TITLE: KNOWLEDGE ATTITUDE AND PERCEPTION OF SOMALI PREGNANT WOMEN TOWARDS C-SECTION DELIVERY IN BERBERA TOWN, SOMALILAND

FACILITY BASED STUDY

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List of Abbreviations:

1. ANC and PNC: Antenatal care and Postnatal care
2. CS: Caesarean section
3. DFID: Department of international development
4. EPHS: an Essential package of health services
5. FGM: Female genital mutilation
6. HPA: Health poverty action
7. HMIS: health management information system
8. MCH: Maternal and child health
9. MDGs: Millennium Development Goals
10. MICS: Multiple Indicator Cluster Survey
11. PESS: Population estimation survey
12. TFR: Total fertility rate
13. UNICEF: United Nations Children's Fund
14. WHO: World health organization

Operational Definition

1. **Caesarean section:** C-section or caesarean section is type of surgery performed to deliver a baby. The fetus is extracted surgically via incision in the mother's abdomen at that time second incision is performed in the worm or uterus.
2. **Maternal Mortality Rate:** The maternal mortality rate can be defined the annual number of women deaths Per 100,000 live births from complicated pregnancy or its management it will be excluded any cause of accidental or incidental.
3. **Perception of birth:** perception of birth experience is defined as feeling about labor or delivery, preoperative procedures and initial contact with the baby which can measured by perception scale.
4. **Multiple indicator cluster survey** (MICS) is an international household survey program developed by UNICEF.it provides up to date information on the situation of children and women and measures key indicators that allow countries to monitor progress towards the Millennium Development Goals (MDGs) and other internationally agreed upon commitments. [29]

ABSTRACT

Caesarean section is a lifesaving surgical operation for mother and the baby. This procedure is one of the common operative interventions in the worldwide. The baby is extracted via abdominal by incising the uterus. Indication for C-section can be maternal or fetus related problems or both.

There is negative view and opinion in the developing countries about C-section and this has resulted obvious underutilization of this procedure comparing to the burden of obstetric morbidity that needs C-section.

The main objective of this study is to describe perception and attitude of pregnant women towards cesarean section delivery in Berbera town (Sahil region), Somaliland.

A descriptive study using questionnaire survey was carried out at the two health centers (Jamalaye and Central) and Berbera hospital in Berbera town.

Convenience sampling method was used from two antenatal clinics and Berbera hospital maternity department were selected. We obtained consent from pregnant mothers attending three facilities.

In Somaliland ANC and C-section rate are low and there is inadequate knowledge and negative view and perception about C-section delivery. We recommend to implement proper programs to modify the negative perception of the local population about C-section.

1. Background:

In the clinical practice, Cesarean section (CS) was introduced as a lifesaving procedure for both mother and the baby [(1)]. In the worldwide, this is a common operative surgical procedure where the fetus is delivered via abdominal by incision of the uterus. [(2)].

Cesarean sections are one of the frequent operation mostly performed in pregnant women that mostly performed frequently. **[(3)].**

One of the most considerable marked features of modern obstetrics is the constant increase of the cesarean section rate. This growing rate of CS is a main public health problem as C-section rate increases the risk of health for mothers and babies. It also increases the cost of health care compared with normal deliveries. **[(4)].**

Maternal mortality is excessively high, about 830 women die from pregnancy or childbirth-related complications around the world every day. In 2015, 303,000 women died during pregnancy and childbirth complications. It was estimated that in 2015, roughly 303 000 women died during and following pregnancy and childbirth. Nearly all of these deaths occurred in the low resource countries as most of these deaths could have been prevented **[(5)].**

Somalia maternal mortality ratio was estimated at 732 per 100,000 live births, there is an improvement since 1990 when the rate was 1210 per 100,000 live births. But the rate is still high and poor comparing to Kenya (510), Ethiopia (353) in the year of 2015.

Somaliland has one of the highest total fertility rates (6.7%) in the world with an unmet need for birth spacing at 26%. In 2015, [(6).]

Pregnancy and delivery are considered as normal physiological conditions of women. Approximately 10% of deliveries are considered as a high risk of pregnancy and may require a cesarean section [(7).]

Delivery is one of the most vital important subjects for human being and generation in the world. This process of childbirth occurs naturally and is called natural vaginal delivery. [(8)] Whereas C-section is the delivery of the baby via an incision in the abdominal wall called laparotomy or uterus (Histrotomy) or both.

Considering 1985, WHO (world health organization) stated that there is no justification for any region to have cesarean section rates higher than 10-15 %[(9)].

A study in Australia in 1998 showed that 21% of women deliver or gave birth by C-section as it has increased up to 30.9% by 2007. [10]. this was similar comparing to United States (USA) was observed the same trend where 20.7% in 1996 but increased up to 31.1% of total births were carried by C-section in 2006 [11].

In 2007 to2008, United Kingdom(UK), the overall rate of C-section births are lower which accounts for 25% comparing to a dramatic increase in the year of 1995-1996 which was approximately 50%. [12].

The cesarean section rate in Canada Between 1970 and 2006 more than quadrupled from 6% to 26%.

In Africa the changes in C-section rate has been less dramatic during the same period. This is due to the negative view of C-section among women in some African countries where CS still perceived as abnormal kind of delivery. [22] Therefore there are evidence shows that CS rate in some sub-Sahara African countries such as Burkina Faso and Niger is as low as 2%.[23]

Some of these countries, women still perceive that CS being a swear word on an unfaithful woman and very weak women.

In Somalia, MICS (Multiple indicator cluster survey) 2011, stated that 12.7% had institutional deliveries. While two point one (2.1 %) of women delivered through C-section.

There are many people especially women who have stated difficulty in fully understanding why they had needed operative delivery; women expressed difficulty in fully understanding why they had needed an operating delivery; typically they typically they proposed that either they or the baby had failed to achieve normal vaginal delivery. The indication related to the fetal position, fetal compromise and size pelvis and baby, few women were clear about the specific reason for operative delivery [16].

Perception of birth is a very important reflection for all healthcare providers. A positive perception of understanding birth can promote effective adaptation to the maternal role.

A qualitative study that has been conducted in the UK showed that some women in the developing countries are still perceived C-section as abnormal means of delivery as they based on some factors such as inadequate facilities and medicine [17].

One of the gross underutilization of C-section procedure was the negative view and perception of C-section by women in the developing countries compared to the large burden of obstetric morbidity requiring resolution by C-section. [18].

It is also perceived to be much safer than vaginal delivery for mothers and their newborn and has become increasingly around the globe. [19].

Awareness and acceptance for labor analgesia were relatively low among the prospective parturient. A high level of education had a significant impact on the decisions towards delivery. [20].

In Bangladesh, Study revealed women who experienced C-section expressed grave worries because of that the procedure would severely influence on their future productivity specifically their capability to perform heavy tasks like carrying vessels of water, washing clothes, carrying children, lifting heavy things and particularly crops during the harvest season.

All most all these women were concerned about the tasks who would assist and whether they would be able to take care of their children, as many perceived that their changed physical abilities might threaten their marital status and family life. [21]

A study conducted in southern Nigeria, among Yoruba women viewed with mistrust, hatred, misconception, fear, guilt, sadness and anger. [24]

In Nigeria and most of the sub-Saharan African countries women accept C-section unwillingly even if there clear clinical indications [25]

Therefore the negative perception and view of C-section among Nigerian women have led to unacceptable underutilization of the procedure related to the large burden of obstetric morbidity requiring resolution by C-section [26].

Majority of Somali women, when seeking health care they define the uncomfortable experience. Regarding the pregnancy and childbirth, Somali women have different strategies, practices, and attitudes which should be seen in the bright of their previous experiences in an environment of high maternal mortality. [27]

Somali women consider as normal and safe vaginal delivery, therefore they eat less food to limit the growth of the baby and thereby to avoid C-section and mortality.

A qualitative study about childbirth experience in Somalian women conducted in Sweden demonstrated that Somali women do not appear to get benefit from antenatal care programs as the way it was intended.

Some Somali women utilize the health facilities in a less appropriate way even if the antenatal care is free and health services coverage is very high. The less compliance is due to cultural barriers such as concerns about pregnancy and childbirth, the impact of female circumcision on childbirth, fear of C-section births and resistance to family planning and contraception.

The study also highlighted that all most all women expressed fear of C-section and could easily remember someone who died in childbirth in Somali context. They expressed worry of dying due to potential problems of the next pregnancy which is caused by surgery complication or anesthesia. [28].

In Somalia, MICS 2011 showed that at least 24 percent of women received antenatal care from a skilled provider and getting antenatal care from a skilled provider was twice as likely in urban 31% than in rural areas 14%.

In Somaliland MICS 2011 showed high total fertility rate (TFR) for women whose ages between 15-19 years the three years preceding MICS is 5.4 births per woman.

In the two years prior the survey 44% of births were delivered with the assistance of a skilled attendance and 31% of births were delivered in a health facility.

The antenatal period presents important opportunities for reaching pregnant women with a number of interventions that may be vital to their health and well-being and that of their infants.

WHO recommends a minimum of four antenatal visits based on a review of the effectiveness of different models of antenatal care. WHO guidelines are specific on the content on antenatal care visits, which include: blood pressure measurement, urine testing for bacteriuria and proteinuria, blood testing to detect syphilis and severe anemia and Weight /height measurement (optional)[30]

In Somaliland, MICS 2011 showed that more than half of women (**58** percent) did not receive antenatal care. Among those receiving ANC, **32** percent were attended by a skilled provider.

This ranged from **40** percent in Maroodijeex/Sahil region to **19** percent in Sanaag region. In addition, the majority of antenatal care is provided by medical doctors (**22** percent) while less than one percent of women receive care from traditional birth attendants. Access to skilled care varies with the area of residence.

In Somaliland, MICS 2011, stated that Four percent (4%) of women delivered through C-section. This mode of delivery was influenced by education and wealth status of the women.

Women with secondary or higher education and in richest households (11 percent for each case) delivered by C-section compared with 3 percent of those with no education and less than one percent among the poorest.

MICS 2011, mentioned that 31 percent of births in Somaliland are delivered in a health facility; of these 19 percent of deliveries occur in public sector facilities and 12 percent occur in private sector facilities.

Increasing the proportion of births that are delivered in health facilities is an important factor in reducing the health risks to both the mother and the baby.

1.2. Statement of the Problem

Somaliland maternal mortality ratio was estimated at 732 per 100,000 live births. Apart from personal and medical factors, a number of social and cultural issues are also involved in a pregnant woman's tendency towards a certain mode of delivery. [33] Today, C-section in most countries seems to be the first option for pregnant women. [34] .

A qualitative study about childbirth experience in Somalian women conducted in Sweden demonstrated that all most all women expressed fear of C-section and could easily remember someone who died in childbirth in Somali context.

In Somaliland, 2016, C-section rate among all public deliveries was 2%, Low C-section rates are indicative of an unmet obstetric need for potentially life-saving care and appear to be an important contributor to perinatal mortality as well as maternal morbidity and mortality.

Somali traditional society in which men tend to hold the positions of power, and characterized by social stratification on the basis of sex.

These gendered socio-cultural arrangements also limit women's capacity to make health-related decisions, including their capacity to accept C-section thus increasing their risk of potentially life-threatening pregnancy complications. There are also many questions regarding the effects of personal, religious, and traditional health beliefs on one's preference for a mode of delivery. These questions need to be addressed in the cultural context of Somaliland.

Studies of the effects of cultural issues on women's knowledge, perception and attitude about delivery mode can contribute to the formulation of policies to confront problems associated with

C-section. This knowledge is important in order to be able to design culturally sensitive antenatal care services including acceptance of C-section in different cultural groups.

1.3. Significance of Study:

Among women in some of these countries, C-section is still being perceived as a curse on an unfaithful woman and is a lot of weak women.

Literature that has explored the knowledge, attitudes, and perception of C-section is limited. Therefore, it is important to further investigate the impact of knowledge, attitudes, and perception of pregnant women with regard C-section delivery.

The findings from this study will add to the existing literature and can be used in developing interventions to improve the knowledge of pregnant women and those of importance for the decision to accept C-section and reduce negative attitude and perception against it.

1.3. Scope of the study

Place Scope:

Sahil is one region in Somaliland and has five districts, namely: Berbera, Sheikh, Mandera, Bulahar and Hagal Districts this is political. But the factual is Berbera and Sheikh are most populated districts, with almost half of the region's population. Berbera is the capital of the region and main port of Somaliland.

There are two main ecological systems in Sahil, namely the coastal (Guban) and the mountainous belts (oogo). There are significant variations in the weather patterns of these ecological zones leading to movements of population within the region in some periods of the region.

The coastal belt is usually cold between the months of November and January while May to September is normally characterized by adverse hot and windy weather conditions.

Berbera is a city in the Sahil region in the Republic of Somaliland. It is the four largest city of Somaliland and serves as the main & official port of Somaliland. Berbera preserves the ancient name of the coast along the southern shore of the Gulf of Aden. It is located 10.44 latitude and 45.01 longitudes and it is situated at elevation 11 meters above sea level.

The British Somaliland protectorate gained independence as the State of Somaliland and united five days later with the Trust Territory of Somalia (the former Italian Somalia) to form the Somali Republic. Located strategically on the oil route, the city has a deep seaport, which serves as the region's main commercial harbor.

This study was conducted in three health facilities, Jamalaye health center and Central health center and Berbera Regional Hospital which is the only functioning hospital run by the government and works as a referral from all Sahil region. In 2016 the estimated total population of Berbera district was **157087**(PESS 2016). Whereas Berbera Town population was estimated at **60314**(PESS2016).

This research was about Perception and attitude of pregnant women regarding C-section delivery targeting the pregnant attending to the antenatal care for the three health facilities for antenatal in Berbera town.

2. Aim:

- To investigate pregnant women's knowledge, attitudes, and perceptions towards C-section in the socio-cultural context of the Somaliland society (Berbera Town).

2.1. Specific Objectives:

- To assess the level of knowledge of pregnant women about C-section
- To describe attitudes and perceptions of pregnant women towards C-section

3. Study Methods:

A descriptive study using questionnaire survey was carried out at the two health centers (Jamalaye and Central) and Berbera hospital in Berbera town over a period of 3 months (April, May and June 2017).

Berbera Hospital is a public hospital that provides a secondary level of health care to the people while health centers provide primary health care services.

Given the time constraints for the study and migration of population due to unbearable heat in Berbera, it was decided to limit the sample size to 150 pregnant women attending the facilities. The selection was made using convenience sampling, a method which is often used in studies made at health facilities as a quick and convenient way to get an understanding of the situation during a certain period of time.

Convenience sample means: Sometimes known as grab or opportunity sampling or accidental or haphazard sampling.

A type of non-probability sampling which involves the sample being drawn from that part of the population which is close to hand. That is, readily available and convenient.

Only pregnant women that were met in the hospital clinic and health centers during their antenatal clinic were recruited to participate in the study. Participation was voluntary.

Pregnant women attend the hospital and health centers for pregnancy check-up and/or when a problem occurs during pregnancy.

Location

The study was conducted in Berbera City the capital of Sahil region, Somaliland. Specifically Jamalaye and Central Health centers and Berbera regional hospital.

4.2.Study Group

The study group was pregnant women that were met in the hospital clinic and health centers during their antenatal care visit, who met the criteria for inclusion in this study.

4.3.Selection of Sample

One hundred and fifty pregnant women attending Jamalaye, Central and Berbera Hospital were included in this study over a period of 3 months (April, May and June 2017).

4.3.1. Inclusion Criteria

1. Pregnant women attending the three facilities during the indicated period of time
2. The participant should be 18 years and above.

2.3.2. Exclusion Criteria

1. Non-pregnant women
2. Respondents less than 18 years.
3. Women with mental illness and severely ill patients

3.5.Data Collection

3.5.1. Data Collection Tools and Procedure

The questionnaire was developed from the literature review, and it was collected in face to face interviews with women as many were illiterate and could not fill the questionnaire. The data collectors were qualified health workers including (qualified midwife and nurse). The data collectors were trained for two days.

The questionnaire was the instrument used for the data collection. The questionnaire was divided into three sections.

Section one was about the socio-demographic characteristics of respondents. Second and third sections were about the knowledge, perception, and attitude of respondents about C-section.

The validity of the questionnaire was established through face and content validity criteria.

The developed questionnaire was given to experts in the field of nursing and reproductive health. Each item on the instrument was examined for content clarity, scope, and relevance to the study.

The interview was conducted with pregnant women who were asked to fill the questionnaire that was translated in Somali language. Those who could not read and right were interviewed and asked for consent of filling their questionnaires by the data collectors.

3.6. Data Management and Quality Assurance

The principal investigator supervised trained health workers during the data collection on daily basis, ensuring the quality and completeness of each questionnaire.

3.7. Data processing, presentation, and analysis

Data editing and cleaning were performed to check for accuracy, consistency, & missing values.

Completed questionnaire from each study participant was checked for completeness and consistency by the principal investigator. The principal investigator entered the data using SPSS 22.0 statistical package.

Data summarized and descriptive statistics using Frequency, proportions, graphs, and crosstabs were presented in the study results.

3.8. Ethical Considerations

Ethical clearance was obtained from an ethical review board of the ministry of health Somaliland and it was also be granted from Regional Health authorities. Written consent form translated with the Somali language and Verbal consent from mothers who don't read and write of study subjects was obtained after we explained them to the objective of the study.

3.8.1. **Secrecy and Confidentiality**

The identification information was collected such as name, address and telephone number of the selected cases for identification only during the collection. The data analysis, this information was being kept separate from the main dataset in a password-protected document. Information was collected in a locked cabinet in a locked room and privacy was maintained.

4. Study Findings

In order to perform and achieve the expected objectives of the study, the researcher has presented according to the specific objectives and all the data that he has received from respondents with their results are shown in tables and charts.

From the study one hundred and fifty pregnant women were interviewed. These are the antenatal women visiting three facilities (Berbera hospital, Jamalaye and Central health centers) in Berbera town.

Demographic Data (see the table in annexes 21)

A total of 150 pregnant women participated in this study. The majority of the pregnant women's ages (70 women) were within the range of 26-35 years while 59 women were within range of 18-26 years and the rest were above 36 years of age.

This study revealed that 86 of the respondents have no basic educations while 38 of them had primary and intermediate education and the rest had reached Secondary School and university level. This can give you a clue that majority of the women have no formal education.

Regarding the socio-demographic analysis, the study revealed that 123 of the respondents were unemployed and stay at home (housewife).

The study found that 53 women were multigravida while 29 of the respondents were Primigravida.

Out of 150 respondents, 119 had normal vaginal delivery and 31 of the total study respondents had ever had C-section delivery while the rest were Primigravida. There was a significant correlation between maternal age and gravidity (p-value: <0.001).

In this study, 16 among the total respondents had delivered at home while the rest had facility delivery.

Knowledge, Attitude and Perception of pregnant women towards C-section (see Annex: 21)

The knowledge of the respondents towards the methods of delivery revealed that 38% did not know about C-section delivery while 52.7% of the respondents know spontaneous vaginal delivery and cesarean section.

From the study 135 of the total respondents refers spontaneous vaginal delivery as the normal mode of delivery while only one mother considered it as a normal mode of delivery.

The result of this study also reflects that women maintained strong commitment with spontaneous vaginal delivery as 143 out of 150 of the respondents preferred spontaneous vaginal delivery, while only 7 mothers preferred cesarean section as mode delivery.
Regarding the knowledge of respondents towards the indications of the cesarean section, it is revealed that 82 knows the indications of cesarean section while the rest 68 had no knowledge about the indications.

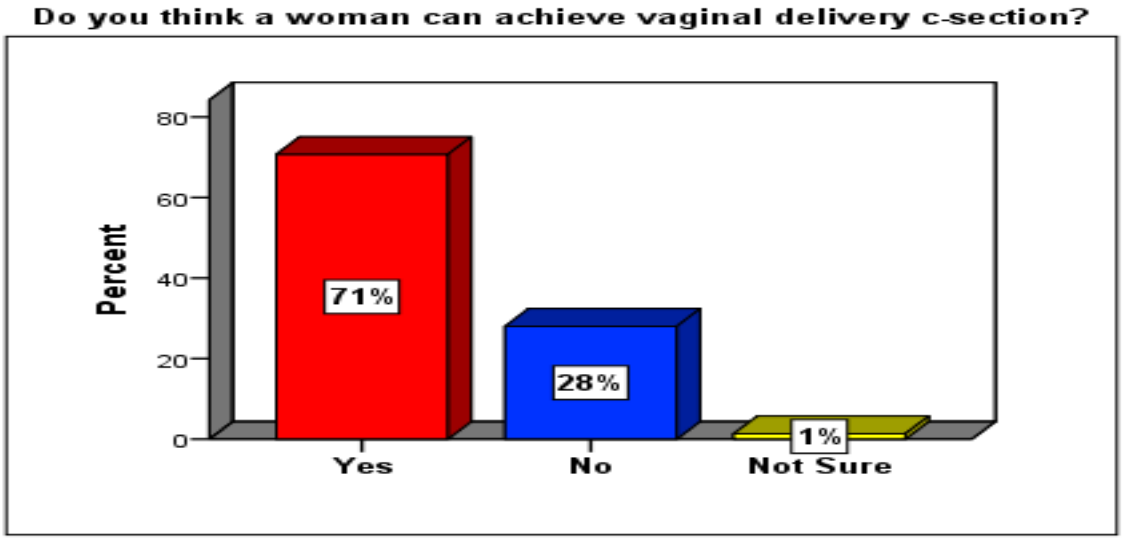
The study showed that 22 out of 150 respondents had experienced C-section delivery, and the reason they mentioned was prolonged labor, convulsion due to high blood pressure, bleeding per vagina before delivery, small pelvis, and Malpresentation.

Respondents were also asked if they could accept another C-section if indicated. It showed that 16 mothers who experienced C-section would accept the procedure if indicated another time while 6 replied that they would not accept and the reason was fear of surgery complications and respondents believe that they can spontaneously deliver.

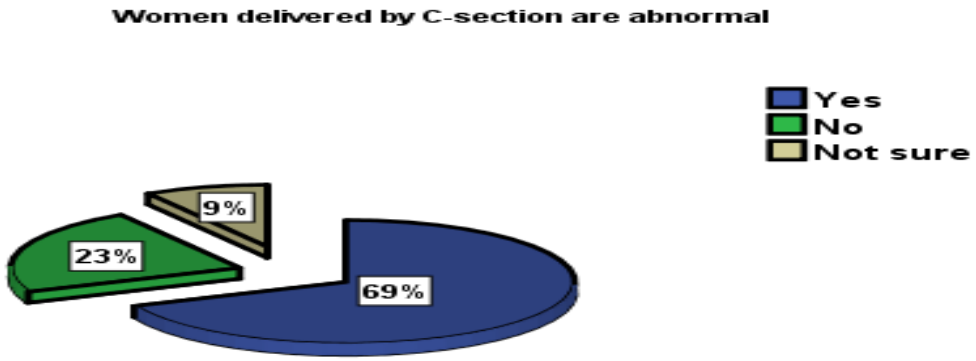
To have a consent during surgical procedures are important. In our Somali context, there are religious and cultural factors regarding the responsibility of husband and wife. Man is responsible for his wife's dignity, living expenses and if she needs operation he has to allow and sign for operation.
Respondents were asked who is required to give a consent for C-section. 97 of the total respondents mentioned that both patient's father and husband are required for consent of this procedure while 33 said that the only husband is required for consent while 19 replied that it is only patient father required for consent.
Respondents of this study were asked How useful your husband helping her through C-section delivery. 19 women said that husband was very helpful, somewhat helpful or moderately helpful while 3 of the respondents mentioned that husband was not helpful at all.

Respondents were also asked Women who undergo C-section will always be delivered by CS in future pregnancies. The study demonstrated that 51.3% said that women with CS will always deliver by CS in the future while the rest (46.7%) disagreed that previous CS women will always deliver by CS.

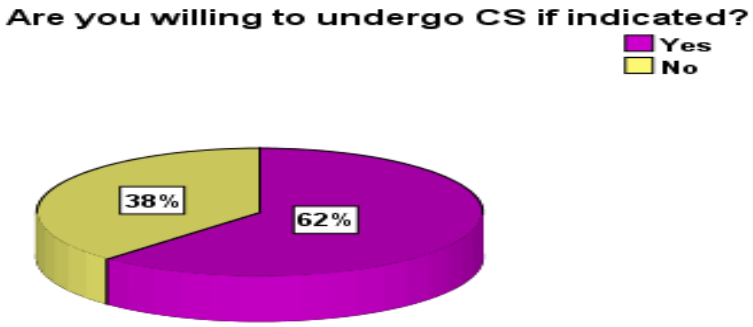
The study also revealed that vast majority of women who had previous C-section worried about their baby's condition during CS delivery. It was also asked the same statement those who had no CS and majority of them mentioned that they would you worry about their baby's condition during CS delivery.



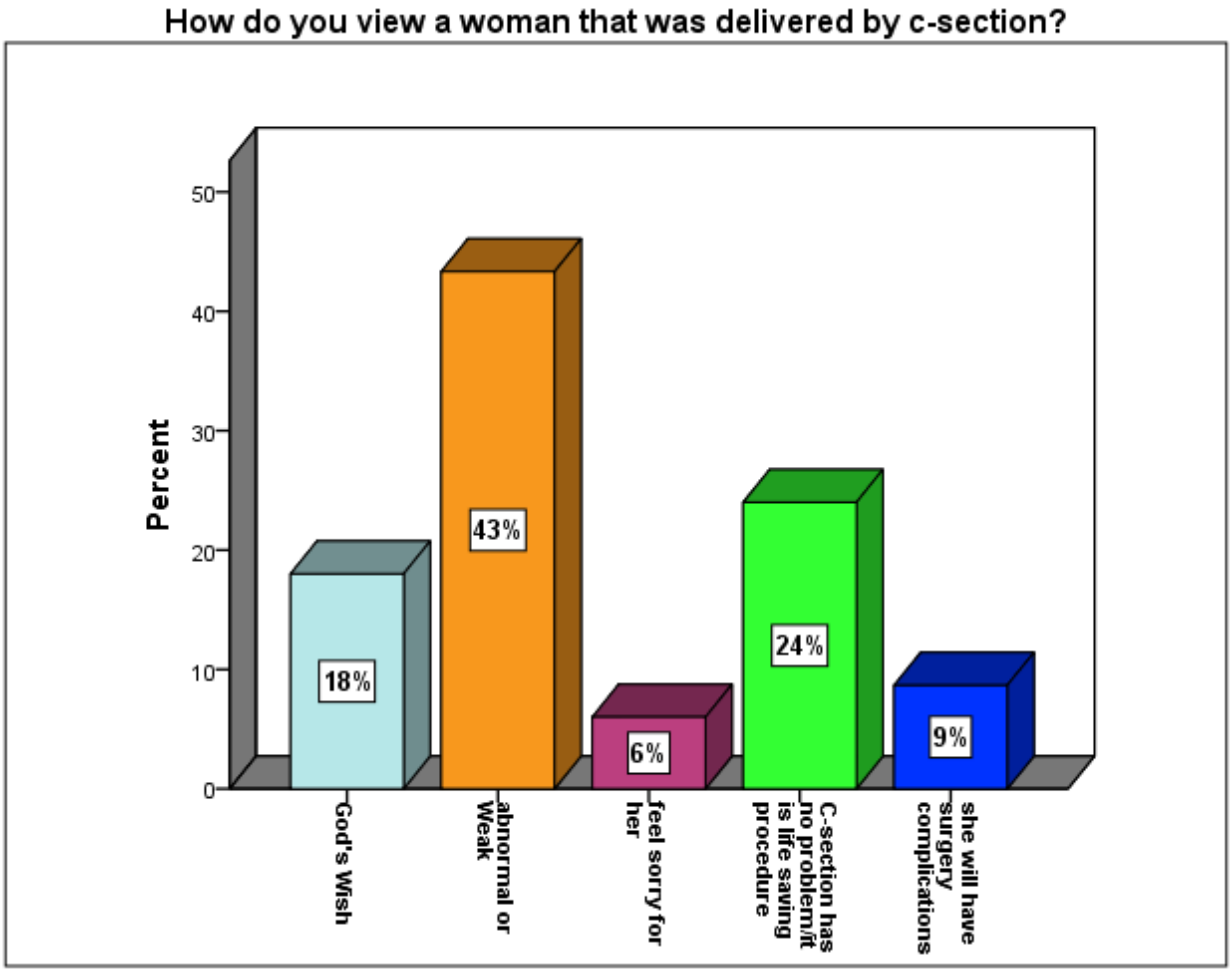
The study shows that 71% of respondents believe that women can achieve vaginal delivery after previous C-section but there is also a significant number (28%) of respondents that believe women cannot achieve vaginal delivery after previous C-section. While the rest are not sure of the situation.



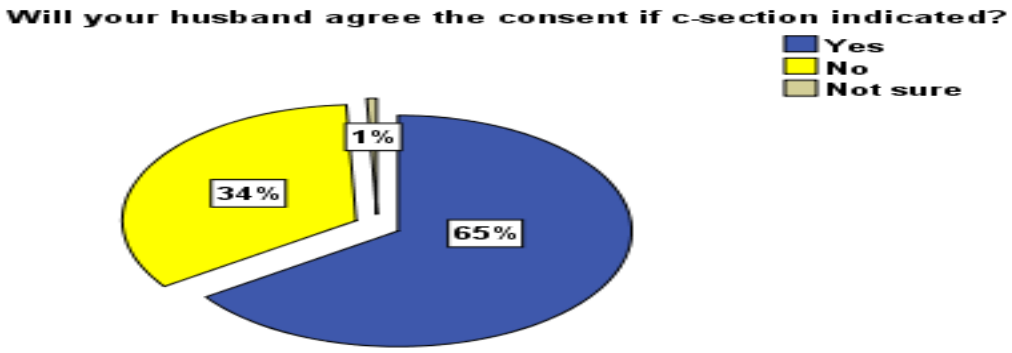
Out of the 150 Study respondents revealed that vast majority of respondents which is 69% perceived that women delivered by C-section are abnormal while 23% believe that it is normal and the rest are not sure of it.



The study demonstrated that 62% of respondents are willing to undergo C-section if indicated while the rest (38%) are not willing to undergo C-section and the reason why they are not willing to undergo C-section believed that they can deliver spontaneously and fear of surgery complications and death.



There are different views mentioned by the study respondent towards women delivered by C-section. About 43% of respondents view women delivered by C-section as an abnormal or weak person, 18% mentioned that this situation as god's wish. But there 24% respondents that view it is normal as it is a lifesaving procedure. The remaining 9% view that women with C-section delivered will have surgery complications.



Since the consent of surgical procedures is very important, Husbands have a great role in this situation. The study showed that 65% of the respondents believe that their husband will agree on the consent if C-section is indicated, on the contrary, there are significant figures of 34% who believe their husband will not agree on the consent of this life-saving procedure. The rest are not sure of it.

5. Discussion

The findings have shown that a little over half of the women in the study knew of several of the indications for C-section and two thirds said that they would undergo a C-section if medically indicated. They also believed that their husbands would agree. This shows that the awareness about the risks of vaginal delivery in case of indication against it is relatively high.

However, from a public health point of view the 45% of the women who had no knowledge about the medical indication for C-section is a big worry, just as the perception of C-section delivery as sign of abnormality or weakness. The fear of complications for oneself and the baby show how lack of knowledge spreads unnecessary fear and contributes to underutilization.

The 34 percent of women who said that husbands would not agree to the wife's SC make them a high risk group among pregnant women.

Study conducted in the UK showed that some women in the developing countries are still perceived C-section as abnormal means of delivery.

This study supports another study conducted in Nigeria and most of the sub-Saharan African countries women accept C-section unwillingly even if there clear clinical indications.

Over two thirds of the respondents mentioned that both patient's father and husband are required to give their consent for this procedure. The potentially dangerous situation for women with indication for SC is evident from our finding that one third of the respondents believed that their husbands would disagree if C-section is indicated.

Lack of knowledge leading to unfounded fear and rejection of C-section represent a high risk for pregnant women in need of C-section intervention. The culturally prescribed decision making pattern necessitating the presence of fathers and/or husbands in C-section decisions adds to this risk. .

6. Study Limitation

During the data collection period harsh climate with unbearable heat has caused population to migrate better environment areas. . There are also some socio-cultural limitations.

7. Conclusion:

This study strengthens the reality that significant proportion of antenatal women attending to certain health facilities are reluctant to C-section with negative cultural perceptions. The reasons include lack of knowledge and negative view about C-section delivery. We recommend to adopt proper programs to modify the negative perception of the local population about C-section and create demand creation programs of behavior communication change and awareness. These methods will reduce the delays and ultimately reduce maternal mortality.

It would be useful to study a group of pregnant mothers in the general population and not just those attending the ANC, to get a wider perspective on community perceptions towards C-section. It might be expected that women attending ANC have a more positive perception of C-section than women not attending, which should be considered when interpreting the findings.

8. Recommendation:

Regarding the finding of this study, we recommend the following:

1. All women with reproductive age and those Antenatal clients should understand the meaning of C-section so they should get enough education about C-section
2. Right of women in choosing any preferred method of delivery and consent of the operation should be respected
3. There is real need to provide better information for pregnant women and during the antenatal period about mode of delivery, their indications, advantages and consequences which enable them to make an informed decision.

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10. ANNEXES

DEMOGRAPHIC DATA

	Age in years	Frequency	Percent
Age	18-26	59	39.3%
	27- 35	70	46.7%
	>36	21	14.0%
Level of Education	No Formal Education	86	57.3%
	Primary School	18	12%
	Intermediate School	20	13.3
	Secondary School	19	12.7
	University	7	4.7
Occupation	Housewife	123	82%
	Governmental Employee	7	4.7%
	Private Business	19	12.7
OBSTETRIC CHARACTERISTICS			
Gravida			
	Primigravida	29	19.3%
	Multi Gravida	53	35.3%
Parity			
	Gravida One	38	25.3
	Multiparity	37	24.7%

Last Delivery Type	SVD	110	73.3%
	Assisted Delivery	9	6%
	C-section	21	14%
	Pregnant	10	6.7%
Last Place of Delivery	Health Center	26	17.3%
	Hospital	84	56%
	Home	16	10.7
	Pregnant	24	16%

Knowledge of Pregnant women Toward C-section			
Category	**Choice**	**Frequency**	**Percent**
What method of method of delivery do you know?	SVD	52	34.7%
	SVD and C-section	79	52.7%
	Assisted Delivery	4	2.7%
	Assisted delivery and SVD	1	0.7%
	All	14	9.3%
What method of delivery do you think as normal?	SVD	138	92%
	Assisted Delivery	4	2.7%
	both SVD & Ass delivery	3	2%
	C-section delivery	1	0.7
	All	4	2.7
What method of delivery do you think as normal?	SVD	138	92%
	Assisted Delivery	4	2.7%
	both SVD & Ass delivery	3	2%
	C-section delivery	1	0.7%
	All	4	2.7%
What method of delivery do you prefer?	SVD	143	95.3%
	Assisted Delivery	1	0.7%
	C-section Delivery	6	4.0%
Have you heard of C-section	Yes	142	94.7%
	No	8	5.3%

Do you know the indication for C-section?	Yes	82	54.7%
	No	68	45.3%
If yes what is the indication for C-section?	Prolonged labor due to a big baby	24	16.%
	Convulsions due to high blood pressure	13	8.7%
	Bleeding per vagina before delivery	3	2.0%
	Small pelvis for the size of the baby	27	18.%
	Fetal distress	4	2.7%
	Mal presentation/high presentation	13	8.7%
	All	1	0.7%

Table: 3

Attitude and Perception towards C-section

Category	Choice	Frequency	Percent
Have you experienced C-section?	Yes	22	14.7%
	No	128	85.3%
	n=22		
If yes do you know why you had C-section?	Prolonged labor due to a big baby	12	8.0%
	Convulsions due to high blood pressure	4	2.7%
	Bleeding per vagina before delivery	3	2.0%
	Small pelvis for the size of the baby	1	0.7%
	Malpresentation	2	1.3%

	n=22		
If another C-section is indicated would you accept?	Yes	16	10.7%
	No	6	4%
If you don't accept why?	Fear of complications	4	2.6%
	Can deliver spontaneously	2	1.3%
Who is required to give consent for C-section	Husband	19	12.7%
	patient's father	33	22.0%
	both of them	97	64.7%
	patient her self	1	0.7%
	n=22		
How useful your husband helping you through C-section delivery	Not at all	3	13.6%
	Somewhat	5	22.7%
	Moderately	4	18.2%
	Very	10	45.5%
Women who undergo C-section will always be delivered by CS in future pregnancies	Yes	77	51.3%
	No	70	46.7%
	Not sure	3	2.0%
If she had C-section, did you worry about your baby's condition during CS delivery	Not at all	2	9%
	Somewhat	11	50%
	Moderately	4	18.2%
	Very	5	22.8%
If she didn't have C-section; would you worry about your	Yes	89	69.5%
	No	39	30.5%

baby's condition during CS delivery?			
If not willing to undergo CS why?	Fear of complication(death)	22	39.3%
	Husband declines	3	5.4%
	can deliver spontaneously	27	48.2%
	Cannot afford to pay operation cost	2	3.6%
	If I agree I will deliver CS in the future	2	3.6%

10.1. STUDY PLAN:

Activity	**Sept, Oct, Nov 2017**	**Jan- April 2018**	**May-June 2018**
Finalize ethical clearance			
Finalize data collection tools			
Train data collectors			
Undertake field survey- data collection			
Data entry and cleaning			
Data analysis			
Report writing: first draft			
Research presentation/defense			

10.1. QUESTIONNAIRE

CONSENT FORM

Title of Project: Knowledge Attitude and Perception of Somali Pregnant Women towards C-section Delivery in Berbera town, Somaliland

I, _____ have had the trial explained to me. I have understood all that has been read and had my questions answered satisfactorily. I understand that I can change my mind at any stage and it will not affect the benefits due to me.

☐ *Please tick* **I agree to take part in this research**

Patient's Signature: _____ **Date:** _____

Patient's Name: _____ **Time:** _____
(please print name)

STATEMENT OF INVESTIGATOR:

I acknowledge my responsibility for the care and well-being of the above subject, to respect the rights and wishes of the subject, and to conduct the study according to applicable Good Clinical Practice guidelines and regulations.

Investigator's Signature: **Date:**

Or Designee _____ _____

Name: _____ **Time:** _____
(please print name)

Only necessary if the Participant cannot read:

1. I* attest that the information in this consent form was accurately explained to, and apparently understood and that informed consent was freely given by the participant.

Witness' Signature: _____ **Date:** _____

Witness' Name: _____ **Time:** _____
(please print name)

****The witness should be independent of trial or a member of staff who was not involved in gaining the consent.***

Thumbprint of the patient as named above if they cannot write: _____

THE PATIENT SHOULD NOW BE GIVEN A SIGNED COPY TO KEEP

I. Socio-demographic Information(For Pregnant Women)

Kindly provide the following information

1. **Patient Name(Optional):_____**
2. Age: 15-24 ☐ 25-34 ☐ 30-34 >35 ☐
3. Area of residence:_____
4. Highest level of Education: None☐ Primary☐ Intermediate☐ Secondary ☐ University☐
5. Occupation: _____

Obstetric Characteristics:

6. Gravida_____ Parity_____
7. Last delivery Type: _____
8. Last Place of delivery_____
9. Date of Consent _____
10. Study Code Number:_____

II. Knowledge of pregnant women regarding mode of delivery including C-section:

1. What method of delivery do you know?
   a. ……
   b. ……
2. What method of delivery do you think as normal?
   a. …….
   b. …….

3. What method of delivery do you prefer?
   a. …….
   b. …….
4. Have you heard of Caesarean section?
   a. Yes, b. No
5. Have you experienced Caesarean section?
   a. Yes, b. No
6. **C-section case only: if yes,** do you know why you had a Caesarean section?
   a. ……
   b. ……
7. **C-section case only:** if another C-section is indicated would accept?
   a. Yes, b. No
8. If you don't accept another C-section why?
   a. …….
   b. …….
9. Do you know the indication for C-section?
   a. Yes, b. No
10. If yes, what is the indication for C-section?
    a. ……
    b. ……...
11. C-section case only: how long have you stayed at the hospital after C-section procedure?
    a. …… Days b. …… Weeks

III. <u>Attitude and Perception of pregnant women toward C-section:</u>

1. Do you think a woman can achieve vaginal delivery after C-section?
   a. Yes b. No
2. Who is required to give consent for C-section?
   a. ……..

b. ……..

3. C-section case only: How useful was your husband helping you through delivery?
   a. Not at all
   b. Somewhat
   c. Moderately
   d. Very
4. Women delivered by C-section are abnormal?
   a. Yes b. No
5. Women who undergo C-section risk to die due to this procedure
   a. Yes b. No c. Not sure
6. Women who undergo one C-section will always be delivered by CS in future pregnancies
   a. Yes b. No c. Not sure
7. **C-section case only**: if she had C-section, did you worry about your baby's condition during C-section delivery?
   a. Not at all b. Somewhat c. Moderately d. Very
8. If she didn't have CS: Would you worry about your baby's condition during CS delivery?
   a. Yes, b. No
9. Are you willing to undergo C-section if indicated?
   a. Yes, b. No
10. If not willing to undergo C-section why?
    a. …….
    b. ……
11. Are you willing to undergo repeated C-section if indicated?
    a. Yes, b. No
12. If you don't accept repeated C-section why?
    a. ……
    b. ……
13. How do you view a woman that was delivered by C-section?
    a. …….
    b. ……

14. Will your husband agree with the consent if C-section indicated?

    a. Yes, b. No