more than half of the participants (53.3%, n=56) participants were aware that infections are more frequent after CS. The majority of the participants in this study have good knowledge (51.4%, n=54) and positive attitude towards both VD (50.5%, n=53) and CS (52.4%, n=55). A significant association was found between knowledge and attitude towards VD among primigravida mothers (p=0.025).

Conclusion: The study revealed that although more than half of primigravida mothers have good knowledge and positive attitude towards both VD and CS, health education to empower primigravida mothers to understand the risks and benefits of different modes of delivery is needed.

Keywords: Knowledge, attitude, primigravida mothers, vaginal delivery, caesarean section

1.0 Introduction

Childbirth is an important life event for mothers. Mode of delivery was subdivided into spontaneous vaginal delivery (SVD), instrumental vaginal delivery (forceps or vacuum extraction) and two categories of caesarean section (elective and emergency) (Macfarlane et al., 2015). Spontaneous vaginal delivery is the most common method of child delivery while CS is a surgical intervention conducted in emergencies to save the lives of mother and child when natural delivery is not possible or is risky for mother or/and child (National Collaborating Centre for Women's and Children's Health, 2011).

World Health Organization in 1985 suggested that the rate of CS should not be allowed to exceed 10-15%. However, this rate has been exceeded far more than recommended levels in many developing and developed countries (Betran et al., 2007; Litorp et al., 2013). Yilmaz, Bal, Beji & Uludag (2013) reported that the rate of CS was found to be just 5% in the 1970s, elevated to 24.5% in 2001 and increased up to 32% in 2007 in the USA; increased to 22% between 2000 and 2001, while 18% between 1994 and 1995 in Canada. In Malaysia, total CS rate rose from 20.8% in 2008-2009 to 21.9% in 2010 (Sivasampu, Chandran & Ahmad, 2011). Although advances in medical technology in maternity care have significantly reduced maternal and infant mortality, CS is associated with maternal and neonatal morbidity (Liu et al., 2007). This increasing CS rate is a major public health problem because caesarean section increases the health risk for mothers and babies as well as the cost of health care compared with normal deliveries (Mishanina et al., 2014; Ajeet, Jaydeep, Nandkishore & Nisha, 2011).

The reasons for the increased rate in CS is multifactorial and common reasons for choosing CS are fear of labour pain and lack of sufficient knowledge about VD (Yamasmit & Chaithongwongwatthana, 2012; Ghotbi et al., 2014). Ajeet et al. (2011) found that women with high education level showed high knowledge on VD and CS. In addition, women with a positive attitude towards VD perceived that VD is natural, safer, less expensive and early discharge from the hospital (Ajeet et al., 2011). Yilmaz et al. (2013) in their study found that women had knowledge about CS not to cause vaginal injuries and not affecting sexual life negatively.

Most of the available literature on the knowledge and attitude towards VD and CS among antenatal women is in different settings and different population (Aali & Motamesi, 2005; Nisar, Sohoo & Memon, 2009; Kasai et al., 2010; Yamasmit & Chaithongwongwatthana, 2012; Ghotbi et al., 2014; Varghese et al., 2016). It is thus important to investigate this issue. This paper reports a study that sought to fill this gap in knowledge at the local level and share it at the international level to contribute to the evidence base for informing antenatal health care service when dealing with the primigravida mothers' knowledge and attitude towards vaginal delivery (VD) and caesarean section (CS). This study aims to assess the knowledge and attitude towards VD and CS among primigravida mothers in a tertiary teaching hospital.

2.0 Materials and Methods

A cross-sectional design was employed in this study. Purposive sampling was undertaken to recruit the primigravida mothers attending antenatal visits in a tertiary teaching hospital on the east coast of Peninsular Malaysia between January and February 2016. Eligible participants were primigravida mothers aged 18 years old and above, and able to understand Bahasa Malaysia or English. Participants were excluded if they have obstetric complications which leading to delivery through caesarean section. The sample size was calculated using single proportion formula (Naing, Winn & Rusli, 2010). By adding 20% drop-out rate, the calculated sample size was 105 participants. For ethical considerations, the participating hospital and the researchers' institution approved the study in accordance with their ethical guidelines (USM/JEPeM/15100438). Permission to use the questionnaire was sought and granted from its original authors (Nisar et al., 2009). Participants who met the research inclusion criteria were given information about the research, and participation was voluntary. The test-retest reliability of the tool was assessed with 10 postnatal women. The Cronbach's alpha for each domain was calculated. The Cronbach's alpha for knowledge domain and attitude domain were 0.77 and 0.67 respectively which shows the good reliability of the instrument. The questionnaire has three sections with a total of 26 items. These included socio-demographic data (age, week of gestation, ethnicity, monthly household income, highest educational status, occupational status and source of information about VD and CS), 9 dichotomous questions to evaluate knowledge on VD and CS evaluated with 'True', 'False' and 'Don't Know'. Ten items on attitudes towards VD and CS with 5 items were related to attitude towards VD and another 5 items on attitudes towards CS. Each question was scored on a five-point Likert scale (strongly agree, agree, no opinion, disagree and strongly disagree) which allows participants to choose one option that best represents their point of view. The time taken to complete the questionnaire is approximately 20 minutes.

For scoring of the knowledge, each correct answer will give one (1) score and zero (0) for each incorrect and don't know response. The total maternal knowledge score for the knowledge part is 9 and it was grouped into a good and poor level based on the mean score of the data. For the attitudes towards VD and CS, the total score is 50 and a low value in the attitude domain represented the negative attitude and high score represents positive attitude.

Data were analysed using SPSS 22.0. Descriptive statistics were calculated for all variables to summarize the data. Pearson Chi-Square test was used to evaluate the association between level of knowledge and attitude towards VD and CS among primigravida mothers. The p -value of ≤ 0.05 was considered statistically significant.

3.0 Results

3.1 Socio-demographic Data of the Participants

A total of 105 primigravida mothers participated in the study. Most of the participants were Malay (98.1%, n=103), have monthly household income below MYR3000 (78.3%, n=78) with high education level (60.9%, n=64) and were more than 28 weeks of gestation (85.7%, n=90). The majority of the participants aged below 26 years old (54.3%, n=57) ranging from 18 to 36 years old. The participants in this study revealed that the source of the information on VD and CS as one of the delivery method was from the family member (54.3%, n=57). More details of the socio-demographic characteristic of the participants are shown in Table 1.

Table 1: Socio-demographic characteristics of primigravida mothers (n=105)

Variables	n	(%)
Age (Year)		
18-26	57	54.3
≥ 27	48	45.7
Week of gestation		
≤ 2nd Trimester	15	14.3
> 2nd Trimester	90	85.7
Ethnicity		
Malay	103	98.0
Indian	1	1.0
Others	1	1.0
Monthly household income		
≤ MYR3000	78	74.3
> MYR3000	27	25.7
Highest education		
Primary school	3	2.9
Secondary school	38	36.2
College	14	13.3
University	50	47.6
Occupation status		
Employed	53	50.5
Non-employed	52	49.5
Source of information on vaginal delivery and caesarean section		
Family	57	54.3
Friends	21	20.0
Social media	12	11.4
Healthcare professionals	15	14.3

3.2 Primigravida Mothers Knowledge towards Vaginal Delivery and Caesarean Section

Table 2 and Table 3 shows the knowledge scores towards VD and CS among primigravida mothers attended tertiary teaching hospital in the east coast of Peninsular Malaysia. Most of the participants know that CS is mandatory for breech presentations (75.2%, n=79). In

addition, the majority of the participants aware that infections are more frequent after CS (53.3%, n=56). The mean knowledge score towards VD and CS of the participants in this study was 3.44 and the majority of the primigravida mothers have good knowledge towards VD and CS (51.4%, n=54).

Table 2: Primigravida mothers knowledge towards vaginal delivery and caesarean section (n=105)

No	Knowledge Towards VD and CS	Frequency (%)		
		Yes	No	Don't Know
1.	Pain is less severe after CS than VD	21 (20.0%)	46 (43.8%)	38 (36.2%)
2.	Maternal morbidity is more frequent in CS than VD	48 (45.7%)	14 (13.3%)	43 (41.0%)
3.	Infections are more frequent after CS than VD	56 (53.3%)	10 (9.5%)	39 (37.1%)
4.	CS is mandatory for tubal ligation procedure	27 (25.7%)	30 (28.6%)	48 (45.7%)
5.	Babies born by CS are more intelligent than VD	3 (2.9%)	52 (49.5%)	50 (47.8%)
6.	CS is mandatory after one CS	10 (9.5%)	66 (62.9%)	29 (27.6%)
7.	Neonatal respiratory disorders are less frequent after CS than VD	13 (12.4%)	29 (27.6%)	63 (60.0%)
8.	Bleeding in CS is less severe than VD	22 (21.0%)	36 (34.3%)	47 (44.8%)
9.	CS is mandatory for breech presentations	79 (75.2%)	14 (13.3%)	12 (11.4%)

VD = Vaginal Delivery; CS = cesarean section

Table 3: Level of knowledge towards vaginal delivery and caesarean section (n=105)

Knowledge towards vaginal delivery and caesarean section	Frequency (%)
Poor	51 (48.6)
Good	54 (51.4)

3.3 Primigravida Mothers Attitude towards VD and CS

Most of the participants agreed and strongly agreed in all statements about VD and disagreed with all the statements on CS (as shown in Table 4). Table 5 shows that the majority of the

primigravida mothers have positive attitudes towards both VD (50.5%, n=53) and CS (52.4%, n=55).

Table 4: Primigravida mothers' attitude towards vaginal delivery and caesarean section (n=105)

No.	Statements on Attitude	Frequency (%)				
		Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1	Vaginal Delivery (VD)					
	VD is an acceptable mode of delivery	66(62.9)	33(31.4)	5(4.8)	-	1(1.0)
2	Seeing the baby immediately after delivery is a pleasure	98(93.3)	5(4.8)	2(1.9)	-	-
3	I regain my health status sooner after VD than CS	53(50.5)	25(23.8)	26(24.8)	1(1.0)	-
4	VD creates a more affectionate mother-baby relationship	57(54.3)	23(21.9)	14(13.3)	10(9.5)	1(1.0)
5	In terms of outcome, VD is more pleasant	56(53.3)	32(30.5)	17(16.2)	-	-
6	Caesarean Section (CS)					
	CS is preferable in the absence of economic problems	1(1.0)	20(19.0)	29(27.6)	38(36.2)	17(16.2)
7	Preferable as mother’s position on the delivery table is unpleasant	7(6.7)	31(29.5)	34(32.4)	28(26.7)	5(4.8)
8	CS is preferable as pain of VD is unpleasant	9(8.6)	33(31.4)	26(24.8)	31(29.5)	6(5.7)
9	Babies born by CS are healthier than those delivered by VD	1(1.0)	4(3.8)	43(41.0)	37(35.2)	20(19.0)
10	If there is an intention for tubal ligation, CS is much better	8(7.6)	31(29.5)	54(51.4)	8(7.6)	4(3.8)

Table 5: Level of attitude towards Vaginal Delivery and Caesarean Section (n=105)

Attitude	Vaginal Delivery n (%)	Caesarean Section n (%)
Negative	52 (49.5)	50 (47.6)
Positive	53 (50.5)	55 (52.4)

3.4 Association between knowledge and attitude towards VD and CS

There was a significant association between knowledge and attitude towards VD among primigravida mothers in this study ($p=0.025$). The result indicated that primigravida mothers with good knowledge showed a positive attitude towards VD. However, there is no significant association between knowledge and attitude towards CS ($p=0.094$) (see Table 5).

Table 5: Association between knowledge and attitude towards VD and CS (n=105)

	Knowledge	Attitude, n (%)		$X^2(df)$	p-value*
		Positive	Negative		
Vaginal Delivery	Good	33 (62.3)	21 (40.4)	5.030 (1)	0.025
	Poor	20 (37.7)	31 (59.6)		
Cesarean Section	Good	24 (43.6)	30 (60.0)	2.807 (1)	0.094
	Poor	31 (56.4)	20 (40.0)		

*Pearson chi-square test

4.0 Discussion

This study found that the majority of the primigravida mothers attended tertiary teaching hospital in the east coast of Peninsular Malaysia have good knowledge towards VD and CS (51.4%, n=54). This finding is inconsistent with previous studies that found mothers had poor knowledge on different routes of delivery (Owonikoko, Bello-Ajao, Atanda and Adeniji, 2014; Ghotbi et al., 2014; Aali and Motamedi, 2005). Good knowledge among participants in this study could be attributed to the recruitment of the participants from the teaching hospital whereby adequate health promotion was given during antenatal health education session. Education is an important component of antenatal care, particularly for women who are pregnant for the first time; primigravida mothers (WHO, 2016). In addition, most of the participants in this study had at least secondary education which may lead to a better understanding of health information.

The present findings are consistent with other research which found women have adequate knowledge on maternal morbidity in relation to CS and VD (Ray Chaudhuri Bhatta & Keriakos, 2011; Shamsa, Bai, Raviraj & Gyaneshwar, 2013). However, the morbidity associated with cesarean sections may be a reflection of the maternal condition prior to the procedure being performed on them.

This study found that primigravida mothers have a positive attitude towards both VD and CS. This finding is consistent with the previous study done by Aali & Motamedi (2005). In addition, most of the participants in this study strongly agreed that VD creates more affectionate mother-baby relationship towards each other. This is similar to the finding in the study done by Faremi, Ibitoye, Otulabi, Koledoye & Ogbeye (2014), in which attitude of the

mothers towards methods of birth shows that majority believed that vaginal delivery creates more mother-baby friendly relationship than a caesarean section. This showed that the participants had a positive attitude towards VD.

The finding in the study showed that there is a significant association between the level of knowledge and the attitude towards VD. This finding supported the idea of good knowledge is associated with a positive attitude. This was coherent to the findings in the study done by Ghotbi et. al., (2014) that mentioned increased maternal knowledge, the positive attitude towards VD is raised. However, the current study did not investigate on the mother's preference on the mode of delivery. Therefore, future study should assess for mother's preference and factors influencing preference towards a mode of delivery.

5.0 Conclusion and recommendation

This study highlights that slightly more than half of primigravida mothers attending antenatal visits in the public teaching hospital in the northeastern Peninsular Malaysia have a good level of knowledge and positive attitude towards VD and CS. The result of this study indicates that there was an association between level of knowledge and attitude towards VD. However, it may not be possible to generalize the findings of this study to primigravida mothers in other setting as this study was conducted with limited sample size in one study setting only. Future study need to consider larger sample size with different sociocultural groups of primigravida mothers. The study recommends continuous assessment during antenatal visits to determine concerns and fears on pregnancy and delivery. In addition, educating about the modes of delivery, their indications, advantages and adverse consequences can better inform the mothers on maternal and perinatal health.

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Declaration

Author(s) declare that the information above is correct, and manuscript submitted by us is original. We have no conflict of interest to declare and certify that no funding has been received for the conduct of this study and or preparation of this manuscript.

Author(s) contribution

Author 1: Shazwani H. involved with study conception and design, acquisition of data and drafting of manuscript

Author 2: Soon L.K. involved with drafting the manuscript and critical revision of the manuscript

Author 3: Azlina Y. involved with study conception and design, analysis and interpretation of data, drafting the manuscript and critical revision of the manuscript

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