Knowledge, attitudes and awareness of women about the long and short-term effects of a caesarean section for mothers and children in Taif, KSA, 2020

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Abstract

Background: Cesarean section (CS) delivery reduces the risk of complications associated with vaginal delivery, but it is associated with short term and long-term complications.

Objectives: The aim of this study was to explore the prevalence of CS, and to assess the extent of Saudi women's awareness and attitude towards the long-term and short-term complications of caesarean sections.

Methods: A cross sectional study using an electronic questionnaire was distributed to 384 women in the reproductive age at Taif City with an age ranging from 18 to 56 years. The questionnaire included items about participants' demographic data, previous delivery, presence of chronic diseases or complications after CS, and items related to the knowledge and attitude towards CS.

Results: Of the participants, 68.8% prefer normal delivery, 77.6% saw that cesarean section is more harmful than normal delivery, and 39.8% saw that cesarean section is safer for the mother and the baby. For the participants who had previous CS (38% of the sample), and 16.9% had CS for health causes and complications for the fetus. About 18% of them said that constant pain was the common complication of CS, 47.9% saw that uterine adhesion is the most common complication of a CS in the long-term, while 44.1% saw that delay and lack of breastfeeding is the most common complications of the CS on the child.

Conclusions: This study calls for health education of all women about advantages and disadvantages of CS to enable mothers to take the proper decision.

Key words: Knowledge, attitudes, caesarean, mothers, children, Taif

Introduction

Cesarean section delivery (CS) is defined as the surgical removal of a neonate through the maternal abdominal and uterine walls. It is a surgical procedure done when the normal delivery is impossible or is dangerous to mother or baby. The World Health Organization recommends to keep the rate of CS below 10–15%, but rates rise worldwide (1).

There are many factors that have increased the rate of caesarean sections, such as maternal obesity, gestational diabetes or hypertension, multiple gestation, preterm labor and physicians malpractice (2). CS is a common operative procedure among the United States hospital patients. The rate from 1996 to 2011 rose from 20.7% to 32.8%. Reported rates of CS in America in 2016 show 24.5% in Western Europe, 32% in North America, and 41% in South America (3).

CS reduces the risk of complications associated with vaginal delivery, like pelvic organ prolapse and urinary incontinence, but it is associated with short term and long-term complications (4).

Cesarean delivery is one of the major abdominal surgery routines that is associated with complications more than vaginal delivery such as infection, emergency hysterectomy, persistent pain, haemorrhage, visceral injury, and venous thromboembolism (5). CS affects not only the mother, it is also carries risks to the infant such as, respiratory distress, asphyxia and other pulmonary disorders. CS only affects the current pregnancy, but it has a major role in future pregnancy complications like adhesions of uterus, bowel and bladder injury, uterine rupture, abnormal placentation (placenta previa, accrete, increta, percreta) and risks of infertility (5,6). First birth CS was reported to increase the risk of placental abruption and placenta previa 30% and 40% compared to vaginal delivery (7).

In the Kingdom of Saudi Arabia, the rate of CS increased 80% from 1997 to 2006 and absence of antenatal care has resulted in 70% increase in CS deliveries (8). A study was done in 2015 in the Eastern Province of KSA to explore women's views and beliefs towards elective caesarean section to discover the role of these factors in increasing the CS rates. The study found that about half of the women (49.7%) indicated that they would agree to undergo CS in the future. It was found that the percentage of those who agree to undergo CS in the future was significantly increasing with increased age of the women (9).

In the same time, another study was done in the same year in Makkah city to determine the popularity of cesarean sections (CS) on demand among women in Saudi Arabia and to assess the factors affecting the choice of the delivery. The study found that (80.9%) of the study population preferred vaginal delivery (10).

A recent study was done in 2019 to determine the outcome of pregnancy in Saudi women with previous one cesarean section. The study found that successful vaginal delivery was (73.9%). There were no reported cases of maternal mortality or morbidity. However, there was a tender scar with no dehiscence or ruptured uterus (4 %). There was no neonatal mortality, however, 6% of the CS were indicated by fetal distress (11).

The aim of the present study was to explore the prevalence of CS, and to assess the extent of Saudi women's awareness and attitude towards the long-term and short-term complications of caesarean sections.

Subjects and Methods

Study design and time frame: This study was a cross sectional study done from 1 May to 31 August 2020
Study setting: Taif city, KSA

Sampling methodology: The sample included 384 females and was calculated by sample size calculation formulas program and use of proportional allocation method. The inclusion criteria were all women in the reproductive age at Taif City with an age ranging from 18 to 56 years. The exclusion criteria were all females under 18 years and those above 56 years.

Study instrument: Data were collected by an electronic questionnaire. The questionnaire included items about socio-demographic data, previous delivery (type of delivery, the causes of CS, number of CS), presence of any chronic disease in the mother (DM, HTN), presence of any complication after CS. It also included items that asked the participants if they thought that the CS is more harmful than normal delivery, CS is safer for the mother and the baby, anesthesia during CS leads to complications for the mother and the baby, CS leads to consecutive CS delivery and reduces the chance of a normal delivery after that, and if the CS increases the chance of placenta previa or abruption in the future.

Pilot testing: Pilot testing of the questionnaire was done on 20 females to ensure correction of confusing and inconsistent questions, before it was administered for the actual data collection.

Ethical consideration: The Research Ethics Committee of Taif University approved the study.

Statistical analysis: Data were analyzed using (SPSS) version 23. Qualitative data was expressed as numbers and percentages, quantitative data was expressed as mean and standard deviation (Mean ± SD).

Results

Table 1 shows that 48.4% of the participants were in an age ranging from 18-30 years, 97.2% were of Saudi nationality, 66% had been pregnant before, and 63.7% had delivery, of them 46.9% had delivered in a governmental hospital.

Figure 1 shows that of the participants who had previous delivery, 42.3% had normal delivery and 38% has CS delivery.

Table 2 shows that only 9.8% of the participants had chronic diseases, 68.8% prefer normal delivery, 77.6% saw that cesarean section is more harmful than normal delivery, and 39.8% saw that cesarean section is safer for the mother and the baby. For the participants who had previous CS (38% of the sample), 16.9% had CS for health reasons and complications for the fetus, 12.1% had their CS as the fourth or fifth etc delivery, and their mean number of CS's was (1.18 ± 0.43).

According to the participants' opinion, 18.6% said that constant pain was the common complication of CS, while 51.4% of them gave more than one answer (Figure 2).

Figure 3 shows that 47.9% of the participants saw that uterine adhesion is the most common complication of a cesarean section in the long-term, while 44.1% saw that delay and lack of breastfeeding is the most common complications of the CS on the child (Figure 4).

Table 1: Distribution of the studied participants according to their demographic characters and their past delivery

Variable	No. (%)
Age:	
18-30 years	192 (48.4)
31-40 years	90 (22.7)
41-50 years	100 (25.2)
51-56 years	14 (3.5)
Above 56	1 (0.3)
Nationality:	
Saudi	386 (97.2)
Not Saudi	11 (2.8)
Marital status:	
Married	123 (31)
Single	274 (69)
Have you ever been pregnant?	
Yes	262 (66)
No	134 (34)
If yes, have you ever had delivery?	
No previous pregnancy	133 (33.5)
Yes	253 (63.7)
No	11 (2.8)
Hospital type:	
No previous delivery	144 (36.3)
Government	186 (46.9)
Private	67 (16.9)

Figure 1: Distribution of the studied participants according to the type of their past delivery

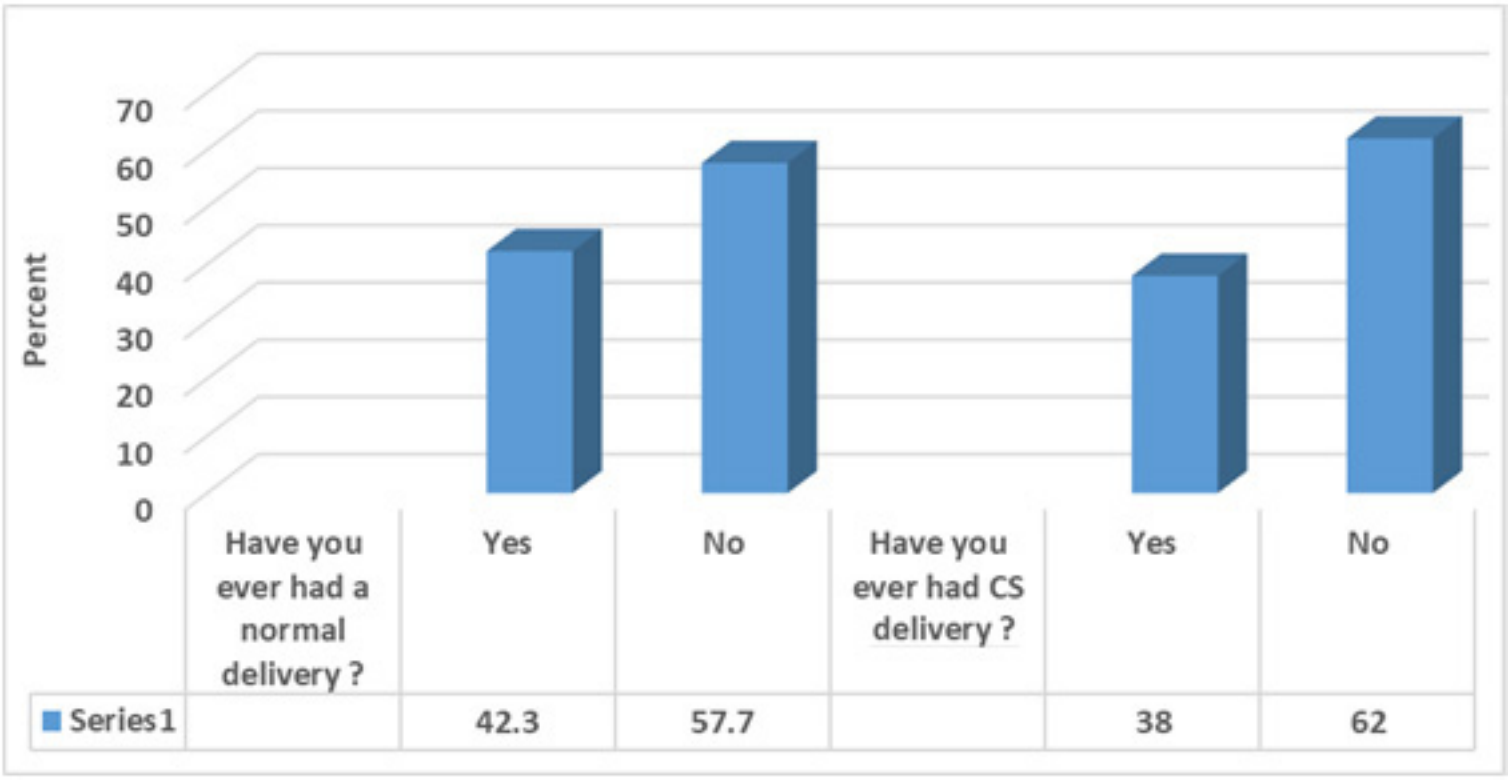


Figure 2: Opinion of the participants regarding complications of a cesarean section in the short-term

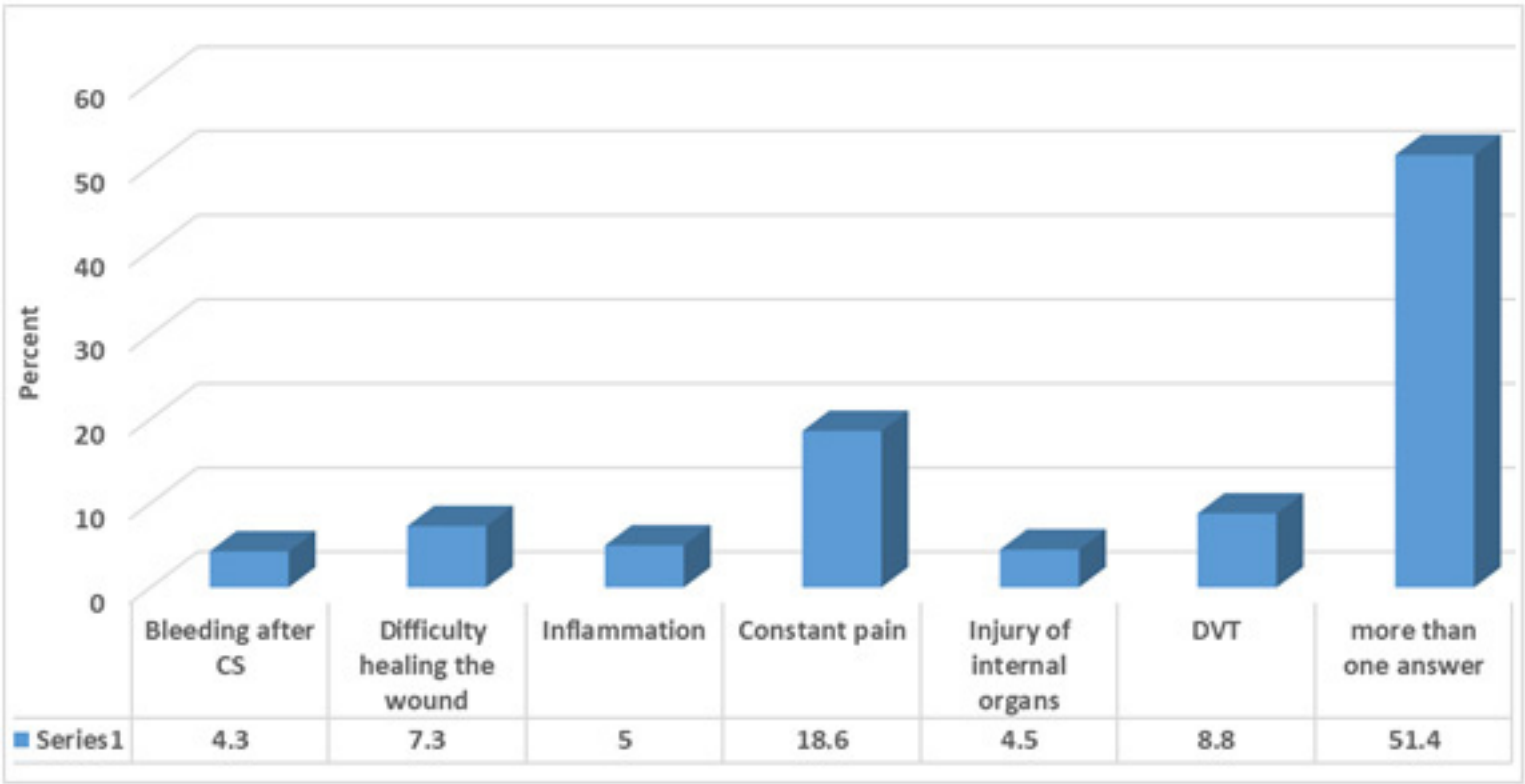


Table 2: Distribution of the studied participants according to having chronic diseases, type of delivery they prefer, opinion about CS, mean number of CS, and order of their CS

Variable	No. (%)
Do you have any chronic disease (DM-HTN-Asthma): Yes No	 39 (9.8) 358(90.2)
Which do you prefer? Normal delivery CS	 273 (68.8) 124 (31.2)
Do you think that the cesarean section is more harmful than normal delivery? Yes No	 308 (77.6) 89 (22.4)
Do you think that the cesarean section is safer for the mother and the baby? Yes No	 158 (39.8) 239(60.2)
Do you think that the cesarean section increases the chance of a repeat in the future and reduces the chance of a normal delivery? Yes No	 325(81.9) 72 (18.8)
What is the reason for your CS delivery? (No.=151) 1-Health causes and complications for the mother (pelvic narrowness-preeclampsia- pregnancy sugar) 2-Health causes and complications for the fetus 3-Psychological reasons such as fear, anxiety and stress 4-I have never had a C-section	 57 (14.4) 67(16.9) 27 (6.8) 246 (62)
Number of your CS delivery: (Mean ±SD) (No.=151)	1.18 ±0.43
Arrangement of your cesarean section (No.=151) 1- First delivery is CS 2- Second delivery is CS 3- Third delivery is CS 4- Fourth or fifth... etc delivery is CS 5- Both (1 & 4) 6- Both (2,3) 7- Both (1,3) 8- Both (2,4) 9- Both (3,4)	 39 (9.8) 30 (7.6) 9 (2.3) 48 (12.1) 2 (0.5) 15 (3.8) 1 (0.3) 2 (0.5) 2 (0.5)

Figure 3. Opinion of the participants regarding complications of a cesarean section in the long-term

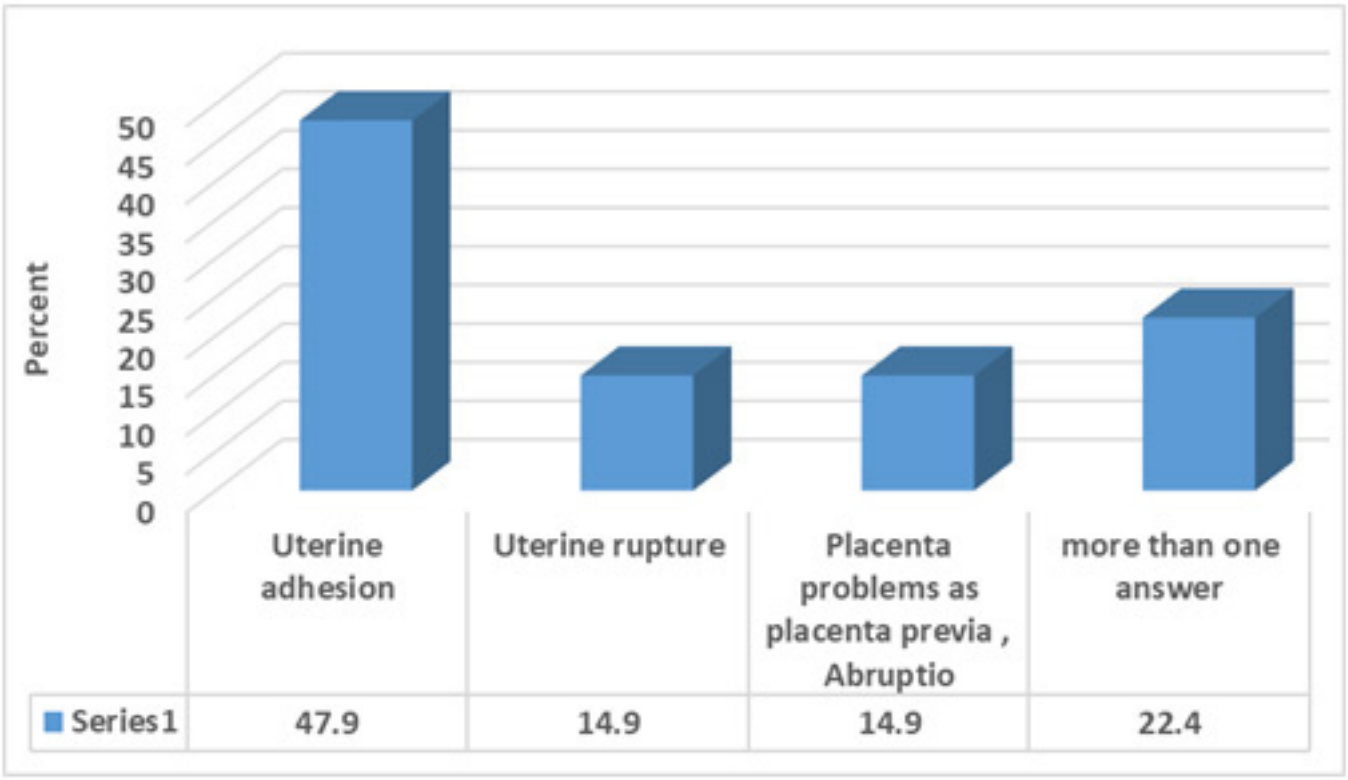
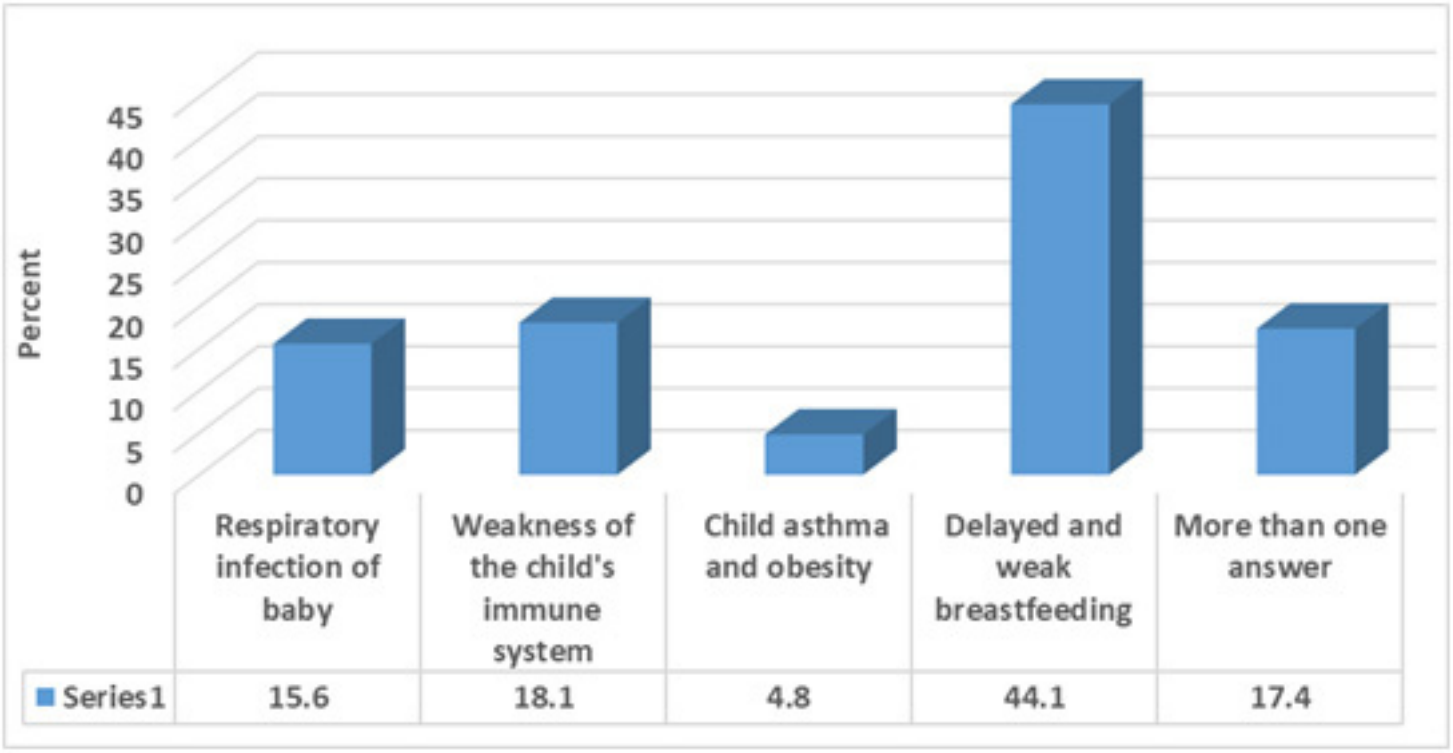


Figure 4. Opinion of the participants regarding complications of the caesarean section on the child



Discussion

In the present study, there was 38% of the participant who had a previous CS, 16.9% of them had CS for medical indications and complications to the fetus.

This result goes along with the result revealed from a previous study done in a central region of KSA, where CS delivery rate significantly increased within the studied population. This increase was related to a change in physician's practice rather than a change in maternal characteristics (8). Over the last two decades, there has been a gradual increase in CS delivery rate observed at King Abdulaziz Medical City (KAMC), Riyadh, Saudi Arabia. This rate increased from 8% to 21% between 1993 and 2013 (8). This also goes along with a previous Saudi study, which revealed that CS delivery rate rose from 10.6% to 19.1% in KSA between 1997 and 2006 (12).

The same increase in CS rate was observed in other international studies (13,14,15). The observed CS prevalence among the studied participants is higher than that observed in a population- hospital-based study done on 18 Arab countries, where the CS rates ranged from 5–15%(16).

Previous studies have shown that morbidity and mortality associated CS should be taken into consideration (17). In the present study, 42.3% of the participants had normal delivery. Studies have found that both vaginal and CS delivery are acceptable modes of delivery, and cases need to be individualized. This individualization should be based on the women's medical history, preferences, incontinence risk factors, and the type of surgical repair done (7, 18, 19, 20, 21).

This work showed that 68.8% of the participants prefer normal delivery, and 77.6% saw that cesarean section is more harmful than normal delivery. In a previous Saudi study, 80.9 % of the study population favored vaginal delivery, imitating the reported global ratio (10). In another systematic review, 84.4% of women preferred vaginal delivery (22). Another study showed that 62.8% of women chose a vaginal delivery as vaginal delivery has less time to return to normal life (23).

In this work, 68.8% of women preferred normal delivery. In a previous national study, 19.1 % of the study participants preferred CS to avoid pain associated with vaginal delivery (10).

This work showed that 39.8% saw that CS is safer for the mother and the baby. The same was reported in a Saudi study done in Qassim where pregnancy within a year or in quick succession may compromise the mother will readily undergo caesarean section if need be in order to avoid complications during Birth whereas more than half of the participants agreed they will undergo CS if need to avoid complications during birth (24). The same cause was observed in a study done in Hong Kong by Pang et al. (25). In an Asian study done by Chong and Mongelli, (26) the most common reasons to prefer CS by the participants were wishing a natural process (23.8%), fast recovery (22%), and safer mode of delivery (7.3%). This result disagrees with that observed in a previous study where 51.7% of studied women thought that CS is dangerous to the mother and baby (2). A much lower percentage of women who preferred vaginal delivery was observed in previous studies. Of these was a study done by Selo-ojeme et al. who reported that 55.3% of women preferred vaginal delivery (27). However, a higher percent was reported in a previous study where 93% (28) and 98.5% of women preferred a vaginal delivery (29). In an Asian study done by Chong and Mongelli, (27) 95.1% of women also preferred vaginal delivery (26).

In this study, for the participants who had previous CS, 16.9% had CS for health causes and complications for the fetus. In a previous study the most common reason for CS delivery was the fear of vaginal birth (30). On the other hand, participants in a USA study found that CS delivery was more painful than vaginal birth with regard to postpartum pain (31).

In the present study, 18.6% of the participants said that constant pain was the common complication of CS, and 51.4% of them gave more than one answer about CS complications. A previous Saudi study found that most women were aware of the complications of CS (57.6 %) (10). This result agrees with that present in a previous study where most of the participants thought that CS has a higher rate of complications such as prolonged bed rest and bleeding risks (32), a result that was also revealed from another study (33).

Limitation

The small sample size could be a limitation of this study. In addition being an online survey calls for future studies with larger sample is recommended.

Conclusion

This study revealed that most of the participants (68.8%) prefer normal delivery, 77.6% of them saw that CS is more harmful than normal delivery, and only 39.8% saw that CS is safer for the mother and baby. Of the studied women, 47.9% saw that uterine adhesion is the most common complication of a CS in the long-term, while 44.1% saw that delay and lack of breastfeeding is the most common complications of the CS on the child. This study calls for health education of all women about advantages and disadvantages of CS for the mother and baby to enable them to take the proper decision to reduce the number of unnecessary CSs.

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