ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov110

The Effects of Female Genital Mutilation on Vaginal Deliveries and Maternal Satisfaction in Awka, Anambra State Nigeria

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Publication Date: 2026/11/07

Abstract: This study aimed at investigating the effect female genital mutilation has on vaginal deliveries and maternal satisfaction of mothers in Awka, Anambra State, Nigeria. This study is quantitative in nature and made use of a target population of women both with FGM and without FGM who gave birth in year 2022 in one of the community hospitals (Chukwuemeka Odumegwu Ojukwu University Teaching Hospital) in Awka, Anambra State, Nigeria. The study used a sample of 138 women categorised into two equal groups of women with FGM and women without FGM, which was determined using the Cochran's (1963) formula. Data were collected using a questionnaire and scales. Data were analysed using via the aid of the SPSS version 26. For evaluation of data descriptive statistics such as frequencies and percentages, and inferential statistics such as correlation analysis, regression analysis, and chi-square tests. Findings from the study showed that, women with FGM experienced challenges such as vaginal tears, long hospital stay, large volume of blood loss, episiotomy, high pain level. It also showed that FGM had a negative relationship with birth outcomes such as vaginal bleeding and tears ($\beta = -0.280$, $p = 0.001<0.05$). Birth outcomes of the women with FGM such as babies' APGAR scores of 8-10, episiotomy, vacuum delivery, high number of pad changes, high number of pain killers used, and 48 hours of hospital were discovered to be significant. The study also discovered that FGM had a negative and statistically significant relationship with maternal satisfaction ($\beta = -0.325$, $p=0.000<0.05$). This study concluded that FGM negatively affects vaginal deliveries and maternal satisfaction of women. The findings suggest that women who have undergone FGM may encounter challenges and adverse outcomes during the childbirth process.

Keywords: *FGM, Maternal Satisfaction, Vaginal Deliveries*

How to Cite: Ogonna F. Muoneke (2026) The Effects of Female Genital Mutilation on Vaginal Deliveries and Maternal Satisfaction in Awka, Anambra State Nigeria. *International Journal of Innovative Science and Research Technology*, 11(11), 76-93. https://doi.org/10.38124/ijisrt/26nov110

I. INTRODUCTION

FGM is a complex issue that has been linked to a range of social, cultural, and religious factors, including the desire to preserve virginity, promote cleanliness, and conform to social norms (Berg & Denison, 2013; WHO, 2021). FGM which is also known as female genital cutting is defined by the World Health Organization (WHO) as every procedure that captures either the partial or total removal of the external female genitalia, or other injury to the genital organs of the female individual for non-medical reasons (WHO, 2023). Mummies found in Egypt provide evidence that FGM was a common procedure thousands of years ago. FGM is widespread among animists, Catholics, Jews, Muslims, Protestants, and those without religious affiliation, with reports indicating that it can be traced to Pharaonic times. While it is not referenced in major religious books like the Quran or the Bible, some tribes believe that FGM is a religious need. As late as the 19th century, clitoridectomy was employed in the United Kingdom (UK) to treat epilepsy, sterility, and masturbation. At the beginning of the 20th century, missionaries in Kenya and medical professionals in Egypt both publicly opposed the practice (Williams-Breault, 2018).

Female genital mutilation (FGM) is a deeply rooted cultural practice in many parts of Africa, including Nigeria, where its rate is reported to have increased from 16.9% in 2013 to 19.2% in 2018 for Nigerian girls aged 0-14 and reduced from 25% in 2013 to 20% in 2018 for women aged 15-49 years (UNICEF, 2022). This practice is usually performed by traditional practitioners who utilises unsterilized instruments such as knives, scissors, and razors, without any form of anaesthesia or pain relief (WHO, 2023). As earlier mentioned, this operation is often performed by a traditional circumciser or Traditional Birth Attendant (TBA) who is uninformed about the female anatomy or how to handle any negative outcomes, with the use of a blade, under anaesthesia or in the absence of it. Girls between the ages of 0 and 14 represent the most common demographic for FGM (UNICEF, 2023). The female genital mutilation practice, however, is also performed on married and mature women

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov110

(WHO, 2008). This has been linked to numerous negative health outcomes, such as infections, urinary and reproductive problems, and even death (Klein, Helzner, Shayowitz, Kohlhoff, & Smith-Norowitz, 2018; Muteshi, Miller, & Belizan, 2016; WHO, 2023).

In accordance with the WHO (1995) classification, it is divided into four categories (Type I, II, III and IV). Type I (clitoridectomy) is the partial or complete removal of the clitoris and/or prepuce; Type II (excision) is the partial or complete detachment of the clitoris and the labia minora; Type III (infibulations) is where a little opening is left to permit urination and flow of blood during menstruation and is carried out by the constriction of the vagina orifice with formation of a concealing seal by trimming and opposing the labia minora and/or the labia major. Type IV includes a variety of treatments in the genital area, with variable levels of intensity having no therapeutic purpose like; piercing, dry sex, stretching, cauterizing the clitoris, etc. (WHO, 2016). The danger of acute injury from type III of FGM/C appears to be the highest of all types, and these occurrences frequently go unreported (Williams-Breault, 2018).

Depending on local customs and conditions, the age at which female genital mutilation is practiced ranges, but is declining noticeably in several nations through awareness campaigns, education, and legal measures (Nwaokoro *et al*., 2016). These efforts have helped shift societal attitudes, challenging the perception that FGM is a necessary tradition. As a result, the age at which FGM is performed has been gradually decreasing, reflecting progress in protecting girls and women from this harmful practice. In addition to international organizations and NGOs working tirelessly to eradicate FGM, governments and community leaders have also taken active steps to address the issue. Legislation has been enacted in many countries, explicitly prohibiting FGM and imposing penalties on those who perform or facilitate it. These legal frameworks serve as powerful deterrents and encourage communities to abandon the practice altogether.

The pronatalist as described by Szalma, Haskova, Olah, and Takacs (2022), are large-family-valued societies where FGM/C is often practiced and, in these areas, motherhood is seen as the main source of stability, affection, and prestige. Different communities have put out a number of justifications for the practice's continued existence, but none of them is sufficient to justify it. It is frequently referred to as a strategy to fight against premarital sex, hence preventing female promiscuity and maintaining virginity (Njoku *et al*., 2020; Yirga *et al*., 2020). In Nigeria, there are regional variations in the frequency of FGM; the southern region of Nigeria having the heaviest incidence (Anyanwu, Torpey, Abiodun, Sanni, & Anyanwu, 2022). The south-south side of Nigeria takes the largest portion at 77%, accompanied by the south-east at 68% and then finally the south-west at 65% (Obijiofor *et al*., 2020).

Despite efforts to eradicate the practice, FGM remains widespread in many parts of Nigeria, including the Awka, Anambra State, where a prevalence rate of 13.4% of women have undergone the procedure was reported (Obijiofor *et al*., 2020).This is a cause for concern, as FGM has been linked to a range of negative health outcomes, including complications such as prolonged or obstructed labour, perineal tears and trauma, postpartum haemorrhage, and so on during childbirth (Gebremicheal *et al*., 2018; Muteshi *et al*., 2016; Njoku, Emechebe, Njoku, Efiok, & Iklaki, 2020; WHO, 2023) . Therefore, there is an urgent need to investigate the effects of FGM on maternal and neonatal health outcomes in this population. FGM has also been linked to numerous negative health outcomes, including infections, urinary and reproductive problems, and even death (WHO, 2023).

Moreover, a study carried out by Suleiman et al. (2021) in Northern Tanzania sought to examine the trends of female genital mutilation and its associated neonatal and maternal adverse outcomes. The study found out that FGM is associated with long maternal hospital stays, delivery by caesarean section, postpartum haemorrhage, and low APGAR score.

These empirical studies collectively highlight the significant consequences of FGM on vaginal deliveries. The findings consistently suggest that women who have undergone FGM are at a higher risk of experiencing complications during childbirth and report lower levels of satisfaction with their childbirth experiences. The evidence underscores the urgent need for comprehensive interventions and support services targeting women affected by FGM, with a focus on improving maternal health outcomes and enhancing the overall childbirth experience.

Given that problems can occur during labour have a substantial impact on maternal mortality rates, childbirth for infibulated women provides the greatest challenge. In order to properly deliver the baby, infibulated ladies (whose genitalia have been tightly closed) undergo a perineum incision during labour (Chibber, El-Saleh, & El Harmi, 2019); this poses a huge risk to them during childbirth. Although, FGM has been linked to numerous negative health outcomes, including complications such as prolonged or obstructed labour, perineal tears and trauma, postpartum haemorrhage during childbirth (Gebremicheal *et al*., 2018; Muteshi *et al*., 2016; Njoku, Emechebe, Njoku, Efiok, & Iklaki, 2020; WHO, 2023), and many studies have examined the effects of FGM on other aspects such as obstetric and neonatal outcomes of FGM survivors, maternal and perinatal outcomes, higher rates of infection, amongst others (Akpak & Yilmaz, 2020; Sylla, Moreau, & Andro, 2020; Iavazzo, Sardi, & Gkegkes, 2013). According to the study of Akpak and Yilmaz (2022), women who had experienced FGM were more associated with emergency caesarean sections, experienced prolonged delivery, and had higher episiotomy and periclitoral injuries. Also, the study of Gebremicheal *et al.* (2018) showed that the existence of FGM had a significant association with perineal tear [RR = 2.52 (95% CI 1.26–5.02)], postpartum blood loss [RR = 3.14 (95% CI 1.27–7.78)], outlet obstruction [RR = 1.83 (95% CI 1.19–2.79)] and emergency caesarean section [RR = 1.52 (95% CI 1.04–2.22)].

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Despite these results revealed by previous studies, there is a lack of research on the specific effects of FGM on vaginal deliveries among women in Awka, Anambra State, Nigeria where it is reported that an FGM prevalence rate of 13.4% exists according to Obijiofor *et al*. (2020). Also, previous studies seemed to have neglected to examine the effect of FGM on maternal satisfaction of women who have experienced FGM. Hence, there is a need to empirically investigate how FGM affects vaginal deliveries and maternal satisfaction of women in Awka, Anambra State, Nigeria. It is therefore against this backdrop that this study aims to examine the effects of FGM on vaginal deliveries and maternal satisfaction in Awka, Anambra State, Nigeria.

Mother and child well-being, in particular, place a high value on postpartum maternal satisfaction. First off, it is essential for supporting moms' emotional and mental well. According to research, satisfied moms had reduced rates of postpartum anxiety and sadness, which benefits their general psychological health (Demis, Nigatu, Assefa, & Gedefaw, 2020). Positive mother-infant bonding is very directly related to postpartum maternal satisfaction. Satisfied women are more likely to exhibit loving behaviours, form strong bonds with their kids, and give their children the best care. The baby's emotional and social development is facilitated by this, which promotes a positive and loving bond between mother and child (Haines, Rubertsson, Pallant, & Hildingsson, 2012). Regarding the effects of FGM on maternal satisfaction, Johansen *et al.* (2013) revealed that women who had experienced FGM were seen to have lower satisfaction levels in their childbirth experience when compared to women who had not experienced FGM. Increased odds of negative experiences of childbirth such as fear, feelings of pain, and loss of control during delivery and labour were associated with FGM as revealed by the study. Also, a research carried out by Behrendt and Moritz (2005) showed that FGM negatively impacts mother-infant bonding. As reported by them, women who had undergone FGM had difficulties in breastfeeding and developing a close emotional connection with their newborns. They concluded that the trauma and pain associated with FGM has the possibility of interfering with the mother's ability to bond with the infant.

It is pertinent to reiterate that the practice of FGM violates both the fundamental human rights of women and girls and is a significant type of violence against women. In spite of having detrimental effects on women's life and reproductive function, this ancient tradition has endured throughout successive stages of human civilization (Njoku *et al*., 2020).

➢ *Purpose of the Study*

The aim of study is to determine the effect of FGM on vaginal delivery and maternal satisfaction.

➢ *Research Questions*

The research questions for this study include the following:

- What are the challenges/difficulties faced by the women during vaginal delivery as a result of genital mutilation?
- Is there a relationship between female genital mutilation and outcomes of birth?
- What are outcomes of birth in the women with FGM, and without FGM?
- What is maternal satisfaction level of the women with FGM and, without FGM?
- Is there any effect of FGM on maternal satisfaction?

It is pertinent to state that the independent variable of this study is FGM while the dependent variables are vaginal delivery and maternal satisfaction.

➢ *Significance of the Study*

FGM is a harmful cultural practice that has been associated with numerous negative health outcomes, including complications such as prolonged or obstructed labour, perineal tears and trauma, postpartum haemorrhage during childbirth. The significance of this study lies in its potential to contribute to the body of knowledge on the effects of FGM on maternal and neonatal health outcomes, particularly during vaginal deliveries, in Awka, Anambra State, Nigeria. Specifically, the study aims to provide a better understanding of the prevalence of FGM in the study population and its effects on maternal and neonatal health outcomes during vaginal deliveries. The findings of this study may help to inform public health policies aimed at eradicating the practice of FGM in Nigeria and other countries where the practice is prevalent.

The study may also have important clinical implications for health care providers and especially nurses working in the areas where FGM is prevalent. The results of this study may help to raise awareness among health care providers about the potential complications associated with FGM during vaginal deliveries, and may prompt them to adopt more effective approaches to managing labour and delivery in women who have undergone FGM. Additionally, the study may help to identify specific risk factors associated with FGM during vaginal deliveries, which may be used to develop more targeted interventions to reduce the incidence of complications and improve maternal and neonatal health outcomes.

II. LITERATURE REVIEW

➢ *Female Genital Mutilation (FGM)*

Female genital mutilation (FGM), also known as female genital cutting or female circumcision, refers to the deliberate alteration or removal of female external genitalia for non-medical reasons (WHO, 2023). It is a deeply rooted cultural practice that has been documented in various parts of the world, particularly in Africa, the Middle East, and some Asian countries (WHO, 2023). It is a harmful cultural practice that infringes on girls' and women's fundamental human rights and can also be referred to as female circumcision (Geremew et al., 2021).

FGM is often performed on young girls, typically between infancy and adolescence, and is influenced by social, cultural, and traditional beliefs (Berg & Denison, 2013). The practice involves various procedures, ranging from the partial

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or total removal of the clitoris to additional modifications of the genitalia, such as the narrowing of the vaginal opening (WHO, 2023). According to Sylla et al. (2020), FGM occurs mostly in about thirty (30) countries which cut across the regions of Asia, Middle East, and Africa. Estimates suggest that approximately 200 million women and girls have undergone the procedure worldwide, and it is projected that each year, about 3.6 million girls and women are at the risk of FGM (Taumberger et al., 2023). Although efforts have been made to address and eliminate the practice, challenges persist due to deeply ingrained cultural beliefs, societal norms, and lack of awareness and education (Berg & Denison, 2013).

Female genital mutilation/cutting (FGM/C) is divided into four categories by the World Health Organization (WHO). The clitoral glans is either completely or partially removed in Type I. Labia minora are also removed in type II. In Type III, sometimes known as "infibulation," the labia minora and majora are removed, often together with the clitoral glans, to reduce the vaginal entrance. Last but not least, Type IV includes all additional non-medical practices that injure the female genitalia, including as cauterization, cauterization, pricking, incising, scraping, and piercing (WHO, 2018). Berg and Denison (2013) corroborate the foregoing by stating that FGM is classified into four types - clitoridectomy, excision, infibulations, and other. This shows that Berg and Denison (2013) provided different names for the FGM types but actually still mean the same thing.

Clitoridectomy refers to the partial or total removal of the clitoral glans, which is a sensitive and erectile part of the female external genitalia. This procedure is categorized as Type I FGM/C by the World Health Organization (WHO) (2018). Excision involves the removal of the clitoral glans and the labia minora, which are the inner folds of the vulva. This procedure is categorized as Type II FGM/C by the WHO (2018). Infibulation, also known as Type III FGM/C, is the most severe form of FGM/C. It involves the removal of the clitoral glans, labia minora, and labia majora, followed by the stitching or narrowing of the vaginal opening, leaving only a small hole for urine and menstrual flow. Infibulation results in the creation of a seal or closure of the vaginal opening, often requiring surgical intervention to allow for sexual intercourse or childbirth. The term "other" in the context of FGM/C refers to the broader category of non-medical procedures that cause harm to the female genitalia. This includes practices such as pricking, piercing, incising, scraping, or cauterization, which may fall under Type IV FGM/C as classified by the WHO (2018). This category captures various harmful procedures performed on the female genitalia for non-medical reasons, but does not fit into the specific definitions of Type I, II, or III.

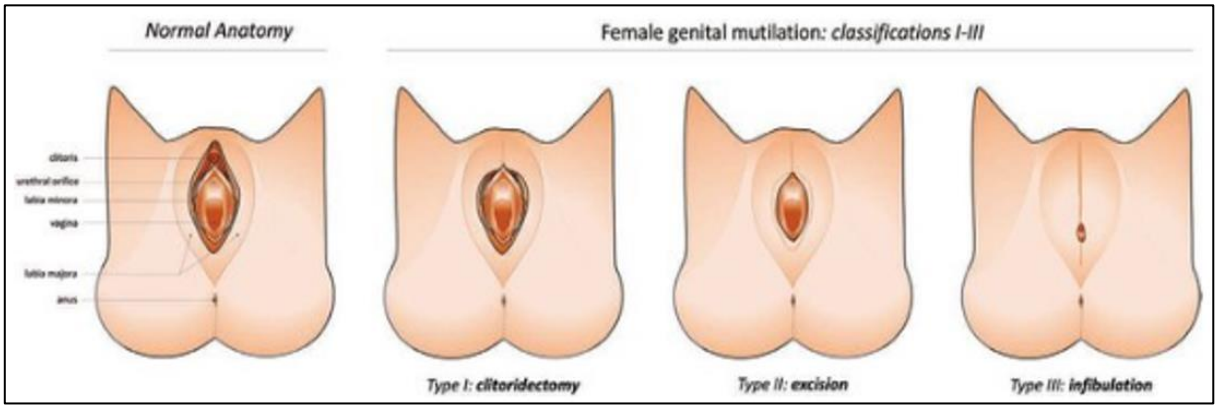


Fig 1 Types of FGM
Source: Akinbiyi et al. (2018)

As revealed by Taumberger et al. (2023), Type IV FGM or other is more prevalent in the developed world than other parts of the globe, however, it is not referred to as FGM there but is rather seen as a cosmetic procedure when it comes to genital piercings. When it comes to the health benefits of FGM, several studies have revealed that FGM provides no health benefits to women and girls, instead it poses severe risks to their health such as genitourinary (Berg et al., 2014; Birge et al., 2016; Lurie et al., 2020), sexual health (Berg et al., 2010; Perez-Lopez et al., 2020), infection (Iavazzo et al., 2013), and obstetrical complications like perineal tears, postpartum haemorrhage (Berg et al., 2014; Matanda et al., 2015).

➢ *Vaginal Deliveries*

The term "vaginal delivery" refers to the birth of a baby through the vagina, commonly referred to as the "birth canal," in animals or in humans (Omona, 2021). It refers to the process of giving birth through the vaginal canal, also known as the birth canal, as opposed to alternative methods such as caesarean section (C-section) or instrumental deliveries. It is the safest method of delivery for both the foetus and the mother at the time the new-born is full-term at the gestational period of 37 – 42 weeks (Desai & Tsukerman, 2023). It is the most common mode of childbirth and involves the natural expulsion of the foetus and placenta (American College of Obstetricians and Gynaecologists [ACOG], 2020).

During a vaginal delivery, the woman experiences contractions of the uterus, which gradually open the cervix, allowing the baby to descend through the birth canal. This process involves the stretching and widening of the vaginal opening to accommodate the passage of the baby's head and body (Evbuomwan & Chowdhury, 2022). Various factors,

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such as the position of the baby, maternal pushing efforts, and the guidance and support of healthcare providers, play a role in facilitating the progression of a successful vaginal delivery (Huang et al., 2019).

- *Maternal Satisfaction*

Maternal satisfaction refers to the subjective evaluation and perception of women regarding their childbirth experience and the care they receive during pregnancy, labour, and the postpartum period (Sawyer et al., 2013). It encompasses various aspects of care, including the quality of communication and information provided by healthcare providers, the level of support and involvement in decision-making, the management of pain and discomfort, and the overall emotional and physical well-being of the mother (Okonofua et al., 2017; Rowe et al., 2012).

Maternal satisfaction is a multidimensional construct influenced by numerous factors. Effective communication and interpersonal skills of healthcare providers play a vital role in shaping women's satisfaction with their childbirth experience (Shamoradifar, 2022). Empathy, respect, and sensitivity to women's needs and preferences contribute to a positive childbirth experience and higher levels of satisfaction (Sawyer et al., 2013). Additionally, the environment in which care is provided, such as the physical facilities and availability of supportive services, can impact maternal satisfaction (Mocumbi et al., 2019). Furthermore, women's expectations and previous experiences with childbirth and healthcare influence their perceptions of satisfaction (Saywer et al., 2013). Positive experiences, feeling listened to, and having a sense of control during childbirth contribute to higher levels of satisfaction (Rowe et al., 2012). On the other hand, experiences of pain, medical interventions, and perceived lack of support may negatively impact maternal satisfaction (Thomson et al., 2019).

Maternal satisfaction is an important outcome in assessing the quality of maternity care and is linked to maternal well-being, postpartum adjustment, and future healthcare-seeking behaviours (Silesh & Lemma, 2021; Srivastava et al., 2015). It reflects the extent to which healthcare systems meet the needs and expectations of women during the vulnerable and transformative period of childbirth.

- *Historical and Cultural Context of FGM in Nigeria*

FGM also known as female circumcision, is deeply rooted in the historical and cultural context of Nigeria. The practice has a long-standing tradition in many Nigerian communities, where it is seen as a rite of passage and a symbol of cultural identity (Ruttert, 2021). FGM has been performed in Nigeria for generations, with evidence of its existence dating back centuries. The historical origins of FGM in Nigeria can be traced to various cultural beliefs and practices that associate the removal or alteration of female genitalia with notions of purity, chastity, and marriageability (Adelekan et al., 2022). The practice is often deeply embedded in traditional customs, religious beliefs, and social norms, making it a complex issue to address.

In Nigeria, FGM practices differ across ethnic groups and regions, reflecting the diverse cultural landscape of the country. Different ethnic groups have distinct methods, rituals, and justifications for performing FGM. For example, among the Ibibio and Efik communities in the southern region, FGM is performed as part of a cultural initiation ceremony for young girls, marking their transition to womanhood (Adelekan et al., 2022). In contrast, the Hausa and Fulani communities in northern Nigeria often practice a more severe form of FGM, known as Sunna circumcision, which involves the removal of the prepuce or the tip of the clitoris (Okeke et al., 2012). These variations in FGM practices demonstrate the intricate interplay between cultural norms, local customs, and regional influences.

Furthermore, the cultural context surrounding FGM in Nigeria perpetuates the practice through intergenerational transmission. Mothers, grandmothers, and other female relatives often play influential roles in ensuring the continuation of FGM among younger generations (Pashaei et al., 2016). The social pressure to conform to cultural expectations and maintain community acceptance further reinforces the persistence of the practice (Okeke et al., 2012). Additionally, the belief that FGM enhances female modesty, purity, and marital prospects contributes to the cultural significance attached to the practice (Adelekan et al., 2022). These deeply ingrained cultural norms and societal expectations make it challenging to eradicate FGM in Nigeria.

The historical and cultural context of FGM in Nigeria has implications for efforts to address and eliminate the practice. While legislative measures and advocacy campaigns have been implemented to curb FGM, cultural norms and social pressures continue to influence its perpetuation. Understanding the historical roots and cultural significance of FGM in Nigeria is essential for developing effective interventions and strategies that respect local traditions while promoting the abandonment of the harmful aspects of the practice.

The negative effects culture has on women’s health in numerous ways especially in Nigeria cannot be overemphasised. Amongst the numerous ways women's health is negatively impacted by culture, gender-based violence is one famous instance. When cultural norms and customs support harmful behaviours including domestic abuse, child marriage, and female genital mutilation as earlier mentioned, these behaviours put women at greater risk of suffering both physical and psychological harm, feeding the cycle of violence, and endangering their health (Ikeaba et al., 2022). Additionally, differences in women's access to reproductive healthcare may be caused by cultural attitudes and behaviours. Women's capacity to seek prompt medical attention is hampered by stigma and taboos around matters related to reproductive health.

According to the World Health Organization (2020), this may result in undesirable health consequences such as increased rates of maternal death, unsafe abortions, and reproductive tract infections. Furthermore, culture can affect

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov110

women's health negatively through traditional norms that limit the autonomy of women and their decision-making power. When women are not involved in decisions about their bodies and healthcare, they may face restricted access to reproductive choices, contraception, and preventive care. This can result in adverse health consequences, including unintended pregnancies and increased risks during childbirth (Johnson-Mallard et al., 2017).

III. METHODOLOGY

➢ *Research Design*

This research adopted a descriptive and correlational research design. It comprised two groups of respondents – those with FGM and those without FGM. The rationale for adopting a descriptive and correlational research design in the context of this study is to comprehensively explore and understand the relationship between Female Genital Mutilation (FGM) and its effects on vaginal deliveries and maternal satisfaction.

➢ *Participants/Population & the Sample / Study Group*

The population of study is all the women (both those with and without FGM) who gave birth in 2022 year in a community hospital in Awka, Anambra State, Nigeria. A community hospital was more preferable because it gives a clear understanding of the cultural under tones, also make the results more generalizable and has more vaginal birth rates. The selected hospital is central and easily accessed by pregnant women and members of the community and researcher, thus it was the hospital of preference.

In generating the sample for this study, Cochran's (1963) formula was used. This is because the researcher is ignorant of the total population of the study. Hence, Cochran's (1963) formula is suitable for generating the sample from an unknown population size.

Hence:

$$n = \frac{Z^2 pq}{e^2}$$

Where:

e = the desired level of precision (i.e. the margin of error) = 0.05

p = the (estimated) proportion of an attribute present in the population = 0.9

q = 1 – p

= 1 – 0.9 = 0.1

Z = 1.96

$$n = \frac{(1.96)^2 \times 0.9 \times 0.1}{(0.05)^2}$$

$$n = \frac{3.8416 \times 0.9 \times 0.1}{0.0025}$$

$$n = \frac{0.345744}{0.0025}$$

$$n = 138.30$$

$$n = 138$$

Based on the fact that the study focuses on two groups of respondents, the sample size was equally split into two. The sample size for those with FGM was therefore 69 while the sample size for those without FGM was also 69.

- *Inclusion Criteria*

The criteria these nursing mothers met before being selected or recruited into the study include the following:

✓ Gave birth to a healthy baby
✓ Have singleton pregnancy
✓ Minimum primary school graduated
✓ Genitally mutilated
✓ Give birth in the selected community hospital
✓ Have no communication problem in English.

On the other hand, the inclusion criteria the babies met to be selected as participants of the study include:

✓ The babies must have a birth weight 2500 gram and over.
✓ Have no health problem and;
✓ Cephalic presentation.

➢ *Data Collection Tools*

The data collection tool, otherwise known as research instrument used for this study is a questionnaire. A questionnaire developed by the researcher, maternal satisfaction in normal and caesarean birth scale developed by Anikwe *et al.* (2022) and, Visual Analog Scale was used for this study.

➢ *Data Collection Procedures*

In collecting data from the study's participants, several key steps were observed. Firstly, ethical approval was obtained from the relevant ethical review board to ensure the study's adherence to ethical guidelines and protection of participants' rights. To recruit participants, potential participants who met the inclusion criteria as stated above were identified. Collaboration with local healthcare facilities facilitated the identification of potential participants.

Before inclusion in the study, informed consent was obtained from the participants. The purpose, procedures, potential risks, and benefits of the study were explained to them, and they were provided with written information. Participants were assured of the voluntary nature of their participation, confidentiality, and their right to withdraw from the study at any time. Data validation and quality control measures were implemented to ensure the accuracy and reliability of the collected data. This included conducting a pilot test of the questionnaire on about 15 participants to

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assess its clarity and appropriateness. Confidentiality and anonymity were maintained throughout the data collection process. Participants were assured that their responses would be kept anonymous, and their personal information would be protected. Data validation and quality control measures were implemented to ensure the accuracy and reliability of the collected data. This included conducting a pilot test of the questionnaire on about 15 participants to assess its clarity and appropriateness. Confidentiality and anonymity were maintained throughout the data collection process. Participants were assured that their responses would be kept anonymous, and their personal information would be protected.

➢ *Data Analysis Procedures*

The quantitative data collected was analysed using appropriate statistical techniques. Statistical tests such as frequencies, percentages, chi-squares tests, regression analysis, and correlation analysis were used to summarize the characteristics of the study population and variables of interest. Statistical significance was set at $p < 0.05$.

➢ *Reliability and Validity of Research Instrument*

The research instrument was subjected to both face validity and content validity tests where an expert researcher's opinion was sought. Subsequent to the expert researcher's approval, the questionnaire was deemed valid and administered to the study's participants. For reliability on the other hand, the research instrument was deemed reliable since it met the threshold of having a Cronbach alpha greater than 0.7 ($\alpha > 0.7$).

IV. DATA ANALYSIS & RESULTS

➢ *Socio-Demographic Characteristics of Respondents*

Table 1 Socio-Demographic Characteristics of the Women n=138

Variables	Frequency		Percent (%)
	Age		
18-22	57		41.2
23-27	21		15.3
28-32	33		23.8
33-37	20		14.3
38-42	7		5.4
	Residence*		
Amansea	4		2.9
Awka	115		83.3
Neni	4		2.9
Nibo	5		3.6
Aguleri, Ukpo, Umuawulu	6		4.3
Umuneri	4		2.9
	Area of Origin		
South-South	18		13.0
South-east	79		57.2
South-west	8		5.8
North	33		23.9
	Educational Level		
Primary	14		10.1
Secondary	34		24.6
Tertiary	61		44.2
Vocational	29		21.1
	Employment Status		
Unemployed	30		21.7
Student	36		26.1
Civil Servant	43		31.2
Self-employed	29		21.0
	Marital Status		
Single	29		21.0
Married	109		79.0
	Religious Affiliation		
Christian	109		79.0
Muslim	29		21.0
Total	**138**		**100.0**

*Aguleri, Ukpo, Umuawulu areas were combined due to the limited answers were given by the women.
Source: Field Survey (2022)

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov110

Table 1 presents the socio-demographic chrematistics of the respondents. Regarding the age of the respondents, 5.8% (71 respondents) are between the ages of 18-25 years, 10.1% (36 respondents) are between the ages of 26 -30 years, and 4.3% (31 respondents) are between the ages of 31 and 34 years.

Regarding the residence of the respondents, 2.2% (2 respondents) are in Aguleri, 2.9% (4 respondents) are in Amansea, 83.3% (115 respondents) are in Awka, 2.9% (2 respondents) are in Neni, 3.6% (5) are in Nibo, 1.4% (2) are in Ukpo, 0.7% (1 person) in Umuawulu and 2.9% (4) are in Umuneri.

Information relating to the area of origin of the respondents, 13% (18 respondents) are in South-South origin, 57.2% (79 respondents) are South-east origin, 5.8% (8 respondents) are in South-west origin and 23.9% (33) selected others. The information relating to the educational level of the respondents shows that 10.1% (14 respondents) have completed primary education, 24.6% (34 respondents) have completed secondary education, 44.2% (61 respondents) have completed tertiary education and 21% (29) have completed vocational education.

The information regarding the employment status of the respondents, 21.7% (30 respondents) are unemployed, 26.1% (36 respondents) are students, 31.2% (43 respondents) are civil servants and 21% (29 respondents) are self-employed.

Concerning the marital status of the respondents, 15.9% (22 respondents) are single, 79% (109 respondents) are married, and 5.1% (7 respondents) have divorced. Regarding the respondents' religious affiliation, 79% (109 respondents) are Christian, and 21% (29 respondents) are Muslim.

➢ *Findings According to First Research Question:*

- What are the Challenges/Difficulties Faced by the Women During and After Vaginal Delivery as a Result of Genital Mutilation?

Table 2 Challenges and Difficulties Faced by Women During and After Vaginal Delivery as a Result of FGM (n = 69)

Challenges/difficulties	Frequency (F)	Percentage (%)
Challenges during vaginal delivery		
1. Mode of delivery		
Spontaneous vaginal delivery (SVD)	12	17.4
Vacuum delivery	47	68.1
Forceps delivery	10	14.5
2. Episiotomy		
Women who underwent episiotomy	55	79.7
Women who did not undergo episiotomy	14	20.3
3. Perineal condition following delivery		
Intact perineum	3	4.3
Perineal bruising	23	33.3
First-degree perineal tear	28	40.6
Second-degree perineal tear	14	20.3
Third-degree perineal tear	1	1.4
4. Blood loss during labour and delivery		
Blood loss ≤500 ml	24	34.8
Blood loss ≥500 ml	45	65.2
5. Pain level during labour and delivery		
Mild pain (0–3)	19	27.5
Moderate pain (4–6)	24	34.8
Severe pain (7–10)	26	37.7
Challenges after vaginal delivery		
6. Duration of hospital stay		
24 hours	15	21.7
48 hours	30	43.5
72 hours	24	34.8
7. Pain level during the postpartum period		
Mild pain (0–3)	28	40.5
Moderate pain (4–6)	26	37.6
Severe pain (7–10)	20	29.0

Source: Field Survey (2022)

The findings presented in Table 2 reveal several challenges and difficulties experienced by women with Female Genital Mutilation (FGM) during and after vaginal delivery. During vaginal delivery, the findings show that assisted vaginal delivery was a major challenge among the respondents. Specifically, 47 (68.1%) women underwent vacuum delivery, while 10 (14.5%) had forceps delivery. Only 12 (17.4%) had spontaneous vaginal delivery. This

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov110

suggests that assisted vaginal delivery was common among the women in the study, indicating possible difficulties with the progress of labour and delivery.

Furthermore, episiotomy was another significant challenge, as 55 (79.7%) women underwent the procedure, compared with 14 (20.3%) who did not. This high proportion suggests that surgical enlargement of the vaginal opening or perineum was frequently required among the respondents. Regarding the condition of the perineum following delivery, the findings indicate that perineal injuries were common. Twenty-three (33.3%) women experienced perineal bruising, while 28 (40.6%) experienced first-degree tears and 14 (20.3%) experienced second-degree tears. Only three (4.3%) women had an intact perineum. These findings suggest that perineal trauma was an important challenge among women with FGM during vaginal delivery.

In addition, excessive blood loss was another complication identified. The findings show that 45 (65.2%) women experienced blood loss of 500 ml or more, compared with 24 (34.8%) who experienced blood loss of 500 ml or less. This indicates that a considerable proportion of the respondents experienced substantial blood loss during labour and delivery.

Pain during labour and childbirth was also a major challenge. Twenty-six (37.7%) women reported severe pain, 24 (34.8%) experienced moderate pain, while 19 (27.5%) experienced mild pain. This demonstrates that more than one-third of the respondents experienced severe pain during childbirth. After vaginal delivery, the findings further revealed challenges relating to the duration of hospitalisation and postpartum pain.

Regarding hospital stay, 30 (43.5%) women remained in the hospital for 48 hours, 24 (34.8%) stayed for 72 hours, while 15 (21.7%) were discharged after 24 hours. This suggests that some women required longer periods of hospital observation and care following delivery. Similarly, postpartum pain remained a concern among the respondents. Twenty-eight (40.5%) women experienced mild pain, 26 (37.6%) reported moderate pain, while 20 (29.0%) experienced severe pain. These findings indicate that pain and discomfort continued to affect some women after childbirth.

Overall, the findings demonstrate that women with FGM experienced several challenges during and after vaginal delivery, including a high frequency of assisted vaginal delivery, episiotomy, perineal trauma, substantial blood loss, labour pain, prolonged hospital stay and postpartum pain.

➢ *Findings: Second Research Question:*

- Is There a Relationship between Female Genital Mutilation and Outcomes of Birth?

Table 3 Comparisons Between Female Genital Mutilation, Vaginal Deliveries, Birth Outcome and Maternal Satisfaction

Variables		**FGM**	**Vaginal deliveries**	**Birth outcomes (Vaginal bleeding, tears, and episiotomy)**	**Maternal satisfaction**
Female genital mutilation	Pearson Correlation	1	-.587	-.280**	-.325*
	Sig. (2-tailed)		.011	.001	.000
	N	138	138	138	138
Vaginal deliveries	Pearson Correlation	-.587	1	.576**	-.239**
	Sig. (2-tailed)	.011		.000	.005
	N	138	138	138	138
Birth outcome (Vaginal bleeding, tears, and episiotomy)	Pearson Correlation	-.280**	.576**	1	-.066
	Sig. (2-tailed)	.001	.000		.445
	N	138	138	138	138
Maternal satisfaction	Pearson Correlation	-.325**	-.239**	-.066	1
	Sig. (2-tailed)	.000	.005	.445	
	N	138	138	138	138
* Correlation is significant at the 0.01 level (2-tailed). ** Correlation is highly significant at the 0.01 level (2-tailed)					

Source: Field Survey (2022)

Table 3 displays correlation coefficients and significance levels (two-tailed) between Female Genital Mutilation (FGM), vaginal deliveries, birth outcomes (including vaginal bleeding and tears), and maternal satisfaction.

For FGM and vaginal deliveries, there is a negative correlation of -0.587, which is statistically significant ($p = 0.011<0.05$). Vaginal deliveries, in turn, show a significant positive correlation with birth outcomes (0.576, $p = 0.000 < 0.05$) and a significant negative correlation with maternal satisfaction (-0.239, $p = 0.005 < 0.05$).

Regarding birth outcomes, FGM has a significant negative correlation with birth outcomes (-0.280, $p = 0.001 < 0.05$), suggesting that as the severity of FGM increases, there is a tendency for adverse birth outcomes.

In terms of maternal satisfaction, FGM exhibits a significant negative correlation (-0.325, $p < 0.000 < 0.05$),

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indicating that as the severity of FGM increases, maternal satisfaction tends to decrease.

These results suggest complex relationships between FGM, vaginal deliveries, birth outcomes, and maternal satisfaction, emphasizing the need for a nuanced understanding of how FGM impacts various aspects of childbirth and maternal experiences.

➢ *Findings: Third Research Question:*

- What are the Outcomes of Birth in the Women with FGM and without FGM ?

The outcomes of birth in the women with FGM can be shown in the table below:

Table 4 Outcomes of Birth in the Women with and without FGM n=138

	Women with FGM		**Women without FGM**	
Mode of Delivery	**F**	**%**	**F**	**%**
Spontaneous vaginal delivery (SVD)	12	17.4%	25	36.2%
Vacuum delivery	47	68.1%	31	44.9%
Forceps delivery	10	14.5%	13	18.8%
Duration of Second Stage of Labour (Minute)				
10	13	18.8%	15	21.7%
5	4	5.8%	3	4.3%
6	2	2.9%	3	4.3%
7	10	14.5%	6	8.7%
8	22	31.9%	10	14.5%
9	18	26.1%	11	15.9%
2	0	0.0%	3	4.3%
4	0	0.0%	3	4.3%
Having Episiotomy				
Yes	55	79.7%	52	75.4%
No	14	20.3%	17	24.6%
APGAR Scores of Babies				
4-7	25	36.2%	39	56.5%
8-10	44	63.8%	30	43.4%
Baby's Birth Weight				
1.0 – 2.4	0	0.0	16	23.1%
2.5 – 3.0	46	66.6%	29	41.9%
3.1 - 3.50	21	30.3%	22	31.9%
Over 3.50	2	2.9%	2	2.9%
Number of Pad				
1	1	1.4%	9	13.0%
2	44	63.8%	15	21.7%
3	6	8.7%	0	0.0%
4	18	26.1%	0	0.0%
5 and more	45	65.4%	0	0.0%
Duration of Hospital Stay				
24 hours	15	21.7%	24	34.8%
48 hours	30	43.5%	23	33.3%
72 hours	24	34.8%	22	31.9%
Pain Killer Taken Per 24 Hours				
Yes	63	91.3%	49	71.0%
No	6	8.7%	20	29.0%
Number of Pain Killer Taken*				
None	6	8.7%	17	24.6%
One	15	21.7%	0	0.0%
Two	20	29.0%	2	2.9%
Three	22	31.9%	5	7.2%
Four	17	24.6%	5	7.2%
Five	28	40.6%	1	1.4%
Total	69	100.0%	69	100.0%

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Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.115[a]	9	.038
Likelihood Ratio	9.787	9	.043
Linear-by-Linear Association	3.451	1	.021

Source: Field Survey (2022)

Table 4 presents a comprehensive comparison of various variables between women with FGM and women without FGM. Regarding mode of delivery, 17.4% of women with FGM had SVD while 36.2% of women without FGM had SVD. A higher percentage of women with FGM (68.1%) had vacuum deliveries compared to women without FGM (44.9%). For forceps deliveries, 14.5% of women with FGM and 18.8% of women without FGM had this type of delivery.

Regarding the duration of second stage of labour (minutes), there is variation in the duration of the second stage of labor among women with and without FGM. For women with FGM, the majority of them (31.9%) had a second stage of labor lasting 8 minutes. 26.1% had a second stage lasting 9 minutes, and 18.8% had it lasting 10 minutes.

For women without FGM, the majority (21.7%) had a second stage of labor lasting 10 minutes. 15.9% had a second stage lasting 9 minutes, and 14.5% had it lasting 8 minutes.

Concerning episiotomy, 79.7% of the women with FGM had episiotomies, while 75.4% of women without FGM also had episiotomies.

With regards to the APGAR scores, a lower percentage (36.2%) of babies born to women with FGM had APGAR scores of 4-7 when compared to babies born to women without FGM (56.5%). Conversely, a higher percentage of babies born to women with FGM had APGAR scores of 8-10 (63.8%) compared to babies born to women without FGM (43.4%).

Concerning baby's birth weight, a majority of babies born to women with FGM had birth weights in the range of 2.5-3.0 (66.6%), while a higher percentage of babies born to women without FGM had birth weights in the range of 2.5-3.0 (41.9%). For baby's weight of 1.0-2.4, most of the babies born to women without FGM had such birth weight (23.1%) while none of the babies born to women with FGM had such birth weight range. Regarding the birth weight range of 3.1-3.50, 30.3% of babies born to women with FGM had such birth weight range while 31.9% of babies born to women without FGM had such weight range.

Moreover, with respect to the number of pads changed during hospital stay, the table showed that the number of pads changed varied for women with and without FGM during their hospital stay. Among the women with FGM, 63.8% had their pads changed 2 times during their hospital stay. 26.1% had their pads changed 4 times, 8.7% had them changed 3 times. On the other hand, among women without FGM, 21.7% had their pads changed 2 times or more during their hospital stay. 13.0% had their pads changed once.

Furthermore, concerning the duration of hospital stay, among women with FGM, 21.7% of them had a hospital stay of 24 hours, 43.5% stayed for 48 hours, and another 34.8% stayed for 72 hours. On the other hand, among women without FGM, 34.8% had a hospital stay of 24 hours, 33.3% stayed for 48 hours, and 31.9% stayed for 72 hours.

With reference to pain killer taken per 24 hours, a higher percentage of women with FGM (91.3%) took painkillers per 24 hours compared to women without FGM (71.0%).

Concerning the number of pain killers taken, about 8.7% of women with FGM reported not taking any painkillers. 21.7% of women with FGM reported taking one painkiller, and 29.0% reported taking two. 31.9% took three painkillers, and 24.6% took four, and 40.6% took five painkillers. Among women without FGM, 24.6% reported not taking any painkillers. No women without FGM reported taking one painkiller. 2.9% took two painkillers, 7.2% took three and four each, while just 1.4% reported taking five painkillers.

Chi-square tests indicate statistically significant differences between women with and without FGM across these variables, highlighting the impact of FGM on various aspects of childbirth.

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➢ *Findings: Fourth Research Question:*

- What is maternal satisfaction level of the women with FGM and, without FGM?

Table 5 Maternal Satisfaction of Women with and without Women with FGM n=138

	Maternal Satisfaction of Women with FGM			**Maternal Satisfaction of Women without FGM**				
	Agree	**Disagree**	**Agree**	**Disagree**				
	F	%	F	%	F	%	F	%
I came through childbirth virtually unscathed	51	73.9	18	26.1	48	69.6	21	30.4
I thought my labour was excessively long	43	62.3	26	37.7	35	50.7	34	49.3
The delivery room staff encouraged me to make decisions about how I wanted my birth to progress	41	59.4	28	40.6	26	37.7	43	62.3
I felt very anxious during my labour and birth	46	66.6	23	33.4	44	63.8	25	36.2
I felt well supported by staff during my labour and birth	36	52.1	33	47.9	26	37.6	43	62.4
The staff communicated well with me during labour	31	44.9	38	55.1	26	37.7	43	62.3
I found giving birth a distressing experience	41	59.4	28	40.6	42	60.9	27	39.1
I felt out of control during my birth experience	46	66.6	23	33.4	42	60.8	27	39.2
I was not distressed at all during labour.	13	18.8	56	81.2	23	33.3	46	66.7
The delivery room was clean and hygienic.	26	37.6	43	62.4	32	46.3	37	53.7

Source: Field Survey (2022)

Table 5 gives a presentation of the maternal satisfaction of women with FGM and women without FGM. As seen in the table above, regarding the statement, 'I came through childbirth virtually unscathed', 73.9% of women with FGM agreed while 26.1% disagreed. On the other hand, 69.6% of women without FGM agreed while 30.4% disagreed.

Concerning the next statement, 'I thought my labour was excessively long', 62.3% of women with FGM agreed while, 37.7% disagreed. Regarding women without FGM, 50.7% agreed while 49.3% disagreed. In the aspect of 'The delivery room staff encouraged me to take decisions about how I wanted my birth to progress', 59.4% of women with FGM agreed and 40.6% disagreed while for women without FGM, 37.7% agreed while 62.3% disagreed.

With reference to the statement, 'I felt very anxious during my labour and birth', 66.6% of women with FGM agreed and 33.4% disagreed, while 63.8% of women without FGM agreed and 36.2% disagreed. Concerning the statement, 'I felt well supported by staff during my labour and birth, 52.1% agreed and 47.9% disagreed, while for women without FGM, 37.6% agreed and 62.4% disagreed.

Moreover, regarding the statement, 'The staff communicated well with me during labour', 44.9% of women with FGM agreed and 55.1% disagreed, while 37.7% of women without FGM agreed and 62.3% disagreed. Concerning the statement, 'I found giving birth a distressing experience', 59.4% of women with FGM agreed and 40.6% disagreed, while 60.9% of women without FGM agreed and 39.1% disagreed.

Furthermore, with respect to the statement, 'I felt out of control during my birth experience', 66.6% of women with FGM agreed and 33.4% disagreed, while 60.8% of women without FGM agreed, and 39.2% disagreed. With regards to the statement, 'I was not distressed at all during labour', 18.8% of women with FGM agreed and 81.2% disagreed, while 33.3% of women without FGM agreed, and 66.7% disagreed.

Finally, concerning the statement, 'The delivery room was clean and hygienic', 37.6% of women with FGM agreed and 62.4% disagreed, while for women without FGM, 46.3% agreed while 53.7% disagreed.

➢ *Findings: Fifth Research Question:*

- Is there any effect of FGM on maternal satisfaction?

Table 6 Model Summary Result of the Effects of FGM on Maternal Satisfaction

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.325[a]	.106	.099	.85577
a. Predictors: (Constant), female genital mutilation				

Table 6 presents the model summary of the effect of female genital mutilation on maternal satisfaction. The results show that female genital mutilation explains 10.6% influence on maternal satisfaction. There are other factors that also influence maternal satisfaction which was not part of this study other than the female genital mutilation.

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Table 7 ANOVA Result of the Effect of FGM on Maternal Satisfaction

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.794	1	11.794	16.104	.000[b]
	Residual	99.599	136	.732		
	Total	111.393	137			
a. Dependent Variable: maternal satisfaction						
b. Predictors: (Constant), female genital mutilation c. ANOVA test was applied to this table.						

Table 7 shows the ANOVA results on the effect of female genital mutilation on maternal satisfaction. The results for the ANOVA (f= 16.104; p = 0.00) show that the model has sufficient explanatory power to explain the causal relationship between FGM and maternal satisfaction.

Table 8 Regression Results of Effects of FGM on Maternal Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.320	.102		32.619	.000
	female genital mutilation	-.311	.078	-.325	-4.013	.000
a. Dependent Variable: marital satisfaction b. Regression analysis test was applied.						

Source: Field Survey (2022)

This table presents the regression results showing the effect of female genital mutilation on maternal satisfaction. The study found that female genital mutilation (β = -0.311, t = -4.013, P =0.000) had a negative and significant impact on maternal satisfaction. The results imply that when there is a partial or total removal of the external female genitalia, it contributes negatively to the sexual intercourse of the women.

V. DISCUSSION

The findings of this study revealed that FGM was significantly associated with the mode of delivery among the respondents. Women with Type II and Type III FGM predominantly underwent vacuum delivery, while women with Type I FGM experienced both spontaneous vaginal delivery (SVD) and vacuum delivery. All four women with Type IV FGM had spontaneous vaginal delivery. These findings suggest that the type of FGM may influence the management and progress of labour, sometimes necessitating assisted vaginal delivery. The findings are consistent with previous studies by Anikwe et al. (2019), Rabiepour and Ahmadi (2023), and Wuest et al. (2009).

Regarding the challenges and complications experienced during vaginal delivery, the study revealed significant associations between FGM and the occurrence of episiotomy and perineal injuries. Episiotomy was common among women with Type I, II and III FGM, with Type III recording the highest proportion. Furthermore, women experienced different degrees of perineal trauma, including bruises, first-degree, second-degree and third-degree tears. These findings indicate that women with FGM may encounter increased obstetric interventions and perineal complications during childbirth. The findings agree with previous studies by Ershragi et al. (2022), Idoko et al. (2022), and Anikwe et al. (2019), which identified episiotomy and perineal tears as important childbirth outcomes among women with FGM.

The study also identified increased blood loss and pain during labour and childbirth as major challenges faced by women with FGM. A considerable proportion of the respondents experienced blood loss of 500 ml or more, particularly women with Type II, III and IV FGM. Similarly, severe pain was reported by 37.7% of the respondents, while 34.8% experienced moderate pain. The findings further demonstrated a statistically significant relationship between the type of FGM and pain experienced during childbirth. These complications may be associated with anatomical alterations, scar tissue formation and tissue damage resulting from FGM. The findings are supported by Gebremichael et al. (2018), Idoko et al. (2022), Kaplan et al. (2011), and Bazzoun et al. (2021).

With respect to the experiences of women during and after childbirth, the study revealed that FGM was associated with adverse maternal and neonatal outcomes, including increased bleeding, perineal tears, episiotomy, higher frequency of assisted vaginal delivery and longer hospital stays. Most women with FGM remained in the hospital for 48 hours. Additionally, the findings showed that women with FGM were more likely to report prolonged labour, anxiety, distress and feelings of losing control during childbirth. Although many respondents perceived support from delivery-room staff positively, communication and the cleanliness of the delivery environment remained areas requiring improvement. These findings highlight the importance of providing individualised, respectful and supportive maternity care to women with FGM.

Furthermore, the comparison of maternal satisfaction between women with and without FGM revealed differences in their childbirth experiences. Although a higher proportion of women with FGM reported receiving encouragement from healthcare providers to participate in birth-related decisions and perceived staff support positively, they also reported higher levels of anxiety, loss of control and distress during

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov110

childbirth. In addition, a smaller proportion of women with FGM reported experiencing no distress during labour compared with women without FGM. These findings suggest that maternal satisfaction is influenced not only by physical birth outcomes but also by psychological well-being, communication, emotional support and involvement in decision-making. The findings are consistent with previous studies by Ahanonu and Victor (2014), Bayoumi and Boivin (2022), and Anikwe et al. (2019).

Finally, the study established that FGM had a statistically significant negative influence on maternal satisfaction, explaining approximately 10.6% of the variation in maternal satisfaction. The findings suggest that physical discomfort, obstetric complications, psychological distress, anxiety, reduced sense of control and challenges in communication with healthcare providers may contribute to reduced satisfaction among women with FGM. However, other factors, including the cost of care, competence of healthcare providers and quality of postnatal assessment, also influence maternal satisfaction. Overall, the study demonstrates that FGM has important implications for maternal health and childbirth experiences, highlighting the need for specialised obstetric care, effective pain management, appropriate psychological support and improved communication between healthcare providers and women with FGM.

VI. CONCLUSION AND RECOMMENDATIONS

➢ *Conclusion*

In conclusion, this comprehensive study has provided a nuanced understanding of the intricate relationship between FGM and various maternal outcomes during childbirth. The prevalence of vacuum delivery among women with and without FGM, particularly in response to factors like prolonged labour, foetal distress, or maternal exhaustion, underscores the significance of this assisted delivery method in the studied population. Statistically significant associations between different types of FGM and childbirth modes, episiotomy occurrences, and maternal satisfaction reveal the multifaceted impact of FGM on the dynamics of childbirth experiences. The findings highlight the challenges faced by women with a history of FGM, including increased risks of perineal injuries, blood loss, and varying pain levels during childbirth. These results underscore the urgent need for tailored obstetric care, heightened awareness, and comprehensive support systems to address the unique needs and challenges faced by women affected by FGM. This study contributes valuable insights for healthcare professionals and policymakers striving to enhance maternal care outcomes and the overall well-being of women who have undergone FGM.

➢ *Recommendations*

Based on the findings of the research study on "The Effects of Female Genital Mutilation on Vaginal Deliveries and Maternal Satisfaction in Awka, Anambra State, Nigeria," the following recommendations are proffered to address the challenges faced by women with FGM during childbirth and enhance their overall maternity care:

- Based on our study's findings, it was discovered that women with FGM could not deliver their babies spontaneously. As a result, there is need for assisted delivery mechanisms like vacuum assisted delivery to aid in the easy delivery of newborns and reduce the pain and difficulties the mothers experience.
- We also discovered FGM to be associated with perineal tears. Hence, it is recommended that healthcare practitioners implement individualized and culturally sensitive obstetric care plans that address the specific anatomical challenges associated with FGM, incorporating techniques such as controlled episiotomy and perineal support during childbirth.
- In our study, it is found out that women with FGM had severe bleeding during birth. Hence, healthcare providers should be trained to address and manage bleeding complications associated with FGM, emphasizing prompt identification, proper hemostasis techniques, and access to blood transfusion services when necessary.
- Also, our study revealed that FGM is negatively associated vaginal deliveries. As a result, this study recommends the need for healthcare professionals to implement targeted obstetric care strategies, including close monitoring and individualized birthing plans, for women with a history of FGM to mitigate the negative impact observed on vaginal deliveries, ensuring safer and more positive childbirth experiences.
- The study also discovered that women with FGM experienced poor maternal satisfaction. As a result, it is recommended that healthcare providers and policymakers should prioritize the development and implementation of specialized support programs and interventions aimed at enhancing the overall maternal satisfaction of women with a history of Female Genital Mutilation (FGM), addressing both physical and psychological aspects to ensure a more positive childbirth experience.

By implementing these recommendations, healthcare systems, policymakers, and communities can work together to improve maternity care for women with FGM, enhance their birthing experiences, and protect their reproductive health and rights. These efforts are essential in promoting safe and satisfactory childbirth experiences for all women, irrespective of their cultural backgrounds or experiences with FGM.

REFERENCES

[1]. Adelekan, B., Kareem, Y. O., Abubakar, Z., Bungudu, K., Aderemi, A., Goldson, E., Mueller, U., Yaya, S., & Fatusi, A. (2022). Female genital mutilation and sexual behaviour by marital status among a nationally representative sample of Nigerian women. *Reproductive Health, 19*(91).https://doi.org/10.1186/s12978-022-01379-w

[2]. Ahanonu, E. L., & Victor, O. (2014). Mothers' perceptions of female genital mutilation. *Health Education Research, 29*(4), 683-689.

[3]. Akinbiyi, T., Langston, E., & Percec, I. (2018). Female genital mutilation reconstruction for plastic surgeons: A call to arms. *PRS Global Open*, 1-6.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov110

[4]. Akpak, Y. K., & Yilmaz, I. (2022). The impact of female genital mutilation/cutting on obstetric outcomes and its management. *J Matern Fetal Neonatal Med*., *35*(5), 927-932.doi: 10.1080/14767058.2020.1734925

[5]. Al-Hussaini, T. K. (2023). Female genital cutting: Types, motives and perineal damage in laboring Egyptian women. *Med Princ Pract, 12*(2), 123–128.

[6]. American College of Obstetricians and Gynecologists (ACOG) (2019). ACOG practice bulletin no. 209: Obstetric analgesia and anesthesia. *Obstet Gynecol., 133*(3), e208-e225. doi: 10.1097/AOG.0000000000003132

[7]. Anikwe. C. C., Ejikeme, B. N., Obiechina, N. J., Okorochukwu, B. C., Obuna, J. A., Onu, F. A., & Ajah, L. O. (2019). Female genital mutilation and obstetric outcome: A cross-sectional comparative study in a tertiary hospital in Abakaliki South East Nigeria. *Eur J Obstet Gynecol Reprod Biol X*., 1, 100005. doi: 10.1016/j.eurox.2019.100005

[8]. Awotunde, T. A, Ani-Amponsah, M., Ajala, D. E., Ojo, S. A., Adeleke, T. O, Awotunde, O. T., & Olaolorun, A. D. (2023). Unveiling contextual influences of maternal satisfaction with labour care services in Nigeria: A qualitative inquiry. *Afr J Prim Health Care Fam Med., 15*(1), 1-7.

[9]. Bassey, A. E., Abonor, L. B., & Ejeje, J. A. (2017). The impact of female genital mutilation (FGM) on hemorrhage during child birth among rural women of Cross River State. *Information and Knowledge Management, 7*(11), 7-13.

[10]. Bayoumi, R. R., & Boivin, J. (2022). The impact of pharaonic female genital mutilation on sexuality: Two cases from Sudan highlighting the need for widespread dissemination of sexual and reproductive health education in Africa. *African Journal of Reproductive Health January*, *26*(1), 110-114.

[11]. Bazzoun, Y., Aerts, L., & Abdulcadir, J. (2021). Chronic vulvar pain after female genital mutilation/cutting: A retrospective study. *Sexual Medicine, 9*(5), 1-10.

[12]. Behrendt, A., & Moritz, S. (2005). Posttraumatic stress disorder and memory problems after female genital mutilation. *American Journal of Psychiatry*, *162*(5), 1000-1002.

[13]. Berg, R. C., & Denison, E. (2013). A tradition in transition: Factors perpetuating and hindering the continuance of female genital mutilation/cutting (FGM/C) summarized in a systematic review. *Health Care Women Int., 34*(10), 837-859.

[14]. Berg, R. C., & Underland, V. (2013). *Obstetric consequences of female genital mutilation/cutting (FGM/C)*. Retrieved from https://www.fhi.no/globalassets/dokumenterfiler/rapporter/2013/rapport_2013_06_obstetric_consequences_fgm_v6.pdf

[15]. Berg, R. C., Denison, E., & Fretheim, A. (2010). *Psychological, Social and Sexual Consequences of Female Genital Mutilation/Cutting (FGM/C): A systematic review of quantitative studies: Knowledge centre for the health services at the Norwegian Institute of Public Health (NIPH)*. https://www-1ncbi-1nlm-1nih-1gov-10013b5iw0011.han.medunigraz.at/books/NBK469815/

[16]. Berg, R. C., Underland, V., Odgaard-Jensen, J., Fretheim, A., & Vist, G. E. (2014). Effects of female genital cutting on physical health outcomes: a systematic review and meta-analysis. *BMJ Open, 4*(11), e006316.

[17]. Birge, Ö., Akbaş, M., Özbey, E. G., & Adıyeke, M. (2016). Clitoral keloids after female genital mutilation/cutting. *J Turk Soc Obstet Gynecol*., *13*(3), 154–157.

[18]. Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

[19]. Chawanpaiboon, S., Titapant, V., & Pooliam, J. (2023). Maternal complications and risk factors associated with assisted vaginal delivery. *BMC Pregnancy Childbirth, 23*, 756 https://doi.org/10.1186/s12884-023-06080-9

[20]. Dawson, A., Homer, C. S., Turkmani, S., Black, K., & Varol, N. (2015). A systematic review of doctors' experiences and needs to support the care of women with female genital mutilation. *Int J Gynaecol Obstet., 131*(1), 35-40.

[21]. Demis, A., Nigatu, R., Assefa, D., & Gedefaw, G. (2020). Maternal satisfaction with intrapartum nursing care and its associated factors among mothers who gave birth in public hospitals of North Wollo Zone, Northeast Ethiopia: Institution-based cross-sectional study. *Journal of Pregnancy, 2020*. doi: 10.1155/2020/8279372

[22]. Desai, N. M., & Tsukerman, A. (2023). *Vaginal delivery*. https://www.ncbi.nlm.nih.gov/books/NBK559197/

[23]. Desai, N. M., & Tsukerman, A. (2023). *Vaginal delivery*. https://www.ncbi.nlm.nih.gov/books/NBK559197/

[24]. Dunn, A. B., Jordan, S., Baker, B. J., & Carlson, N. S. (2017). The maternal infant microbiome: Considerations for labor and birth. *MCN Am J Matern Child Nurs., 42*(6), 318-325. doi: 10.1097/NMC.0000000000000373

[25]. Eshraghi, B., Hermansson, J., Berggren, V., & Marions, L. (2022). Risk of obstetric anal sphincter tear among primiparous women with a history of female genital mutilation, giving birth in Sweden. *PLoS ONE, 17*(12), 1-13. https://doi.org/10.1371/journal.pone.0279295

[26]. Evbuomwan, O., & Chowdhury, Y. S. (2022). *Physiology, cervical dilation*. https://www.ncbi.nlm.nih.gov/books/NBK557582/

[27]. Gebremicheal, K., Alemseged, F., Ewunetu, H., Tolossa, D., Ma'alin, A., Yewondwessen, M., & Melaku, S. (2018). Sequela of female genital mutilation on birth outcomes in Jijiga town, Ethiopian Somali region: A prospective cohort study. *BMC Pregnancy Childbirth*, *18*(1), 305. doi: 10.1186/s12884-018-1937-4.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov110

[28]. Geremew, T. T., & Azage, M., & Mengesha, E. W. (2021). Hotspots of female genital mutilation/cutting and associated factors among girls in Ethiopia: a spatial and multilevel analysis. *BMC Public Health, 21*(186), 1-18.

[29]. González-Timoneda, A., González-Timoneda, M., Cano-Sánchez, A., & Ruiz-Ros V. (2021). Female genital mutilation consequences and healthcare received among migrant women: a phenomenological qualitative study. *Int J Environ Res Public Health, 18*(13), 7195. doi: 10.3390/ijerph18137195.

[30]. Goordyal, D., Anderson, J., Alazmani, A., & Culmer, P. (2021). An engineering perspective of vacuum assisted delivery devices in obstetrics: A review. *Proc Inst Mech Eng H.,235*(1), 3-16.

[31]. Haines, H. M., Rubertsson, C., Pallant, J. F., & Hildingsson, I. (2012). The influence of women's fear, attitudes and beliefs of childbirth on mode and experience of birth. *BMC Pregnancy Childbirth, 12*(55). https://doi.org/10.1186/1471-2393-12-55

[32]. Huang, J., Zang, Y., Ren, L. H., Li, F. J., & Lu, H. (2019). A review and comparison of common maternal positions during the second-stage of labor. *International Journal of Nursing Science, 6*(4), 460-467. doi: 10.1016/j.ijnss.2019.06.007.

[33]. Iavazzo, C., Sardi, T. A., & Gkegkes, I. D. (2013). Female genital mutilation and infections: A systematic review of the clinical evidence. *Arch Gynecol Obstet. 287*(6), 1137–1149.

[34]. Idoko, P. *et al*. (2022). Obstetric outcome of female genital mutilation in the Gambia: An observational study. *Afr Health Sci., 22*(4), 386-395.

[35]. Ikeaba, N. C., Balogun, M. R., Olubodun, T., & Okafor, I. (2022). Harmful traditional practices among market women in Ojuwoye market Mushin, South West, Nigeria. *Annals of African Medicine, 21*(3), 208-216.

[36]. Ismail, S. A., et al. (2017). Effect of female genital mutilation/cutting; types I and II on sexual function: Case-controlled study. *Reprod Health, 14*, 108. https://doi.org/10.1186/s12978-017-0371-9

[37]. Jafari, E., Mohebbi, P., & Mazloomzadeh, S. (2017). Factors related to women's childbirth satisfaction in physiologic and routine childbirth groups. *Iran J Nurs Midwifery Res*., *22*(3), 219-224. doi: 10.4103/1735-9066.208161

[38]. Johansen, R. E., Diop, N. J., Laverack, G., & Leye, E. (2013). What works and what does not: A discussion of popular approaches for the abandonment of female genital mutilation. *Obstet Gynecol Int*. 348248. doi: 10.1155/2013/348248

[39]. Johnson-Mallard, V., Kostas-Polston, E. A., Woods, N. F., Simmonds, K. E., Alexander, I. M., & Taylor, D. (2017). Unintended pregnancy: A framework for prevention and options for midlife women in the US. *Women's Midlife Health, 3*(8). https://doi.org/10.1186/s40695-017-0027-5

[40]. Kaplan, A., Hechavarría, S., Martín, M., & Bonhoure, I. (2011). Health consequences of female genital mutilation/cutting in the Gambia, evidence into action. *Reprod Health, 8*, 1-8. https://doi.org/10.1186/1742-4755-8-26

[41]. Kerubo, K. R. (2010). *Female genital mutilation: Effects on women and young girls*. Retrieved from https://core.ac.uk/download/pdf/38021037.pdf

[42]. Kimani, S., Muteshi-Stratchan, J., & Njue, C. (2016). *Health impacts of female genital mutilation/cutting: A synthesis of the evidence*. Retrieved from https://knowledgecommons.popcouncil.org/cgi/viewcontent.cgi?article=1636&context=departments_sbsr-rh

[43]. Konwea, P. E., & Fabamise, O. M. (2020). Religion and female genital mutilation as correlates of maternal mortality in Ekiti State. *Journal of Health, Medicine, and Nursing, 76*, 63-67.

[44]. Kulaksiz, D., Nor, I. A., Erin, R., Erin, K. B., & Toprak, T. (2022). A prospective cohort study of the relationship of female genital mutilation with birth outcomes in Somalia. *BMC Women's Health, 22*(202), 1-6.

[45]. Lurie, J. M., Weidman, A., Huynh, S., Delgado, D., Easthausen, I., & Kaur, G. (2020). Painful gynecologic and obstetric complications of female genital mutilation/cutting: A systematic review and meta-analysis. *PLOS Med., 17*(3), e1003088.

[46]. Mahmoud, M. I. (2016). Effect of female genital mutilation on female sexual function, Alexandria, Egypt. *Alexandria Journal of Medicine, 52*(1), 55-59.

[47]. Matanda, D. J., Sripad, P., & Ndwiga, C. (2019). Is there a relationship between female genital mutilation/cutting and fistula? A statistical analysis using cross-sectional data from demographic and health surveys in 10 sub-Saharan Africa countries. *BMJ Open. 9*(7), e025355.

[48]. Melo, J. K., Davim, R. M., & Silva, R. A. (2015). Advantages and disadvantages of labour and normal cesarean: View puerperal. *Revista de Pesquisa: Cuidado é Fundamental Online, 7*(4), 3197-3205. https:// doi.org/10.9789/2175-5361.2015.v7i4.3197-3205

[49]. Mocumbi, S., Högberg, U., Lampa, E., Sacoor, C., Vala, A., Bergstrom, A., von Dadelszen, P., Munguambe, K., Hanson, C., Sevene, E., & the CLIP working group (2019). Mothers' satisfaction with care during facility-based childbirth: A cross-sectional survey in southern Mozambique. *BMC Pregnancy Childbirth, 19*(303) https://doi.org/10.1186/s12884-019-2449-6

[50]. Mpinga, E. K., Macias, A., Hasselgard-Rowe, J., Kandala, N. B., Félicien, T. K., Verloo, H., ... & Chastonay, P. (2016). Female genital mutilation: A systematic review of research on its economic and social impacts across four decades. *Global Health Action, 9*(1), 31489.

[51]. Nolens, B., Akker, T. V., Lule, J., Twinomuhangi, S., Roosmalen, J. V., & Byamugisha, J. (2019). Women's recommendations: vacuum extraction or caesarean section for prolonged second stage of labour, a prospective cohort study in Uganda. *Tropical Medicine and International Health, 24*(5), 553-562.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov110

[52]. Nonterah, E. A. *et al*. (2020). Prevalence and adverse obstetric outcomes of female genital mutilation among women in rural Northern Ghana. *European Journal of Public Health, 30*(3), 601-607.

[53]. O'Neill, S., & Pallitto, C. (2021). The consequences of female genital mutilation on psycho-social well-being: A systematic review of qualitative research. *Qualitative Health Research, 31*(9), 1738-1750.

[54]. Okonofua, F., Ogu, R., Agholor, K., Okike, O., Abdus-salam, Gana, M., Randawa, A., Abe, E., Durodola, A., Galandachi, H., The WHARC WHO FMOH MNCH Implementation Research Study Team (2017). Qualitative assessment of women's satisfaction with maternal health care in referral hospitals in Nigeria. *Reproductive Health, 14*(44). https://doi.org/10.1186/s12978-017-0305-6

[55]. Omona, K. (2021). *Midwifery*. IntechOpen

[56]. Pashaei, T., Ponnet, K., Moeeni, M., Khazaee-pool, M., & Majlessi, F. (2016). Daughters at risk of female genital mutilation: Examining the determinants of mothers' intentions to allow their daughters to undergo female genital mutilation. *PLoS One, 11*(3), e0151630. doi: 10.1371/journal.pone.0151630.

[57]. Pathirana, J., Muñoz, F. M., Abbing-Karahagopian, V., Bhat, N., Harris, T., Kapoor, A., Keene, D. L., Mangili, A., Padula, M. A., Pande, S. L., Pool, V., Pourmalek, F., Varricchio, F., Kochhar, S., Cutland, C. L., & Brighton Collaboration Neonatal Death Working Group (2016). Neonatal death: Case definition & guidelines for data collection, analysis, and presentation of immunization safety data. *Vaccine, 34*(49), 6027-6037. doi: 10.1016/j.vaccine.2016.03.040.

[58]. Pérez-López, F. R., Ornat, L., López-Baena, M. T., Pérez-Roncero, G. R., Tajada-Duaso, M. C., & Chedrau, P. (2020). Association of female genital mutilation and female sexual dysfunction: a systematic review and meta-analysis. *Eur J Obstet Gynecol Reprod Biol., 254*, 236–244.

[59]. Rabiepour, S., & Ahmadi, Z. (2023). The effect of female circumcision on maternal and neonatal outcomes after childbirth: A cohort study. *BMC Pregnancy and Childbirth, 23*(46), https://doi.org/10.1186/s12884-022-05316-4

[60]. Ramos, S. Z., Waring, M. E., Leung, K., Amir, N. S., Bannon, A. L., & Moore, T. A. (2017). Attempted and successful vacuum-assisted vaginal delivery by prepregnancy body mass index. *Obstet Gynecol., 129*(2), 311-320.

[61]. Rodriguez, M. I., Seuc, A., Say, L., & Hindin, M. J. (2016). Episiotomy and obstetric outcomes among women living with type 3 female genital mutilation: A secondary analysis, *Reproductive Health, 13*, 131-135. doi: 10.1186/s12978-016-0242-9

[62]. Rowe, R. E., Fitzpatrick, R., Hollowell, J., & Kurinczuk, J. J. (2012). Transfers of women planning birth in midwifery units: data from the birthplace prospective cohort study. *BJOG, 119*(9), 1081-1090. doi:10.1111/j.1471-0528.2012.03414.x

[63]. Ruttert, S. (2021). *Traditions of female genital mutilation in Nigeria*. https://borgenproject.org/female-genital-mutilation-in-nigeria/

[64]. Sawyer, A., Ayers, S., Abbott, J., Gyte, G., Rabe, H., & Duley, L. (2013). Measures of satisfaction with care during labour and birth: a comparative review. *BMC Pregnancy Childbirth, 13*(108). https://doi.org/10.1186/1471-2393-13-108

[65]. Seidu, A. A. *et al.* (2022). Female genital mutilation and skilled birth attendance among women in sub-Saharan Africa. *BMC Women's Health, 22*, 26-30.

[66]. Shamoradifar, Z., Asghari-Jafarabadi, M., Nourizadeh, R., Mehrabi, E., Areshtanab, H. N., & Shaigan, H. (2022). The impact of effective communication-based care on the childbirth experience and satisfaction among primiparous women: An experimental study. *J Egypt Public Health Assoc*., *97*(1), 12. doi: 10.1186/s42506-022-00108-2.

[67]. Shiferaw, D., & Toma, S. (2017). The Prevalence of Vacuum Vaginal Delivery and It's Indications and Outcome among Mothers Who Delivered in Mizan-Tepi University Teaching Hospital, Southwest Ethiopia, 2017. Retrospective CrossSectional Study. *Journal of Gynecology and Women's Health, 6*(2), 1-5.

[68]. Silesh, M., & Lemma, T. (2021). Maternal satisfaction with intrapartum care and associated factors among postpartum women at public hospitals of North Shoa Zone Ethiopia. *PLoS One, 16*(12), e0260710. doi: 10.1371/journal.pone.0260710

[69]. Srivastava, A., Avan, B. I., Rajbangshi, P., Bhattacharyya, S. (2015). Determinants of women's satisfaction with maternal health care: A review of literature from developing countries. *BMC Pregnancy and Childbirth, 15*(97). https://doi.org/10.1186/s12884-015-0525-0

[70]. Strand, P. S., Maxwell, P., & Trang, J. (2021). *Daughter circumcision and maternal life satisfaction: A cultural moderation effect revealed across two studies*. Retrieved from https://medrxiv.org/content/10.1101/2023.10.11.23296885v1.full.pdf

[71]. Suleiman, I. R. *et al*. (2021). Trend in female genital mutilation and its associated adverse birth outcomes: A 10-year retrospective birth registry study in Northern Tanzania. *PLos One, 16*(1), 1-5.

[72]. Suleiman, I. R., Maro, E., Shayo, B. C., Alloyce, J. P., Masenga, G., Mahande, M. J., Mchome, B. (2021). Trend in female genital mutilation and its associated adverse birth outcomes: A 10-year retrospective birth registry study in Northern Tanzania. *PLoS One, 16*(1), e0244888. doi: 10.1371/journal.pone.0244888

[73]. Swami, V., Frederick, D. A., Aavik, T., Alcalay, L., Allik, J., Anderson, D., ... & Dijkstra, P. (2010). The attractive female body weight and female body dissatisfaction in 26 countries across 10 world regions: Results of the international body project I. *Personality and Social Psychology Bulletin, 36*(3), 309-325.

[74]. Sylla, F., Moreau, C., & Andro, A. (2020). A systematic review and meta-analysis of the consequences of female genital mutilation on maternal

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov110

and perinatal health outcomes in European and African countries. *BMJ Global Health, 5*, 1-14.

[75]. Sylla, F., Moreau, C., & Andro, A. (2020). A systematic review and meta-analysis of the consequences of female genital mutilation on maternal and perinatal health outcomes in European and African countries. *BMJ Global Health, 5*, 1-14.

[76]. Taumberger, N., Gruber, T., Edler, K., Trutnovsky, G., Bracic, T., Semrl, N., Schütz, A.M., Eisnecker, K., Tamussino, K., & Fluhr, H. (2023). Female genital mutilation/cutting incidence, diagnostic capacities, and obstetric outcomes among migrant women: a single-center retrospective analysis in a 10-year birth cohort in Austria. *BMC Public Health, 23*(68), 1-9.

[77]. Thomson, G., Feeley, C., Moran, V. H., Downe, S., & Oladapo, O. T. (2019). Women's experiences of pharmacological and non-pharmacological pain relief methods for labour and childbirth: A qualitative systematic review. *Reproductive Health, 16*(1), 71. doi: 10.1186/s12978-019-0735-4.

[78]. Thornicroft, G., Mehta, N., Clement, S., Evans-Lacko, S., Doherty, M., Rose, D., Koschorke, M., Shidhaye, R., O'Reilly, C., & Henderson, C. (2016). Evidence for effective interventions to reduce mental-health-related stigma and discrimination. *The Lancet, 387*(10023), 1123-1132.

[79]. United Nations Human Rights (2020). *Information series on sexual and reproductive health and rights: Maternal mortality and morbidity*. Retrieved from https://www.ohchr.org/sites/default/files/INFO_MMM_WEB.pdf

[80]. WHO (2008). Effects of female genital mutilation on childbirth in Africa. Retrieved from https://www.jstor.org/stable/resrep28081

[81]. World Health Organization (2018). *Care of girls and women living with female genital mutilation: a clinical handbook*. https://www.who.int/teams/sexual-and-reproductive-health-and-research-(srh)/areas-of-work/female-genital-mutilation/types-of-female-genital-mutilation.

[82]. World Health Organization (2023). *Female genital mutilation (fact sheet)*. https://www.who.int/news-room/fact-sheets/detail/female-genital-mutilation.

[83]. World Health Organization. (2020). *Sexual and reproductive health and research*. https://www.who.int/teams/sexual-and-reproductive-health-and-research/key-areas-of-work/sexual-health/defining-sexual-health

[84]. Yosef, Y., Borsamo, A., & Abeje, S. (2023). Assessment of complications associated with female genital cutting among postnatal women in Chuko Primary Hospital, Sidama region, Southern Ethiopia. *SAGE Open Medicine, 11*, 1-7. doi: 10.1177/20503121221144243.

[85]. Yosef, Y., Borsamo, A., & Abeje, S. (2023). Assessment of complications associated with female genital cutting among postnatal women in Chuko Primary Hospital, Sidama region, Southern Ethiopia. *SAGE Open Med., 11*, 1-12.