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# Women of Reproductive Age's Knowledge, Perception and Willingness to Undergo Elective Caesarean Section in an urban community setting in Ibadan, Nigeria

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## ABSTRACT

**Aim:** Perceptions regarding elective caesarean section have a major role in women's readiness to consider the procedure when it is medically indicated. This study was carried out to investigate the perception and willingness of women of reproductive age to undergo elective caesarean section in Ibadan south-west local government in Nigeria. **Method:** Descriptive cross-sectional design was employed for the study which involved a three-stage sampling technique. The study was conducted among consenting 380 women of reproductive age. Questionnaire elicited information on socio-demographic characteristics, awareness, knowledge, perception, and willingness. Knowledge was scored on a 14-point scale; scores <8 and =8-14 were categorised as "poor" and "good" knowledge respectively. Perception was scored on a 16-point scale and scores <8 and =8-16 were categorized as "negative" and "positive" perceptions respectively. Descriptive statistics using mean and inferential statistics (chi-square and Pearson Correlation Coefficient) were generated. **Result:** Age of women of reproductive age was 33.7±8.0 years, 48.6% had tertiary education, 52.4% were traders, and 88.9% had vagina birth as previous type of delivery. Majority (77.1%) were aware of elective caesarean section and (36%) heard from health facility. Majority of respondents had good knowledge (69.7%) and good perception (71.8%) of elective caesarean section. Majority (75.0%) were willing to undergo elective caesarean section to avoid labour complications. **Conclusion:** This study showed that majority of the respondents' still view elective caesarean section as being unpleasant. Reinforcement of appropriate educational activities about elective caesarean section for the female population could have a significant impact on maternal and child health.

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## Introduction

Maternal mortality is one of the common causes of death among women of reproductive-age in most developing countries including Nigeria and about 94% of preventable maternal deaths occur in low income countries.<sup>1,2</sup> The estimated global maternal mortality ratio in Africa was 210 per 100,000 live births and 480 per 100,000 in 2010,<sup>3</sup> and in low income countries in 2017 was 462 per 100,000 live births with Nigeria highlighted as one of the 15 high alert countries for maternal mortality.<sup>1</sup> In Nigeria, the maternal mortality ratio was reported at 1350 per 100,000 live births in 1990, 814 per 100,000 in 2015<sup>4</sup> and 917 per 100,000 live births in 2017.<sup>1</sup> Diseases, deformity and mortality are typically words used to characterize pregnancy and childbirth experiences of many women in sub-Saharan African settings.<sup>5</sup> The Millennium Development Goals had attempted to tackle maternal mortality associated with pregnancy for ten years and been translated into the Sustainable Development Goals. However, more interventions are required to tackle the risks of pregnancy and post-pregnancy-related morbidity and mortality among women in the African region.<sup>6</sup>

The elective caesarean section is considered to be a scheduled delivery made during antenatal care to prevent risk to the life and well-being of the mother or the fetus; the date is set based on considerations for both mother and the fetus as well as suitability for the surgeon.<sup>7</sup> The decision for an elective caesarean section is made before or during pregnancy and is scheduled as near as possible to the delivery date.<sup>8</sup> On the other hand, emergency caesarean section is a scheduled procedure, and the decision is made considering risks to the mother or the fetus.<sup>7</sup>

Evidence has shown that female aversions to the caesarean section procedure can lead to delays or refusals.<sup>9-11</sup> This distaste appears to be rooted in fears that the caesarean section could lead to complications in health such as sterility, or even bereavement,<sup>12</sup> as well as local/communities beliefs associated with the caesarean section.<sup>10,12</sup> Approximately 23 per cent of women with

caesarean section were not adequately received at home and from community leaders in a study conducted in Nigeria.<sup>11</sup> This unhelpful attitude may have a detrimental impact on women's decision to support elective caesarean section, and this may lead to poor maternal and perinatal outcomes.<sup>13</sup> Perceptions regarding elective caesarean section have a major role in women's readiness to consider the procedure when it is medically indicated.<sup>13</sup> This study investigated the perception and willingness of women of reproductive-age to undergo elective caesarean section.

## Material and Methods

### - Study Population and Sampling Techniques

The study ethical approval was obtained from the Oyo State Ethical Review Committee (AD 13/ 479/200). Written informed, voluntary and verbal consent were obtained from each study participant before data collection, and confidentiality of information provided was ensured.

A descriptive cross-sectional design was employed for this study. Three hundred and eighty women of reproductive age, who had given birth to at least one child were selected for the study. This involved three-stage sampling techniques to randomly select one local government area (LGA) in Ibadan metropolises and six wards were selected in the LGA using simple random technique. In the second stage, random sampling technique (balloting) was used to select one community in each ward. In the third stage, systematic sampling technique was used to select households in each community and women of reproductive age who have had at least one birth before were invited to participate in the study. Where the women of reproductive age and who had given birth before were more than one from a house that was to be interviewed, balloting was used to select one woman.

A set of pre-tested semi-structured questionnaire elicited information from 380 women of reproductive age on socio-

demographic profile, awareness, knowledge and perception of elective caesarean section and willingness to undergo elective caesarean section. A 14-point knowledge and 16-point perception scores were computed to analyse the data, with higher scores indicating better knowledge and perceptions. The instruments originally developed in English, were translated into Yoruba language, and back translated into English to ensure accuracy of translation. The quantitative instruments were administered by well-trained research assistants.

**Statistical Analysis**

Data generated from the questionnaire were coded, entered, cleaned and analyzed using the IBM Statistical Package for Social Sciences (version 20). Knowledge of elective caesarian section was scored on a 14-point scale, with scores <8 categorised as “poor knowledge” and scores =8-14 categorised as “good knowledge”. Perceptions about elective caesarian

section was scored on a 16-points scale, and scores <8 were categorized as “negative perception” while scores =8-16 were categorized as “positive perception”. Descriptive statistics using mean and inferential statistics (chi-square and Pearson Correlation Coefficient) were generated. Data was stored in a password protected system and accessed only by the researcher.

**Results**

**Demographic characteristics**

The women's mean age was 33.7± 8.0 years. Majority of the respondents 80.5% were married and 63.4% were Christians. Majority of the respondents 95.5% were Yoruba and less than half 48.6% had tertiary education. Slightly over half of the respondents 52.4% were traders. Majority were multiparous 77.9%, had no history of caesarean section 84.2% and had vaginal delivery 88.9% (Table 1).

**Table 1: Socio-demographic profile of women of reproductive age towards elective caesarean section**

| Method of Breast Exam | Response option | Cystic | Normal |
|-----------------------|-----------------|--------|--------|
| Age                   | <20 years       | 49     | 2.2    |
|                       | 20-29 years     | 114    | 30.0   |
|                       | 30-39 years     | 159    | 41.8   |
|                       | >40 years       | 58     | 26.0   |
| Marital Status        | Single          | 51     | 13.4   |
|                       | Married         | 306    | 80.5   |
|                       | Separated       | 13     | 3.4    |
|                       | Divorced        | 2      | 0.5    |
|                       | Widowed         | 8      | 2.1    |
| Religion              | Christianity    | 241    | 63.4   |
|                       | Islam           | 139    | 36.6   |
| Ethnicity             | Igbo            | 17     | 4.5    |
|                       | Yoruba          | 363    | 95.5   |

| Method of Breast Exam     | Response option   | Cystic      | Normal |
|---------------------------|-------------------|-------------|--------|
| Educational Level         | Primary           | 23          | 6.1    |
|                           | Secondary         | 172         | 45.3   |
|                           | Tertiary          | 185         | 48.6   |
| Occupation                | Trading           | 199         | 52.4   |
|                           | Civil Servant     | 55          | 14.5   |
|                           | Housewife         | 24          | 6.3    |
|                           | Artisan           | 70          | 18.4   |
|                           | Student           | 19          | 5.0    |
|                           | Others**          | 13          | 3.4    |
|                           | Parity            | Primiparous | 73     |
|                           | Multiparous       | 296         | 77.9   |
|                           | Grandmultiparous  | 11          | 2.9    |
| Caesarean section History | Yes               | 60          | 15.8   |
|                           | No                | 320         | 84.2   |
| Previous type of delivery | Vaginal delivery  | 338         | 88.9   |
|                           | Caesarean section | 42          | 11.1   |

- **Awareness of elective caesarean section**  
Majority of the women (90.5%) had heard about caesarean section and majority could identify the two types of caesarean section as elective caesarean (77.1%) and emergency caesarean (79%) (Table 2). Major source of information was from health facilities (53%). Other sources were from friends (19%), family (15%) and social media (13%).

**Table 2: Awareness of Elective caesarean section (N=380)**

| Variables  | Yes Freq (%) | No Freq (%) | Don't know Freq (%) |
|--|--------------|-------------|---------------------|
| Heard about caesarean section  | 344 (90.5)   | 32 (8.4)    | 4 (1.1)             |
| Family members done caesarean section in the past  | 155 (40.8)   | 203 (53.4)  | 22 (5.8)            |
| Caesarean section is when an incision is made on the abdomen to deliver a baby from the womb | 350 (92.1)   | 15 (3.9)    | 15 (3.9)            |
| The following are types of caesarean section   |              |             |                     |
| Elective caesarean section   | 293 (77.1)   | 24 (6.3)    | 63 (16.6)           |
| Emergency caesarean section  | 302 (79.5)   | 19 (5.0)    | 59 (15.5)           |

**- Knowledge of elective caesarean section**

Majority of the women (83.7%) had the knowledge that elective caesarean section is a delivery scheduled based on deliberations between the pregnant woman and the doctor before the delivery date. Majority of the respondents (91.8%) had the knowledge that emergency caesarean section is a delivery carried out because there is a threat to the mother's existence and the baby during labour while 82.4% reported that elective caesarean section is best done when there is justifiable medical indication to do so. More than half (55.0%) indicated that post-operative pain is

associated with elective caesarean section while majority (78.9%) stated that a woman can experience vaginal birth after elective caesarean section (Table 3).

Majority stated that small pelvis for the size of the baby (81.3%), breech presentation (68.7%) and uterine fibroid (65.5%) were indications for elective caesarean section (Table 4). Majority of the women had fairly good knowledge of elective caesarian section and its indications (69.7%), while less than one-third (30.3%) had poor knowledge. Mean knowledge of the respondents was  $8.63 \pm 3.36$  (Table 5).

**Table 3: Knowledge of Elective caesarean section (N=380)**

| Variables  | Yes (%)   | No (%)   | Don't know (%) |
|--|-----------|----------|----------------|
| Elective caesarean section is a scheduled delivery based on deliberations between the mother and the doctor before delivery date | 318(83.7) | 30(7.9)  | 32(8.4)        |
| Emergency caesarean section is a delivery done because there was a danger to the life of the mother and the baby during labour   | 349(91.8) | 10(2.6)  | 21(5.5)        |
| Elective caesarean section is best done when there is justifiable medical indication to undergo the procedure                    | 313(82.4) | 17(4.5)  | 50(13.2)       |
| Post-operative pain is associated with elective caesarean section  | 209(55.0) | 62(16.3) | 109(28.7)      |
| A woman can experience vaginal birth after elective caesarean section  | 300(78.9) | 30(7.9)  | 50(13.2)       |

**Table 4: Knowledge of indications for elective caesarean section (N=380)**

| Variables                             | Yes (%)   | No (%)    | Don't know (%) |
|---------------------------------------|-----------|-----------|----------------|
| Previous caesarean section            | 149(39.2) | 152(40.0) | 79(20.8)       |
| HIV infection in pregnancy            | 169(44.5) | 91(23.9)  | 120(31.6)      |
| Breech presentation                   | 261(68.7) | 56(14.7)  | 63(16.6)       |
| Pre-eclampsia                         | 173(45.5) | 94(24.7)  | 113(29.7)      |
| Advanced maternal age                 | 167(43.9) | 153(40.3) | 60(15.8)       |
| Multiple gestation                    | 168(44.2) | 155(40.8) | 57(15.0)       |
| Uterine fibroid                       | 249(65.5) | 39(10.3)  | 92(24.2)       |
| Bad obstetric history                 | 144(37.9) | 138(36.3) | 98(25.8)       |
| Small pelvis for the size of the baby | 309(81.3) | 18(4.7)   | 53(13.9)       |

**Table 5: Knowledge Categorisation (N=380)**

| Categories                | Frequencies | Percentages |
|---------------------------|-------------|-------------|
| Poor Knowledge (<8)       | 115         | 30.3        |
| Good Knowledge (≥8)       | 265         | 69.7        |
| <b>Mean SD= 8.63±3.36</b> |             |             |

#### - Perceptions about elective caesarean section

Many of the respondents (63.7%) were of the opinion that elective caesarean section saved life rather than being dangerous, while majority of the respondents (87.6%) were of the perception that elective caesarean section is good if that is the only option to protect the mother and the baby's health. More than half (55.3%) of the respondents disagreed that doctors deliberately select elective caesarean section as an alternative to vaginal delivery. About half of the respondents (50.5%) were of the opinion that women who give birth through elective caesarean section missed an

important experience in birth (vaginal delivery). Majority of the respondents (72.4%) reported that women who undergo elective caesarean section do not recover faster when compared to those that experience vaginal birth. However, less than a third (25%) of the respondents felt that women who give birth through elective caesarean section are prone to die from the procedure (other perception variables can be seen on Table 6).

Majority of the respondents had fairly positive perceptions about elective caesarian section (71.8%). The mean score of respondents was  $8.76 \pm 3.16$  (Table 7).

**Table 6: Perception about elective caesarean section (N=380)**

| Statement   | Agreed (%) | Undecided (%) | Disagreed (%) |
|---|------------|---------------|---------------|
| Elective caesarean section is dangerous rather than saving life   | 76 (20.0)  | 62(16.3)      | 242(63.7)     |
| Elective caesarean section is associated with future complication   | 109(28.7)  | 88(23.2)      | 183(48.2)     |
| Elective caesarean section is good if that is the only option to protect the mother and the baby's health       | 333(87.6)  | 31(8.2)       | 16(4.2)       |
| Doctors deliberately opt for elective caesarean section instead of vaginal delivery                             | 93(24.5)   | 77(20.3)      | 210(55.3)     |
| Elective caesarean section does not make one a real woman   | 81(21.3)   | 76(20.0)      | 223(58.7)     |
| It is only a cursed woman that will have reason to go through elective caesarean section                        | 18(4.7)    | 55(14.5)      | 307(80.8)     |
| Women who give birth through elective caesarean section miss an important experience(vaginal delivery)          | 192(50.5)  | 64(16.8)      | 124(32.6)     |
| Women recovers faster after elective caesarean section than after vaginal birth                                 | 55(14.5)   | 50(13.2)      | 275(72.4)     |
| Women who give birth through elective caesarean section are likely to die from the procedure                    | 95(25.0)   | 74(19.5)      | 211(55.5)     |
| Women who had had one caesarean section are most likely to deliver by caesarean section in the future pregnancy | 98(25.8)   | 70(18.4)      | 212(55.8)     |
| Elective caesarean section is a normal obstetric decision   | 131(34.5)  | 66(17.4)      | 183(48.2)     |
| Elective caesarean section prevents early initiation of breastfeeding   | 176(46.3)  | 71(18.7)      | 133(35.0)     |
| Elective caesarean section will give a woman an unpleasant skin mark  | 245(64.5)  | 45(11.8)      | 90(23.7)      |
| Babies born through elective caesarean section are likely to die soon after birth                               | 28(7.4)    | 54(14.2)      | 298(78.4)     |
| Elective caesarean section makes the woman stay longer in the hospital  | 236(62.1)  | 49(12.9)      | 95(25.0)      |
| Babies born with elective caesarean section generally have a low IQ   | 17(4.5)    | 64(16.8)      | 299(78.7)     |
| In terms of outcome, elective caesarean section is not pleasant   | 246(64.7)  | 57(15.0)      | 77(20.3)      |

**Table 7: Perception Categorisation (N=380)**

| Categories                  | Frequencies | Percentages |
|-----------------------------|-------------|-------------|
| Negative Perception(<8)     | 107         | 28.2        |
| Positive Perception (≤8)    | 273         | 71.8        |
| <b>Mean SD= 8.76 ± 3.16</b> |             |             |

**- Willingness to undergo elective caesarean section**

Majority of the women (75.0%) were willing to accept to undergo elective caesarean section by choice to avoid complications of labour. Similarly, majority the respondents (88.4%)

were willing to accept elective caesarean section if the life of the mother and the baby was in danger. In addition, majority of the respondents (81.8%) were willing to accept elective caesarean section if the doctor advised them to do so (Table 8).

**Table 8: Willingness to undergo elective caesarean section (N=380)**

| Variables   | Yes (%) | No (%) |
|---|---------|--------|
| Willing to accept elective caesarean section by choice to avoid the complication of labour        | 75      | 25     |
| Willing to undergo elective caesarean section if the life of the mother and the baby is in danger | 88.4    | 11.6   |
| Willingness to go through elective caesarean section if recommended by the doctor.                | 81.8    | 18.2   |

**Discussion**

The study revealed that most of the women were aware of elective caesarean section and the source of information was majorly from health facilities. In this study, majority had the knowledge that elective caesarean section is best carried out when there is justifiable medical indication to undergo the procedure. This is higher than the 33.3% observed in a study that women believed caesarean section was carried out for medical reasons.<sup>17</sup>

Many of the respondents had fairly good knowledge of elective caesarean section. According to a study conducted in Southwest Nigeria, the knowledge and understanding of caesarean section is an indication of women's ability to give adequate approval to the surgical

procedure.<sup>18</sup> Also, study indicated that patients who are informed about their circumstances will contribute actively to shared decision making.<sup>19</sup> Those who are well educated are also more likely to have a shorter stay, decreased need for additional treatments, lower costs and less difficult post-operative recuperating time.<sup>19</sup>

This study also revealed that many women considered the elective caesarean section to be less-hazardous, contrasting with a study that states that women view the caesarean section as dangerous and painful.<sup>18</sup> Nearly half of the respondents considered a major experience (vaginal delivery) missed by women who give birth by elective caesarean section. This is similar to a study conducted in South-West Nigeria that stated that a



majority of the study population perceived that women who give birth through the Caesarean section missed a significant experience in child birth.<sup>20</sup> Many of the respondents reported that elective caesarean section is not pleasant in terms of outcome. The report in a Nigerian study stated that aversion of Sub-Saharan African women to caesarean section may not be a fear of the operation per se, but a reflection of the women's desire to have a vaginal birth they considered as natural.<sup>12</sup> Women in the developing and developed countries have expressed their preference for vaginal birth.<sup>12,21,22</sup> Perceptions of the elective caesarean section play an important role in the willingness to consent to the procedure.<sup>18</sup>

The study findings revealed that majority of the respondents were willing to accept to undergo elective caesarean section to prevent adverse risks in labour or danger to the life of the mother and the baby, and if the doctor advises to do it. These results are consistent with a study in Nigeria<sup>9</sup> where acceptability of caesarean section was found to be 85 percent when medically indicated, and also if supported by doctor's advice. Also study findings were contrary to the widely held belief of unwillingness to have caesarean section common among Nigerian women.<sup>19</sup> This might be an

indication of the respondents' educational level.

### **Conclusion**

The results from this study suggest that many women perceive elective caesarean section as acceptable if it is medically justifiable. Regardless of positive perception and willingness to undergo elective caesarean section, many respondents still consider elective caesarean section as unpleasant and would still prefer vaginal delivery. Given the fairly good knowledge and willingness to undergo elective caesarean section if required, continuous, sufficient and appropriate health education about elective caesarean section can help reduce negative perceptions about the procedure.

### **Conflict of interest declaration**

The authors declare that they have no conflict of interest.

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