ASSOCIATION BETWEEN PERINEAL BIRTH TRAUMA AND POSTPARTUM SEXUAL FUNCTION AMONG WOMEN IN KAPENGURIA COUNTY REFERRAL HOSPITAL, WEST POKOT, KENYA

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR AWARD OF A MASTER OF SCIENCE IN NURSING DEGREE IN MATERNAL NEONATAL HEALTH

DECLARATION

I hereby declare that this thesis is my original work and has never been presented either in whole or in part to any other examining body for the award of certificates, diploma or degree in any other learning institution

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I dedicate this research thesis to daughter Abigail, you are the North on my compass.

ABSTRACT

Introduction: Childbirth is associated with a number of changes to a mother's overall health and well-being. Among the adverse experiences that mothers go through in childbirth is perineal birth trauma. Perineal birth trauma involves any type of damage to the female genitalia during labour, which can occur spontaneously or iatrogenically. This is a major attribute of sexual dysfunction and predisposes the women to concerns like sexual dissatisfaction, pain and affects their social and emotional wellbeing. This study was focused on the sexual experience of women who sustain perineal birth trauma.

Objective: To determine the prevalence of perineal birth trauma, to describe factors associated with perineal birth trauma, to describe the sexual function of women who experience perineal birth trauma and to describe the association between perineal birth trauma and sexual function.

Methods: The study was conducted in Kapenguria County Referral Hospital in West Pokot County in western Kenya. 304 women were consecutively sampled to participate in the study which employed a cross-sectional study design. A questionnaire comprising the Female Sexual Function Index was administered to the respondents; Descriptive statistics were used to describe the prevalence of perineal birth trauma in percentages while the association between categorical variables was assessed using chi square. Continuous variables were compared using independent samples t-test with a level of significance of p-value < .05.

Results: The study showed that the prevalence of perineal trauma in Kapenguria County referral Hospital is 205(67.4%). Perineal Birth trauma was statistically significantly associated with age χ^2 (3, N = 304) = 14.835, p =.002, marital status χ^2 (4, N = 304) = 14.440, p =.006, education level χ^2 (3, N = 304) = 12.341, p = .006, occupation χ^2 (2, N = 304) = 7.451, p =.024, weight of the child χ^2(2, N = 304) = 6.438, p =.04 and parity χ^2(6, N = 304) = 28.012, p =.000). The study further revealed that perineal trauma experience is statistically significantly associated with sexual satisfaction χ^2(1, N = 304) = 6.556, p =.01 and sexual pain χ^2(1, N = 304) = 5.322, p =.021. There was a significant difference between those women who experienced perineal birth trauma and those who did not in terms of sexual function where satisfaction t(302) =1.6780, p =.01 and pain t(302) = 1.581, p =.021

Conclusions: Perineal trauma was highly prevalent in labour and delivery, and almost half the cases were due to episiotomies. Factors significantly associated with Perineal Birth Trauma included age, marital status, education level, occupation, weight of the child and parity. Among the women who experienced perineal birth trauma, there was significant sexual pain and low sexual satisfaction. Compared to the women who did not experience perineal birth trauma, those who experienced perineal birth trauma reported significantly low sexual satisfaction and low sexual pain.

Recommendations: The study recommends that health care workers limit perineal trauma during delivery for ease of resumption of optimum sexual intercourse after childbirth. The County Reproductive Health Department to train health care workers on minimizing factors associated with Perineal Birth Trauma. The study recommends that programs such as extended postpartum counselling for women who experience Perineal Birth Trauma should be included in the targeted postpartum care policy.

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ABBREVIATIONS AND ACRONYMS

FDA	Food and Drug Administration
FGM/C	Female Genital Mutilation /Cutting
HSDD	Hypoactive Sexual Desire Disorder
MCH	Maternal Child Health
PTSD	Post-Traumatic Stress Disorder
PPD	Post – Partum Depression

OPERATIONAL DEFINITIONS

Arousal is typically physiological excitement during or in anticipation of sexual activity

Assisted delivery is a type of instrumental delivery (vacuum or forceps) to aid in delivery of a baby

Desire is a state of interest in sexual objects or activities, or as a wish, or drive to seek out sexual objects or to engage in sexual activity

Emancipated minor is a status conferred upon persons who have not yet attained the age of legal competency as defined by state law, but who are entitled to treatment as if they had by virtue of assuming adult responsibilities, such as self-support, marriage or procreation

Lubrication is essential vaginal wetness created by glands in the vagina and cervix to prevent injury, tears during penetration.

Mature minor is Minors 15 years of age or older; living separate and apart from their parents or guardian, whether with or without the consent of a parent or guardian and regardless of the duration of the separate residence, and managing their own financial affairs, regardless of the source of income

Multipara is A woman who has had two or more pregnancies resulting in potentially viable offspring

Orgasm is a feeling of uncontainable pleasure accompanied by an act of ejaculation or a discharge of accumulated erotic tension.

Perineal Birth trauma is any damage to the area between the vagina and the anus during the birth of the baby.

Postpartum is the time after childbirth. The period begins immediately after childbirth as the mother's body, including hormone levels and uterus size, returns to a non-pregnant state.

Prevalence is the proportion of a particular population found to be affected by a medical condition at a specific time.

Satisfaction is the positive aspects of individual sexual experience, such as pleasure, positive feelings, arousal, sexual openness, and orgasm

Sexual dysfunction is Persistent, recurrent problems with sexual response, desire, orgasm or pain that prevent a woman from experiencing sexual satisfaction

Sexual function is how the body reacts in different stages of the sexual response cycle, or as a result of sexual dysfunction.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

It has been asserted that Childbirth is associated with a number of changes to mother's overall health and wellbeing. This is largely attributed to the fact that it is associated with changes in the overall physical, emotional and psychological wellbeing of the mother (Crookall *et al.,* 2018). Child birth is associated with perineal trauma which is a major attribute of sexual dysfunction thus predisposing the women to a number of concerns like sexual dissatisfaction, pain and affects their social and emotional wellbeing (Salvatore et al., 2016). According to (Kingsberg & Woodard, 2015) the prevalence of sexual dysfunction among women mostly occurs during their midlife with lack of sexual desire being most common.

According to (Sultan, 2018), perineal trauma affects 8% of women during parturition and it is reported that nearly 50% requires suturing. The author mentions that practicing clinicians mainly in obstetrics should be trained in the best diagnostic methods and classification of perineal trauma. Consequences of these injuries may go back to the sexual functioning of the mother after delivery which might end up in family issues between the husband and wife. All these happen after delivery putting the natural process in to association of disadvantages despite carrying many advantages and blessings of a child to the family**.**

While analyzing literature from various studies (Aguiar, *et al.* 2019) re-counted that the perineal trauma prevalence among low-income and middle-income women in Africa and Asia is 46%. This suggest that in every 100 women in middle and low-income countries

there could be approximately 46 of them who have suffered from perineal trauma after delivery. The study further indicated that the reporting of perineal trauma in low and middle-income countries is poor and could be even higher.

In the United Kingdom alone 90% of women who have vaginal birth experience some degree of perineal trauma. A study noted that this type of trauma is rising in developed countries. As such it is suggested that awareness is created in midwives and other health care professionals working within the maternity services on recognition and support of women who are at an increased risk of sustaining perineal trauma during birth (Ridley, 2017).

Sexual functioning is undoubtedly a very important part of adult life. There are many conflicting results on the sexual functioning mostly after normal delivery or in comparison with Cesarean section. In a study done by (Amiri *et al.* 2015) to ascertain whether there is a significant difference in sexual functioning of women who underwent cesarean delivery and those who delivered normally that is normal vaginal delivery, even though there was no statistically significant difference found between the two groups the average score for female sexual function significantly went down after pregnancy time. Therefore, it is concluded that delivery influences significantly the sexual functioning of a woman and thus it requires further investigation to find out the exact cause of low sexual function after delivery (Amiri, *et al.* 2015).

According to (Leal *et al.*, 2014), episiotomy has proven to be a very beneficial procedure in preventing extensive tears during delivery. This procedure causes perineal trauma albeit surgical, the effects of which can last for some months or years after delivery. The same

study measured the female sexual function index and found out that those women with episiotomy, presented higher levels of pain and lower sexual satisfaction suggesting these to be direct consequences of this procedure.

In a similar study done in Melbourne Australia, a cohort of women was recruited to participate in a study on the effect of perineal trauma on sexual functioning among women who underwent cesarean delivery and normal delivery. Among these women 50% had an episiotomy and 6% had first and the third-degree tears. The arousal domain (on the Female Sexual Function Index) in a woman who had perineal injury during delivery was lower compromising their sexual function. In this regard then it means that 6 months after perineal tears and injury during delivery women still experience lower arousal and thus lower sexual function index (Souza *et al.*, 2015).

On the other hand, (Rathfisch *et al.*, 2010), reported in a study on the extent of postpartum sexual dysfunction associated with perineal trauma. In their study women with intact perineum and those who had episode of second- and third-degree tear were compared to find out the levels of libido, orgasm and sexual satisfaction as well as pain during intercourse. The study found out that women with intact perineum compared with second-degree tear had lower levels of libido orgasm and satisfaction as well as more pain during the process reporting that there was a reduced desire and reduce lubrication in addition to frequency of orgasm and dyspareunia.

In Africa there are a number of factors which may lead to postpartum sexual dysfunction due to perineal trauma. Firstly, culture at times forces women to resume sexual relations before adequate healing which only increases the pain and thereby limits the pleasure in

the activity (Owonikoko *et al.*, 2017). Additionally, a study by (Atwoli *et al.,* 2015) revealed that perineal trauma and post-traumatic stress disorder (a risk factor for sexual dysfunction) are more prevalent in low income countries as compared to high income countries. Another study revealed that women in Africa are exposed to a high level of sexual trauma and post-traumatic stress disorder (PTSD) which in turn interferes with their emotional and physical experience of the activity (Mhlongo *et al.,* 2018).

In Kenya, few studies have focused on the role of perineal trauma on sexual dysfunction among women. However, one study conducted in Nakuru, Kenya revealed that women who have undergone female genital mutilation /cutting (FGM/C) experience a number of complication which interfere with the sexual experience after birth (Esho *et al.,* 2017). Among the Pokot FGM is seen as a rite of passage, confirming a girl's progression to womanhood and is usually carried out on girls between 9 to 15 years old. It is closely linked to early forced marriage with girls often being forcibly married to older men soon after FGM. This painful and traumatic procedure has long and short-term effects. Many girls and women die from the procedure either due to infection brought about by the unsanitary tools being used or because of a tremendous loss of blood. Life-long problems also include chronic pain, painful sexual relations obstructed labour in child birth and psychological trauma. FGM is not reversible, has no health advantages and is not required by any religion. Much of Pokot County is remote and isolated with high poverty levels and FGM and child marriage is a source of getting income and wealth. Therefore, against this backdrop of poverty and limited choices, many families continue these practices as their only means for the family to get wealth. Without being cut, a girl is not considered a woman and she may not be married or attend public function within the community. Women who have

undergone FGM faces obstructed labour in child birth and a myriad of postpartum complications. This study is aimed at shedding lighter on the sexual experience of women who experience perineal trauma during child birth in Kapenguria.

1.2 Problem Statement

According to studies by (Persico *et al.* 2013), there is under reporting on the association between perineal birth trauma and postpartum sexual functioning especially among women in Africa. Even though there are some studies reporting the same, little attention has been paid to African countries. A study by (Atwoli *et al.,* 2015) found that perineal trauma and post-traumatic stress disorder (a risk factor for sexual dysfunction) are more prevalent in low income countries as compared to high income countries. Another study revealed that women are exposed to a high level of sexual trauma and post-traumatic stress disorder (PTSD) which in turn interferes with their emotional and physical experience of the sexual activity resulting to poor sexual or low sexual function (Mhlongo *et al.*, 2018). The study concluded that the mode of delivery has no significant effect over short and long term postpartum sexual function. However, it found that perineal trauma was strongly associated with postpartum sexual dysfunction. Another similar study conducted recently in Australia emphasized that more studies should be conducted on this topic to bring more understanding and shading of light (Gutzeit, Levy, & Lowenstein, 2020).

Anecdotal observations revealed that a majority of women in Kapenguria County Referral Hospital experience perineal birth trauma. However, there is no literature describing the experience of postpartum sexual function. Therefore, the problem of the present study was to find out specifically whether women who experience perineal birth trauma also

experience postpartum sexual function challenges in terms of desire, arousal, lubrication, orgasm, satisfaction and pain.

1.3 Justification of the Study

Sexuality is a vital aspect of healthy adult life. When women are affected in their sexual function, they may have other consequences According to (Basson & Gilks, 2018) women living with psychiatric illness, despite their frequent sexual difficulties, still consider sexuality to be an important aspect of their quality of life. The study further links poor sexual function to increased incidence of depression and trait anxiety.

Despite this, it is noted that clinicians do not routinely inquire about their patients' sexual concerns, particularly in the context of postpartum wellbeing, as such discussions are considered taboo (Pardell – Dominguez, 2021). This predisposes women to sexual dysfunction and an inability to address arising challenges. Noting there are limited studies in Kenya which provide conclusive evidence on the sexual function of women in relation to perineal birth trauma, and consequences of sexual dysfunction on women and their families poses an immediate need for study for a better solution to the immense challenges squarely on women shoulders

This study attempts to find the association between perineal birth trauma and postpartum sexual function thus forming a rudimentary foundation for establishment of preventive measures of sexual dysfunction among women who deliver vaginally (Mccool-Myers, *et al.* 2018).

1.4 Objectives of the Study

1.4.1 Main Objective

The main objective of the study was to investigate the association between perineal birth trauma and postpartum sexual function among women in Kapenguria County Referral Hospital, West Pokot, Kenya.

1.4.2 Specific Objectives

1. To determine the prevalence of perineal birth trauma among postpartum women in Kapenguria County Referral Hospital.
2. To describe factors associated with perineal birth trauma among women in Kapenguria County Referral Hospital.
3. To describe the sexual function of women who experience perineal birth trauma in Kapenguria County Referral Hospital.
4. To describe the association between perineal birth trauma and sexual function among postpartum women in Kapenguria County Referral Hospital

1.5 Research Questions

1. What is the prevalence of perineal birth trauma among postpartum women in Kapenguria County Referral Hospital?
2. What are the factors associated with perineal birth trauma among women in Kapenguria County Referral Hospital?
3. What is the sexual function of women who experience perineal birth trauma in Kapenguria County Referral Hospital?

4. What is the association between perineal birth trauma and sexual function among postpartum women in Kapenguria County Referral Hospital?

1.6 Significance of the Study

The present study will be of importance to the following stakeholders: The Ministry of Health and healthcare providers. It will enable the understanding of the association between perineal birth trauma and postpartum sexual functioning of women whom they are dealing with and put in place measures to minimize or prevent perineal trauma during delivery. Counseling psychologists will also benefit as sexual dysfunction may manifest in form of psychological disorders. Policymakers will also benefit from the findings and develop a policy that governs the sexual health education among postpartum women. Ultimately the findings of this study will be disseminated to the consumers among them postpartum women. Dissemination of the prevalence of perineal trauma and its consequences to the women will create awareness and women who have experienced sexual dysfunction may be linked to the right professionals to alleviate challenges and consequences of postpartum sexual dysfunction.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed literature from recent studies. This was critical in providing further information and guidance in the conduct of the study.

2.2 Conceptual Framework

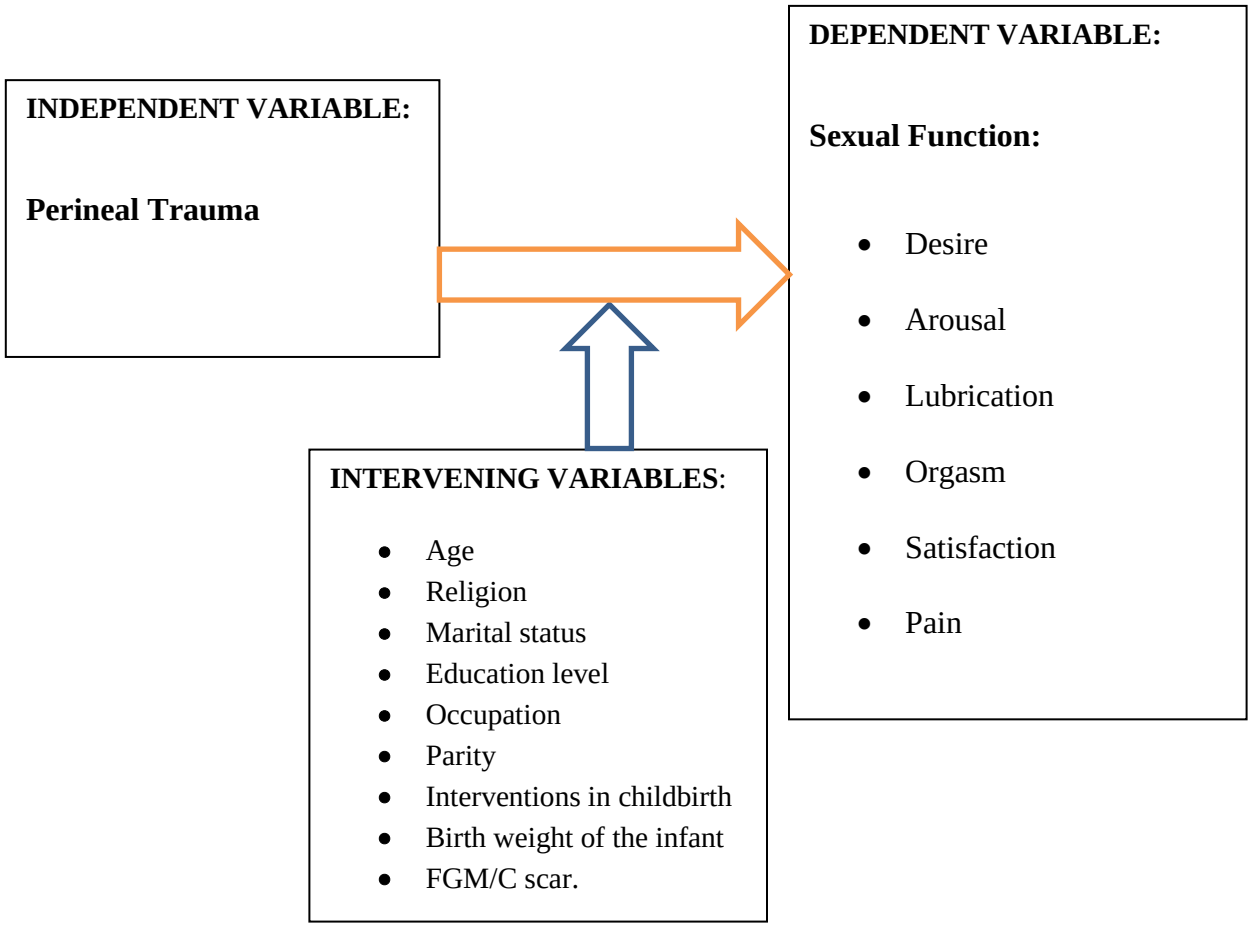

Figure 1 Conceptual Framework (source: Researcher, 2022)

The current study was operated under three variables. These variables are, independent variable in terms of perineal trauma, dependent variable in terms of sexual function (borrowed from the domains of the Female Sexual Function Index), and intervening variables which may influence the interaction between dependent and independent variable.

Perineal trauma is an independent variable in the study. This means that, the sexual function postpartum women attending MCH services in Kapenguria County referral Hospital may depend on perineal trauma. The study conceptual framework depicts that desire, arousal, lubrication, orgasm, satisfaction and pain indicators of sexual function of a woman depends on the level and the presence or experience of perineal trauma during delivery.

Nonetheless, the present study also has intervening variables which may impact the relationship between independent variable that is perineal trauma and dependent variable which is female sexual function.

Women sexual function level may be influenced by age, or even religious doctrines which may forbid or permit resumption of sexual activity before healthcare professional advisory time. Marital status in this case may influence the findings of this study because some women maybe divorced others maybe single while some could be separated. This may influence the frequency and engagement in sexual activity. On the other hand, mode of delivery for instance cesarean delivery does not allow the passage of the infant through the vaginal canal hence there is no tear or trauma (Malhi, 2018). So, when the woman reaches sexual activity, she may not feel any pain. In addition, birth weight of the infant may play

a significant role in determining the degree of perineal trauma. The higher the weight of the baby, the more likely the incidence and adversity of perineal trauma. Some women in addition to above factors may have undergone female genital mutilation which in one way or another also may influence the sexual function of the woman in terms of lubrication and satisfaction (Malhi, 2018).

2.3 Perineal Trauma

Perineal trauma is any damage to the area that lies between the vagina and the anus during birth of the baby. Following childbirth, women may go through an experience of perineal trauma. It has been estimated that 85% who deliver via vaginal birth experienced perineal trauma. Among these between 60 to 70% requires suturing (Zulkowski, 2008).

Zulkowski, (2008) classified perineal trauma that occur during delivery as first-degree tear, which tear the skin only. Second degree tear which affect perineal muscles under the skin too. The third-degree tear is more complex because it involves damage to the muscles of the anus and this may require operative repair under anesthesia.

2.3.1 Prevalence of Perineal Trauma

In a study conducted in United Kingdom, it was revealed that 85% of women sustain some form of perineal trauma. In addition, the study discovered that the prevalence of perineal trauma is largely dependent on variation in obstetric practice (Sultan & Kettle, 2017).

In Netherlands for example, the rate of episiotomy is 8% in comparison to United Kingdom which is 14% in England and in the United States it is 50% while in East European countries it is 99% (Sultan & Kettle, 2017). It is important to note in this literature part that the author did not find any classification of the perineal trauma on 17% of the participants

in the study. Furthermore, the researcher asserted that 672 consultants in active practice classified 33% of complete or partially external sphincter tear as a second degree. This brought a challenge again in classification resulting to poor reporting of perineal trauma among women in Europe and northern America in general. Therefore, this study perceives that the prevalence of perineal trauma could be higher than already reported numbers (Sultan & Kettle, 2017).

While carrying out a study in United States where 2100 women participated, (Williams, Herron-Marx, & Carolyn, 2017), reported high levels of perineal morbidity, 53.8% experienced stress urinary incontinence, while 36.6% could not contain liquid faecal matter. Women with first- or second-degree tear reported significantly higher morbidity related to perineal trauma than women with intact perineum. Also, 25.3 percent experienced dyspareunia. The study concluded that perianal morbidity can occur irrespective of extent of perineal trauma. The study was conducted in United States and depicts clearly how prevalent perineal trauma is among women who are sexually active. As the response rate of the study was 23.3 percent, high number of this non-response suggests high prevalence of perineal trauma which may reflect on this study's respondents.

According to a recent study by (Kimmich, Te-Ying, Zimmermann, & Furrer, 2020), perineal tears are common and are associated with parity. It is also good to note that the impact of the tears from previous pregnancy to subsequent ones is unknown. To show the effect of parity on perineal trauma the researchers were able to group tears into their patterns and were able to analyse by parity. The frequency of tears and episiotomy decreased with higher parity while the frequency of intact premium increased. As evidence of the presence and high prevalence of perineal trauma, 28 different tear patterns were

revealed. The presence of 28 tear patterns in this study showed how manifestation of high prevalence of is common among women who undergo normal vaginal delivery. Therefore, it is imperative to look into the consequences of perineal trauma having notified in this study that 28 patterns were marked. The present study also focused on the prevalence of perineal trauma but went an extra mile to find out association of perineal trauma and female sexual function.

This study understands that sexuality is an important part of human identity and it contributes immensely to the quality of life of men and women. Any Factor that interferes with this aspect of life is a real concern for many women. In a study which was conducted by Gommesen, Nohr, Qvist and Rasch in hospitals in 2015 where 554 women participated, 191 women had first degree of perineal trauma. In addition, 189 women experienced second-degree tears and finally 174 had third- and fourth-degree tears. The study found that the prevalence of perineal trauma is a challenge for women as evidenced by the following findings; that 25% of women experience dyspareunia, 53% experience labia first-degree second-degree or even third-degree tears. In making conclusion the authors presented that employment of sexual health education is needed among women after vaginal delivery. This is evidence that different patterns of perineal trauma tears are common in many hospitals especially women who went through normal vaginal delivery but the prevalence is under-reported as little amount of literature showed the exact prevalence of perineal trauma rather, they report high prevalence and at the same time reporting that there is under-reporting in many parts of the world. (Gommesen, Nøhr, Qvist, & Rasch, 2019).

In another almost similar study, (Pihl & Uustal, 2020) asserts that a registry study from Swedish laceration registration from 2014 to 2018 where 2236 women participated 32.9% of women who underwent normal vaginal delivery had external anal sphincter injury. In addition, the study also revealed that after delivery, perineal palpatory thickness was less than 10 millimeters. This thickness showed the level of internal injury experienced by women during normal vaginal delivery in Sweden.

Pereira, Hosoume, Monteiro, Juliato, & Brito (2020) while studying non-Episiotomy protocol of selective episiotomy as an intrapartum intervention in a bid to establish whether it would modify the incidence of obstetric anal sphincter injury, recorded the following. A total of 1833 women participated in the study in which 21.4 percent underwent episiotomy and 13.3% experienced any one of the studied forms of perineal trauma. Some of those who went through instrumental delivery also experienced perineal trauma or pain. The study concluded that there is no significant difference between routine episiotomy and selective episiotomy as regards the occurrence of perineal trauma. This study puts the prevalence of perineal trauma into obscurity requiring a thorough study to find out the prevalence of this condition among women who deliver through vaginal mode.

Burns, Price, Carpenter, & Smith (2019) studied obstetric anal sphincter injury during childbirth whether it is associated with genital pain and sexual dysfunction. 2908 women who gave birth in hospital were recruited for the study and the incidence of occurrence of obstetric anal sphincter injury was 1.9% for multipara women. For nulliparae it was higher at 3.2%. This is the only study which has recorded lower and level of perineal trauma the cause of intervention during delivery. Nonetheless it is realized that even though

interventions were introduced early still first-time mothers experience perineal trauma suggesting how prevalent this condition is among the nullipara women.

A challenge in reporting on the prevalence of perineal trauma is also seen in Kenya. (Kituku, Getanda & Mwangi, 2019) posits that even though perineal trauma is classified according to the degree of structures involved or could be the depth of injury, mild perineal trauma is also very common following vaginal delivery. The researchers mentioned that some of the risk factors involved include precipitate labour, instrumental deliveries, pushing techniques and even birth positions. In the study which was carried out in one of the teaching and referral hospital in Kenya where over 200 deliveries were observed. The study found that 38.8% of women sustained various types of perineal trauma. In addition, it was noticed that the age of the mother, parity, infant birth weight and history of previous trauma was statistically significant and that all were associated with trauma in the uni-variate analysis. The overall prevalence of the perineal trauma in the referral Hospital under study was 38.8 %.

2.4 Types of Female Sexual Disorder

2.4.1 Sexual Pain Disorder

This type of disorder is the most common type of sexual dysfunction which mostly affects women during the postpartum period. It consists of various categories which include dyspareunia, vaginismus and other disorders. Some examples of these types of disorder include perineal pain and dyspareunia which impair the normal sexual functioning of women (McCabe *et al.,* 2016). These two disorders are usually attributed to perineal trauma, episiotomy and instrumental delivery. A study by Shifren in 2016, demonstrated that least 42% of all new mother's experience perineal pain after delivery which

significantly reduces to 22% and 10% during week 8 and 12 respectively. Women who require assisted delivery are at high risk of experiencing prolonged perineal pain contrary to mothers who deliver normally (Shifren, 2016).

According to a study conducted by (Bergeron *et al.,* 2015) despite sexual disorders being increasingly studied and researched, they still remain to be among the major complaints of women and their partners due to their association with sexual pain and psychological concerns. (Graziottin *et al.*, 2015) however posits that the chronicity of sexual pain disorders is associated with psychological factors which in turn subjects the women to pain, distress and a reduction in happiness and relational health. Additionally, it is also associated with a lack of sexual desire, an inability to achieve orgasm, impaired arousal or a combination of these concerns. The diagnosis and treatment of these concerns is thus reliant on the management of both physical and psychological factors (Shifren, 2016).

2.4.2 Hypoactive Sexual Desire Disorder

This is usually associated with a persistent and recurrent absence in sexual fantasy and/or desire for sexual activity which result in personal distress. Hypoactive sexual desire disorder (HSDD) affects at least 10% of all adult women which in turn results in a reduced quality of life in women (Goldstein *et al.,* 2017). This disorder is associated with a decrease in the overall quality of life of women, general happiness, and can lead to emotional distress. Additionally, HSDD is usually under-detected and under-treated largely due to the fact that most patients are inhibited to seek medical care due to fear and embarrassment (Parish & Hahn, 2016).

Kingsberg *et al.*, (2015) posit that HSDD affects at least 7.4% of women in the United States and despite its prevalence, there is little intervention which can be offered due to the lack of a formal, safe and effective therapy which is approved by the US Food and Drug Administration (FDA). This is similar to a study which was conducted by (Pyke & Clayton, 2015) which reveals that all psychological treatment that have been developed for dealing with HSDD are not supported with adequate clinical trials.

2.4.3 Arousal and Orgasmic Disorder

Arousal disorder is associated with a persistent inability to attain and/or maintain, until completion of sexual activity, adequate lubrication and a swelling response due to sexual excitement which in turn results into personal distress. Orgasmic disorder on the other hand is a persistent delay in attaining an orgasm despite sufficient sexual stimulation and arousal thus resulting in personal distress (Meston & Stanton, 2017). There are a number of factors which are associated with the development of arousal disorders with one major factor being post-traumatic stress which reduces the level of sexual desire among the women (Nicholson *et al.*, 2016). A study conducted to assess the sexual experience among women with arousal disorder and their partners revealed that their women had low sexual desire, low sexual satisfaction, high sexual distress, depression and anxiety.

The diagnosis of orgasmic disorder is usually marked with distress and interpersonal difficulty (Bradford, 2016). According to (Brody, 2017) orgasmic disorders are associated with psychological , behavioral, interpersonal and physiological factors. These include issues like specifics on sexual behaviors, mental focus during sexual activity and intimate relationship focus. Orgasms are triggered by psychological, physiological and interpersonal aspects. Another study also states that orgasm disorders are caused by a

multiple psychological conditions e.g. depression, body image pelvic conditions etc. which disrupts a woman's ability to reach orgasm (Cohen & Goldstein, 2016).

2.5 Factors that Influence Female sexual Function

2.5.1 Assisted Delivery

This is usually conducted by the use of forceps or vacuum in conducting safety delivery of the infant. Assisted delivery is however associated with an increased risk of both perinea and sphincter trauma which poses significant trauma to the pelvic floor and poses risks to the women's sexual health. Childbirth is usually associated with emotional upheaval as vaginal delivery can affect sexual function after birth (Alesheikh *et al.,* 2016). Assisted delivery is also associated with a high level of pelvic floor dysfunction complaints which limits the sexual function of the women (Lipschuetz *et al.,* 2015).

2.5.2 Spontaneous Vaginal Delivery

Another study aimed to investigate the role of mode of delivery on the sexual function of women among those who delivered vaginally and those who delivered through caesarian section. The study revealed that women who delivered vaginally registered low levels of sexual desire, lubrication, orgasm and sexual satisfaction (Eid *et al.,* 2015). Crookall *et al.,* (2018) notes that perineal trauma which develops after childbirth is a major cause of misery which forces an individual to either cope or compromise with the sexual encounters, and it causes poor social functioning, psychological health and poor quality of life.

2.5.3 Caesarian Section Delivery

This type of delivery is mainly utilized in instances of obstetric contraindications to vaginal delivery. In essence, women who deliver through this method are less likely to develop

perineal pain in order as the risk of episiotomy is negated. The increase in the number of caesarian section deliveries are on the rise around the world largely due to the increase in the risks associated with sexual dysfunction (Mylonas & Friese, 2015). However, a study conducted by (Kainu *et al.*, 2016) revealed that the incidence of persistent for one year after delivery through cesarean section delivery. The study also revealed that this pain was more common among women who were primiparous. A study conducted (Bjelland *et al*., 2016) however refutes these claims and it claims that pelvic pain is most common among women who delivered through vaginal delivery. The study revealed that new onset of pelvic pain is common among these women during 0-3 months postpartum.

2.5.4 Breastfeeding

Breastfeeding can also lead to a decrease in sexual due to its association with both physical and psychological aspects of a woman. There is various conflicting information which are associated with breastfeeding and sexuality. In relation to culture, most women are reducing the level of breastfeeding of their children in order largely due to the fact that breasts are primarily deemed to be sex objects. Breastfeeding is therefore perceived by most women to distort the shape of the breasts which makes the women to dislike their body image and therefore not enjoy sex (Dettwyler, 2017). (Dixson *et al.*, 2015) notes that the morphology of the breast has evolved due to sexual selection and men use this as judgement for women's attractiveness. This therefore plays a big role in the sexual quality and abilities of women.

2.5.5 Early Resumption of Sex

According to (Alum *et al.*, 2015) there are a variety of concerns associated with early resumption of sex especially giving birth, after experiencing genital trauma or infections

which reduces the woman's ability to experience sexual pleasure. A study (Owonikoko *et al.,* 2017) revealed that women resume sexual behaviors at an early stage after childbirth due to cultural demands and the inherent inability to deal without sexual intercourse. The study revealed that these women experience vaginal pain, vaginal discharge and bleeding, bruises and perineal damages which affects their sexual experience. Another study in Nigeria revealed that women who had caesarian section delivery are highly unlikely to resume their sexual behavior thus reducing their chances of being affected by perineal pain (Adanikin *et al.,* 2015).

2.5.6 Postpartum Depression

A study conducted by (Khajehei *et al.,* 2015) female sexual dysfunction occurred among almost two-thirds of women during the first year of after childbirth mainly due to postpartum depression. The women mostly experienced issues like sexual dissatisfaction, orgasmic disorders and sexual arousal concerns. Another study in Turkey revealed that sexual dysfunction among women who were 2-12 months after childbirth, those who were high school graduates, a history of high-risk pregnancy and post –partum depression (Yilmaz *et al.,* 2018). A study assessing the level of sexual dysfunction between women who gave birth through the vagina and through depression revealed that women who have experience depression are most likely women who deliver through caesarian section (Chang *et al.,* 2015). A decline in sexual functioning is mostly experienced among women during the first 6 months due to postpartum depression which can persist until the 12 months after childbirth thus resulting into lower sexual functioning (Galbally *et al.,* 2018).

2.5.7 Female Genital Mutilation/Cutting

According to (Esho *et al.,* 2017) women who have undergone female genital mutilation are at high risk of sexual dysfunction after giving birth due to the extent of pain which an result in discomfort during sex especially if they underwent spontaneous vaginal delivery. This is in agreement with a study conducted by which reveals that female genital mutilation affects the woman's physical, psychological and sexual wellbeing (Momoh, 2017).

2.6 Association Between Perineal Trauma and Female Sexual Function

One of the variables of the present research is to find out the relationship between perineal trauma and female sexual function. Looking into literature it is evident that there are a number of studies conducted which associate perineal trauma and female sexual function. This section of the thesis presents recent literature on this topic. The study perceives that presence of perineal trauma, alone without any consequences does not pose any problem to postpartum mothers. But seems there is a perceived Association between perineal trauma and the female sexual function which influence the quality of life, the study made an attempt to get data and examine statistically how these influenced women qualities of life in terms of sexual function.

Rathfisch *et al.,* (2010) conducted a study to examine the extent of postpartum sexual dysfunction influence by perineal trauma. The study compared women with intact perineum and those who experienced perineal trauma through episiotomy perineal tears. The study revealed that perineal tears were associated with lower levels of libido, orgasm, sexual satisfaction and presence of pain during intercourse. The interesting part of the findings was that presence of at least one sexual problem like reduced sexual desire, vaginal

arousal, lubrication, reduced frequency of orgasm and reduced satisfaction with sexual life was statistically common after birth.

In addition, (Gommesen, Nøhr, Qvist, & Rasch, 2019), concluded in their study that ignorance of sexual health is a common phenomenon among women after vaginal delivery. Because of vaginal delivery, women experienced various levels of perineal trauma. And at 12 months postpartum, more than half of the women with third-degree tear experienced average challenges including dyspareunia. The authors further clarify sexuality during and after pregnancy is associated with a trauma especially perineal trauma during normal vaginal delivery.

While describing postpartum females' sexual function and risk factors associated with postpartum sexual dysfunction, (Gutzeit, Levy, & Lowenstein, 2020) emphasized that women's sexual health is a vital and important part of life at any age. They believed that clarifying the risk factors will help open up conversation and ultimately improving the sexual function. The study concluded that the mode of delivery may not have any significant effect on a short-term postpartum sexual function. The study found episiotomy does not affect while lactation has slightly negative effect. Having looked at the study, put the entire group of factors perceived to be associated with female sexual function into obscurity. Since the study did not associate episiotomy but attention was turned into lactation as one of the factors which may influence the sexual function of women. This finding differed with other studies conducted which implicates perineal trauma as one of the factors which influence the sexual function of women.

Furthermore, another study showed that coital resumption after delivering among patients is delayed as it attempted to find the differences between instrumental and spontaneous delivery. The study asserted that obstetric anal sphincter injuries are associated with sexual dysfunction and lower likelihood of return to sexual activity in the immediate postpartum period. With over 140 women who had an experience of perineal trauma, showed that women who experienced perineal trauma had lower level of early coital resumption as compared to those who delivered spontaneously. The same women who experienced perineal tumor reported low level of sexual function (Anglès-Acedo *et al.*, 2019).

Lessard, Pierrepont, Brassard, & Polomeno (2018), studied perineal trauma during childbirth and its relationship to postnatal marital and sexual function and also perceived intimacy of new parent couples. The study was conducted in Canada Ontario. 67 Canadian French-speaking couples were recruited for the study. The findings revealed that the severity of perineal trauma is linked to the perception of decreased intimacy and weakest sexual function for the woman. The study emphasizes that healthcare providers should think of supporting women who have experienced during the trauma due to childbirth as well as also supporting their partners.

One of the factors which was adversely mentioned by the researchers was perineal trauma where laceration was statistically significant associated with increased depression among women 24 months after childbirth. Though there are other factors, this literature information found published showed that perineal trauma can find itself associated with depression that ultimately influence the sexual function of a woman.

When conducting a study among 75 women about the choice of mode of delivery, (Long & Jha 2018), found that for women who choose to deliver through vaginal delivery 79% had third degree tear while the rest experienced 4th degree tear. Though some women choose to deliver via cesarean delivery, it was noticed that their choice of mode of delivery was largely and statistically influenced by their previous sexual function. Therefore, these women associated the mode of delivery especially normal vaginal delivery with lower sexual function and that was the reason they wished a Cesarean section would help them reduce the problem.

Ahmed, Kishk, Farhan & Khamees (2016), upheld that different degree of perineal Tears sustained during delivery had an influence or negative influence on sexual function of women. The study was conducted in Saudi Arabia where 156 women who completed the female sexual function scores were significantly different between groups at six months postpartum. Women in the study group showed significant decrease in the scores of arousal, lubrication, orgasm, satisfaction and pain domains at 12 months post-delivery. This was associated with different levels of perineal tears and trauma that Arabic women went through during normal vaginal delivery.

2.7 Summary of the Literature Review

Despite numerous literatures showing the presence of perineal trauma among women who deliver via normal vaginal delivery, most of the studies clearly mention that their findings on prevalence of perineal trauma is under-reported. That means the reports on its prevalence are present and numerous in the literature reviewed but determination of range of prevalence of perineal trauma is still not clear. Therefore, the present study made an attempt to narrow the gap by providing the prevalence of perineal trauma in West pokot

County among women who attended maternal child health services at the Kapenguria County Referral Hospital. The study further determined the association between perineal trauma and their sexual function.

Most of the research conducted and presented in the literature review in this thesis showed that many of the available literature is conducted in Europe, United States and parts of Asia. At the time of the search of literature review in this study only one study conducted in a county referral hospital in the Republic of Kenya had been published. Suggesting that the literature review and such studies which are very important for women in Kenya, who deliver via normal vaginal delivery have not been conducted. That is the reason why most of the studies suggest that more study needs to be done on this topic. Hence, the present study filled this gap which exists in the literature.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provided the research methodology that was employed in the study. This was composed of the research design, area of study, population, sampling procedure and technique, pre testing, the instruments that was used in data collection, data analysis and ethical considerations.

3.2 Research Design

This study adopted a cross-sectional study design. A cross-sectional study analyses data from a population, or a representative subset, at a specific point in time (Levin, 2006). This design is appropriate because it described information of different groups with similar characteristics and outcome in terms of sexual function and exposure in terms of perineal trauma among postpartum women attending Kapenguria county referral Hospital. A cross-sectional research design has a significant role because it significantly increased knowledge and understanding of what is happening in the hospital across the study area (Setia, 2016). This design enabled the esearcher to get a larger opulation hence a reasonable sample size. Questionnaires were used and this ensured that data to be collected is standardized, easily understood and easy to compare. This method enabled a deeper understanding for the problems investigated through different sources of information, as well as able to describe a general picture of the reliability in which the problem is involved (Walliman, 2005).

3.3 Study Area

The study was conducted in Kapenguria County Hospital, West Pokot, Kenya. West Pokot County is located in the Republic of Kenya in the western part of the country (see Appendix. The County covers an area of approximately 9169 square kilometres. It is bordered by Turkana County and Baringo County as well as to the south-east by Elgeiyo Marakwet County. According to 2019 census the county has a population of 621,241. The County which is majorly populated by the Pokot People has its Headquarters in Kapenguria which is cosmopolitan with more than 20 communities living and doing business. In the appendix, there is a map which is showing this particular County and its location in the Republic of Kenya (Maina & Mandila, 2019).

Kapenguria County hospital was chosen since it is the major hospital in the County attended by the Pokot community who to a great extent practice FGM as a rite of passage. FGM is usually carried out on 9 to 15 years old to confirm their progression to womanhood. Women who have undergone FGM may face difficult labour in child birth, leading to perineal trauma.

3.4 Target population

The target population for this study were women of above six (6) weeks postpartum status attending Kapenguria County Hospital Maternal Child Health clinic (MCH) but below 9 months postpartum. According to Kapenguria County Hospital records the MCH/CWC receives approximately 30 women daily, 7 of which meet the study criteria. This translates to approximately 35 women weekly. Based on the determined sample size, the study was conducted for three months.

3.5 Inclusion and Exclusion criteria

3.5.1 Inclusion Criteria

- Reproductive age women (15 to 49 years) of above six (6) weeks postpartum but below 9 months postpartum.
- Women attending maternal child health services at Kapenguria county referral Hospital.
- Have undergone a vaginal delivery.

3.5.2 Exclusion Criteria

- Women with chronic illnesses that in one way or another may affect their sexual functioning
- Very sick patients
- Women unable to communicate in English, Swahili or Pokot

3.6 Sample Size Determination and Sampling Technique

Since the number of women of postpartum status between 6 weeks and 9 months attending Kapenguria County Hospital is unknown, the sample size was derived by computing the minimum sample size required for accuracy in estimating proportions. The formula is:

$$n=\frac{z^2(p)(1-p)}{c^2}$$

Where:

n = sample size

z = standard normal deviation set at 95% confidence level (1.96)

p = prevalence of perineal tears in Kenya (38.8%) (Kituku, Getanda & Mwangi, 2019).

c = confidence interval (0.05 = ±5)

Therefore, required sample size was calculated as follows

$$n=\frac{1.96^2(0.388)(1-0.388)}{0.05^2}$$

n=365

Therefore, the study had a sample size of 365 women.

Consecutive sampling was used to select approximately 7 women per day who meet the inclusion criteria. This sampling method allowed the researcher to include all the accessible subjects as part of the sample as long as they met the eligibility criteria (Bernard, Wutich & Ryan, 2017).

3.7 Data collection tools and procedure

The study collected primary data using questionnaires from women who met the eligibility criteria. Research assistants who speak the local dialect was recruited and trained to help in questionnaire administration. Questionnaires were divided into two sections. Section A was designed to obtain data on the demographic profile of postpartum women who participated in the study. The areas of coverage in this section were age, religion, marital status, educational level, occupation, mode of delivery and interventions during delivery, birth weight of the infant and female genital mutilation status.

Section B of the questionnaire is adopted from American college of obstetricians and gynecologists 2014. This instrument is called female sexual function index developed by R. Rosen and colleagues and it is based on clinical interpretations of principal components analysis, which identifies a 6-domain structure including desire, subjective arousal, lubrication, orgasm, satisfaction, and pain (Rosen *et al.*, 2000) Since the researcher focused on the variables that are captured in this data obtaining instrument. Data modification was done on wordings but not the rating. The domains that were covered in this section include,

desire, arousal, lubrication, orgasm, satisfaction and pain. The rating on these variables is Likert modified scale of 5. Where 0 to 2 showed dissatisfaction and 3 to 5 show satisfaction. To obtain data on sexual activity the ratings was as follows: 0 to 2 showed sexual inactive and 3-5 sexually active. The questionnaire adopted from American gynecologists and obstetricians is attached to the appendix of this thesis (Papatheodorou, 2016).

3.8 Pretesting of data collection tools

A pre-test study is a mini-version of a full-scale study in preparation of the complete study. To ensure reliability and validity of the questionnaires, a pre-test study was carried out by distributing 37 questionnaires to respondents in Kitale County Referral Hospital. The pilot respondents represented 10% of the sample size (Doody & Doody, 2015). Trans Nzoia County Referral Hospital was used for pre-testing because it has similar characteristic with study area. The pre-testing of the questionnaire was used to; identify the likely mistakes in measurement procedures and the functioning of independent variables, to detect unnecessary and not clear items in the questionnaire and any other respondent's non-verbal behaviors. It is also useful in identifying any embarrassing information that may led to experience of discomforts by from the content and wording of the questionnaire. The results helped the researcher to correct inconsistencies arising from the instruments, which ensure that they measure what is intended (Madu, 2005). Pokot version of the questionnaire was achieved through validated English version. Then results were interpreted back to English and the results were same as those of respondents who responded using English.

3.8.1 Validity of the Research Instruments

In this study, the questionnaire's construction, quality control and validity are to ensure through: Face validity, where the instrument is subjected to experts to check whether it

measures what it is intended to measure. In content validity, the instrument is designed according to the study variables and their respective indicators of measurement; it ensured that each question was appropriated for a particular variable. Construct validity, which is maintained through restricting the questions to the conceptualizations of the variables and ensuring that the indicators of a particular variable fall within the same construct. Lecturers in the field of public health was consulted and their opinions and suggestions incorporated in polishing of the research instruments.

3.8.2 Reliability of the Research Instruments

The questionnaire tested for reliability by using Cronbach's coefficient alpha to determine the internal consistency of the items. This is a method of estimating reliability of test scores by the use of a single administration of a test. Consequently, it provides good measures of reliability because holding other factors constant, the more similar the test content and conditions of administration are, the greater the internal consistency reliability (Mugenda & Mugenda, 2013). Cronbach alpha values range from 0 to 1, with higher values indicating greater reliability. Alpha coefficient of**;** below .60 is unacceptable, between .60 and .65 undesirable, between .65 and .70 minimally acceptable, between .70 and .80 respectable between .80 and .90 very good, > .90 is considered perfect (Eroğlu, 2020). However, if Cronbach Co-efficient alpha of $\alpha = 0.70$ is obtained then it indicated that the research instruments are reliable and therefore can be adopted for data collection.

Cronbach alpha coefficient test was used to measure the internal consistency of the instruments used. Reliability test results are presented in Table 3.1.

Table 1: Reliability Test Results

Variables	Cronbach's Alpha	N of Items
Perineal birth trauma	.762	4
Sexual function	.972	19

As shown in Table 3.1, the Cronbach's Alpha coefficients for perineal birth trauma was 0.762. Cronbach's Alpha coefficients for sexual function was 0.972. This implied that Cronbach's Alpha coefficients for the study variables were above 0.7 hence the instruments were reliable. These findings were in line with the rule of thumb proposed by Hair et al. (2010) where coefficient of 0.60 is regarded to have an average reliability while coefficient of 0.70 and above indicates that the instrument has a high reliability standard. Therefore, all items were included in the research instrument.

3.9 Data Collection Procedure

Research authorization letters were obtained from the authorities of the hospital. After authorization, a suitable date was selected and appointments reserved with the hospital authorities in order to know the schedule of medication and get adequate time for data collections. Questionnaires was distributed to (n=365) women of postpartum status whom their children are of the age nine months and below attending Kapenguria County Hospital. Data collection was done through interviewer administered questionnaires in a pre – booked interview room for privacy. The purpose of the study and the instructions were explained to the respondents then consent was sort before proceeding with data collection. This done through an interview after which the researcher collected questionnaires for analysis and interpretation.

3.10 Data Analysis and Presentation

Collected data using Likert scale was cleaned, coded, checked, and entered into computers using SPSS software version 23 for analysis. Descriptive statistics was used to analyze data. Descriptive statistics comprised of frequency, percentage, mean and standard deviations. Association between categorical variables was assessed using chi square, and continuous variables was compared using independent samples t-test, and p-value of less than 0.05 was used to define statistical significance. The findings of the study were presented graphically using tables, figures.

Table 2: Statistical Treatment of Data

Variable (objective)	Data analysis
1. To determine the prevalence of perineal birth trauma among postpartum women in Kapenguria County Referral Hospital	The researcher used descriptive statistics to describe the prevalence of perineal trauma among postpartum women in terms of percentages only
2. To describe factors associated with perineal birth trauma among women in Kapenguria County Referral Hospital	The researcher used descriptive statistics and Chi-Square
3. To describe the sexual function of women who experience perineal birth trauma in Kapenguria County Referral Hospital	Researcher used descriptive statistics as per the instructions of the female sexual function index instrument domain scoring.
4. To describe the association between perineal birth trauma and sexual function among postpartum women in Kapenguria County Referral Hospital	Association between categorical variables was assessed using chi square, and continuous variables was compared using independent samples t-test, and p-value of less than .05 was used to define statistical significance

3.11 Ethical Consideration

The researcher presented the research thesis to the Moi University school Ethics Committee seeking for clearance and approval to conduct the study. Clearance was

obtained from the concerned public health authorities. The respondents gave a signed and voluntary informed consent prior to participation. The researcher explained and brief them on their rights and the expected benefits of the study. There was no any coercion or inducement to participate in the study. To ensure anonymity of participants serializing of the structured questionnaires was done. The participants were allowed to ask questions and answers was provided to their satisfaction. The researcher also asked the participants questions on the information to be provided to ascertain their comprehension about the study before they could sign the consent forms. Research tools were securely stored under lock and key and research information in computers with password protection.

3.12 Dissemination

A dissemination strategy was developed to ensure the sharing of the research results to maximize the benefit of the patients and MOH. This will include publications of study findings in peer reviewed journals and local MoH newsletters. Working with the local Health care communities will support dissemination to non-academic audiences' and the public. Thus, this dissemination approach will provide broad coverage to the target audience. Also, it will provide an interactive platform with key audiences.

CHAPTER FOUR

PRESENTATION OF STUDY FINDINGS

4.1 Introduction

This chapter presents the study findings; data analysis, interpretation and discussion. The general objective of this study was to investigate the association between perineal birth trauma and postpartum sexual function among women in Kapenguria County Referral Hospital, West Pokot, Kenya. The chapter comprises of the following sections: demographic characteristics of the respondents, perineal birth trauma experience, female sexual function index and association between perineal birth trauma and sexual function among postpartum women. These sections correspond with the research objectives and questions in chapter one.

4.2 Response Rate

Response rate equals the number of people with whom semi-structured questionnaires were properly completed divided by the total number of people in the entire sample (Fowler, 2004). The results of response rate are presented in Table 4.1.

Table 3: Response Rate

Respondents	**Frequency**	**Percentage**
Responded	304	83.3
Non-responded	61	16.7
Total	**365**	**100**

Out of a total of sample 365 women targeted, 304 women successfully filled the questionnaires, which translate to a response rate of 83.3%. The response was appropriate for the study to continue and provide reliable results. According to Mugenda and Mugenda

(2003) a fifty percent response rate is adequate, sixty percent good and above seventy percent rated very well.

4.3 Demographic Characteristic of the Respondents

This section presents the study results for age, religion, marital status, education level, occupation, weight of the child, parity and female genital mutilation. Table 4.2 presents the study results.

Table 4: Demographic Characteristic of the Respondents

Demographic Characteristic	**Frequency (*N* = 304)**	**Percent (%)**
Age		
15-20 years	36	11.8
21-30 years	216	71.1
31-40 years	42	13.8
41-49 years	10	3.3
Religion		
Christian	289	95.1
Muslim	15	4.9
Marital Status		
Married	233	76.6
Divorced	10	3.3
Separated	7	2.3
Single	52	17.1
Widow	2	0.7
Education		
Primary	64	21.1
Secondary	114	37.5
College	113	37.2
University	13	4.3

Demographic Characteristic	Frequency (*N* = 304)	Percent (%)
Occupations		
Employed	91	29.9
Farmer	107	35.2
House wife	106	34.9
Weight of the child		
Low birth weight	31	10.2
Normal	269	88.5
Macrosomia	4	1.3
Parity		
1 Child	111	36.5
2 Children	86	28.3
3 Children	47	15.5
4 Children	31	10.2
5 Children	12	3.9
6 Children	7	2.3
7 Children	10	3.3
Female Genital Mutilation		
Yes	70	23
No	234	77

The study findings in Table 4.2 showed that the highest proportion 216(71.1%) of the respondents comprised of those aged 21-30 years. Further majority 289(95.1%) of the respondents indicated were Christians. This implies that majority of the residents in West Pokot were Christians. The study findings further, revealed that majority 233(76.6%) of the respondents were married while a few 2(0.7%) were widowed. The study results also indicated that majority 114(37.5%) of the respondents had a secondary level of education. Only 13(4.3%) of respondents had attained university degree in their level of education. The study findings showed that majority 107(35.2%) of the respondents indicated that they were farmers while few 91(29.9%) were employed. The study further revealed that

majority 269(88.5%) of children had normal weight. The study findings revealed that the women with 1 parity were 111(36.5%). The study findings in Table 4.2 revealed that 70(23%) of the respondents had undergone female genital mutilation.

4.4 Objective One: Prevalence of Perineal Birth Trauma Among Postpartum Women in Kapenguria County Referral Hospital

The first objective sought to determine the prevalence of perineal birth trauma among postpartum women in Kapenguria County Referral Hospital. The study results are presented below;

4.4.1 Prevalence of Perineal Birth Trauma Among Postpartum Women

The study sought to determine prevalence of perineal birth trauma among postpartum women. The study findings are presented in Figure 4.1.

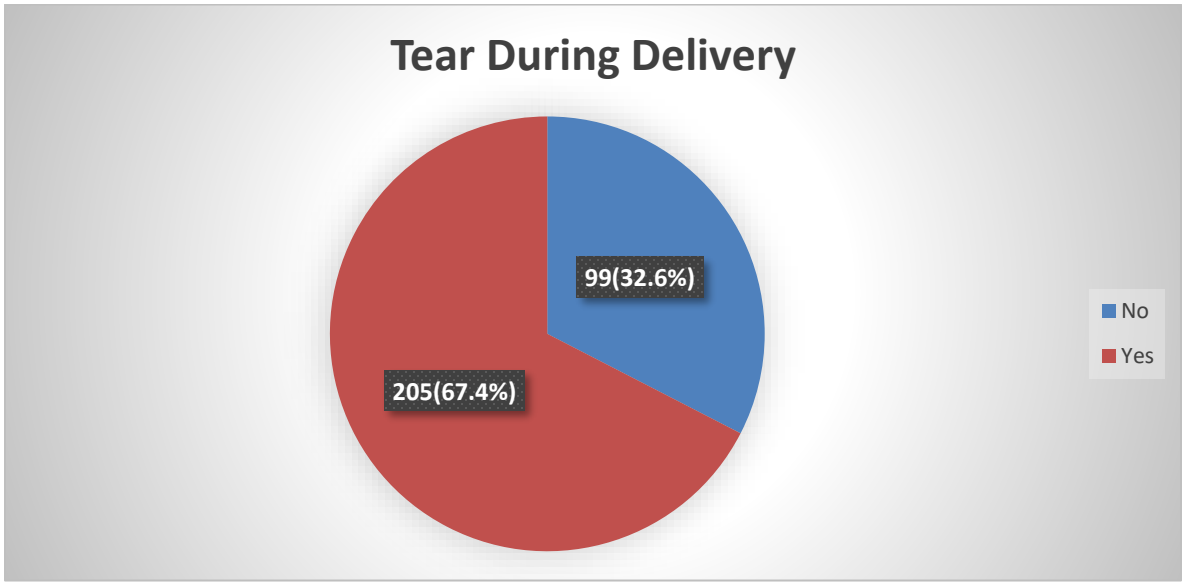

Figure 2: Prevalence of Perineal Birth Trauma Among Postpartum Women

The study findings in Figure 4.1 revealed that majority 205 (67.4%) of the respondents indicated that they experienced a tear during birth. This implied that the prevalence of perineal birth trauma among postpartum women in Kapenguria County Referral Hospital is 67.4%.

4.4.2 Perineal Trauma Experience

The study sought to know the perineal trauma experience of patience. Table 4.3 presents the study results.

Table 5: Perineal Trauma Experience

Statements		**Yes**	**No**
1. After birth, I experienced difficulty walking	*f*	200	104
	%	65.8	34.2
2. After delivery, I experienced difficulty using the rest room for a week or so due to pain	*f*	234	70
	%	77.0	23.0
3. My frequency of urination has changed after birth	*f*	202	102
	%	66.4	33.6
4. I felt pain when having sex for the first time after birth	*f*	242	62
	%	79.6	20.4

The study findings in Table 4.3 revealed that 104(34.2%) of the respondents indicated that after birth; they did not experience difficulty walking. Further, majority 234(77.0%) of the respondents indicated that after delivery, they experienced difficulty using the rest room for a week or so due to pain. Furthermore, 202(66.4%) of the respondents indicated that their frequency of urination has changed after birth. Finally, 242(79.6%) of the respondents indicated that they felt pain for the first time they had sex after birth. The study results

implies that perineal trauma experience of patience include; difficulty in using rest room for a week or so due to pain and also pain first time they had sex after birth.

4.4.3 Interventions During Delivery

The study results also sought to determine the interventions during delivery. Table 4.4 presents the study results.

Table 6: Interventions During Delivery

Interventions During Delivery	Frequency	Percent
A Vacuum extraction	33	10.9
A forceps delivery	37	12.2
None	234	77
Total	**304**	**100**

The study findings in Table 4.4 showed that 33(10.9%) of the respondents indicated that they delivered through a vacuum extraction and 37(12.2%) indicated that they delivered through a forceps delivery.

4.4.4 Episiotomy During Delivery

The study sought to determine whether the respondents delivered through episiotomy. Table 4.5 presents the study results.

Table 7: Episiotomy During Delivery

Episiotomy	Frequency	Percent
Yes	134	65.4
No	71	34.6
Total	**205**	**100**

Table 4.5 showed that out of 205 respondents who experience perineal birth trauma during birth 134(65.4%) of them delivered through episiotomy.

4.5 Objective Two: Factors Associated with Perineal Birth Trauma Among Women in Kapenguria County Referral Hospital.

The study sought to describe factors associated with perineal birth trauma among women in Kapenguria County Referral Hospital. The study results are presented in Table 4.6.

Table 8:Factors Associated with Perineal Birth Trauma Among Women

		Perineal Trauma Experience				
		No	**Yes**	**χ^2**	**df**	**P-value**
		(*N* = 99)	**(*N* = 205)**			
Age	15-20 years	2(.7%)	34(11.2%)	14.835	3	0.002
	21-30 years	80(26.3%)	136(44.7%)			
	31-40 years	15(4.9%)	27(8.9%)			
	41-49 years	2(.7%)	8(2.6%)			
Religion	Christian	94(30.9%)	195(64.1%)	.004	1	0.948
	Muslim	5(1.6%)	10(3.3%)			
Marital Status	Married	84(27.6%)	149(49.0%)	14.440	4	0.006
	Divorced	3(1.0%)	7(2.3%)			
	Separated	3(1.0%)	4(1.3%)			
	Single	7(2.3%)	45(14.8%)			
	Widow	2(.7%)	0(0.0%)			
		Perineal Trauma Experience				
		No	**Yes**	**χ^2**	**df**	**P-value**
		(*N* = 99)	**(*N* = 205)**			
Education level	Primary	25(8.2%)	39(12.8%)	12.341	3	0.006
	Secondary	24(7.9%)	90(29.6%)			

	College	43(14.1%)	70(23.0%)			
	University	7(2.3%)	6(2.0%)			
Occupation	Employed	38(12.5%)	53(17.4%)	7.451	2	0.024
	Farmer	36(11.8%	71(23.4%)			
	House wife	25(8.2%)	81(26.6%)			
Episiotomy during delivery	Yes	20(6.6%)	114(37.5%)	33.955	1	0.000
	No	79(26.0%)	91(29.9%)			
Interventions	A Vacuum extraction	9(3.0%)	24(7.9%)	1.521	2	0.467
	A forceps delivery	15(4.9%)	22(7.2%)			
	None	75(24.7%)	159(52.3%)			
Weight of the child	Low birth weight	5(1.6%)	26(8.6%)	6.438	2	0.04
	Normal	94(30.9%)	175(57.6%)			
	Macrosomia	0(0.0%)	4(1.3%)			
FGM	Yes	25(8.2%)	47(15.5%)	.200	1	0.655
	No	74(24.3%)	158(52.0%)			
Parity	1 Child	21(6.9%)	95(31.3%)	28.012	6	0.000
	2 Children	43(14.1%	56(18.4%)			
	3 Children	11(3.6%)	26(8.6%)			
	4 Children	9(3.0%)	18(5.9%)			
	5 Children	5(1.6%)	5(1.6%)			
	6 Children	6(2.0%)	1(.3%)			
	7 Children	4(1.3%)	4(1.3%)			

The study findings in Table 4.6 reveals that there was no statistically significant association between perineal trauma experience and religion χ^2 (1, N = 304) = 0.004, p =.948, interventions χ^2 (2, N = 304) =1.521, p =.467 and FGM χ^2 (1, N = 304) = 0.200, p =.655.

However, the study findings revealed that perineal trauma experience is statistically significant associated with age bracket χ^2 (3, N = 304) = 14.835, p =.002, marital status χ^2 (4, N = 304) = 14.440, p =.006, education level χ^2 (3, N = 304) = 12.341, p = .006, occupation χ^2 (2, N = 304) = 7.451, p =.024, Episiotomy during delivery χ^2(1, N = 304) = 33.955, p =.000, weight of the child χ^2(2, N = 304) = 6.438, p =.04 and parity χ^2(6, N = 304) = 28.012, p =.000).

4.6 Objective Three: Sexual Function of Women who Experience Perineal Birth Trauma in Kapenguria County Referral Hospital

The study sought to know the perineal trauma experience of patience. The study is presented in the section below.

4.6.1 Frequencies of Sexual Function of Women

The researcher sought to know if for the past 4 weeks the respondents had the sexual desire or interest. Table 4.7 presents the study results.

Table 9: Sexual Desires

Statements	Frequency (N = 205)	Percent
Almost never or never	62	30.2
A few at times (less than half the time)	33	16.1
Sometimes (about half the time)	67	32.7
Most times (more than half the time)	33	16.1
Almost always or always	10	4.9
Degree		
Very low or none at all	65	31.7
Low	15	7.3

Moderate	101	49.3
High	22	10.7
Very high	2	1

Table 4.7 showed that 67(32.7%) of the respondents sometimes have the sexual desire or interest in the past 4 weeks. The study further revealed that 101(49.3%) of the respondents were moderately sexually aroused ("turned on") during sexual activity or intercourse.

The study further sought to know how often the respondents felt sexually aroused ("turned on") during sexual activity or intercourse. Table 4.8 presents the study results.

Table 10: Sexual Arousal

Sexually Aroused	**Frequency (N=205)**	**Percent**
No sexual activity	29	14.1
Almost never or never	25	12.2
A few time (less than half the time)	29	14.1
Sometimes (about half the time)	71	34.6
Most times (more than half the time)	37	18
Almost always or always	14	6.8
Rate of Sexual Arousal		
No sexual activity	30	14.6
Very low or none at all	10	4.9
Low	34	16.6
Moderate	98	47.8
High	25	12.2
Very high	8	3.9
Confidence		
No sexual activity at all	32	15.6
Very low or no confidence	10	4.9
Low confidence	45	22
Moderate confidence	72	35.1
High confidence	41	20
Very high confidence	5	2.4

Table 4.8 showed that 37(18.0%) of the respondents sometimes feel sexually aroused ("turned on") during sexual activity or intercourse. The study findings also showed that 98(47.8%) of the respondents indicated that their rate level of sexual arousal ("turn on") during sexual activity or intercourse were moderate. Further, the study findings revealed

that 72(35.1%) of the respondents indicated that they have moderate confidence of becoming sexually aroused during sexual activity or intercourse.

The study also sought to how often respondent had been satisfied with their arousal (excitement) during sexual activity or intercourse. Table 4.9 showed the study results.

Table 11: Sexual Satisfaction

Sexual Satisfaction	**Frequency (N=205)**	**Percent**
No sexual satisfied	31	15.1
Almost never or never	37	18
A few times (less than half the time)	14	6.8
Sometimes (about half the time)	67	32.7
Most times (more than half the time)	29	14.1
Almost always or always	27	13.2
Satisfied with Arousal		
No sexual activity	30	14.6
Almost never or never	17	8.3
A few times (less than half the time)	16	7.8
Sometimes (about half the time)	83	40.5
Most times (more than half the time)	45	22
Almost always or always	14	6.8

Table 4.9 showed that 67(32.7%) of the respondents indicated that they sometimes get satisfied with their arousal (excitement) during sexual activity or intercourse. The study findings further revealed that 83(40.5%) of the respondents were sometimes satisfied with their arousal (excitement) during sexual activity or intercourse.

The study further sought to determine how often they become lubricated ("wet") during sexual activity or intercourse. Table 4.10 presents the study results.

Table 12: Sexual Lubrication

Lubricated during Sexual Activity	**Frequency (N=205)**	**Percent**
No sexual activity	45	22
Extremely difficult or impossible	10	4.9
Very difficult	7	3.4
Difficult	14	6.8
Slightly difficult	99	48.3
Not difficult	30	14.6
Maintenance of Lubrication		
No sexual activity	29	14.1
Extremely difficult or impossible	18	8.8
Very difficult	15	7.3
Difficult	19	9.3
Slightly difficult	87	42.4
Not difficult	37	18

Table 4.10 showed that 99(48.3%) of the respondents indicated that they find it slightly difficult to get lubricated ("wet") during sexual activity or intercourse. The study further revealed that 87(42.4%) of the respondents indicated that they slightly maintain their lubrication ("wetness") until completion of sexual activity or intercourse.

The study further sought whether the respondents have had sexual stimulation or intercourse and how often they reach orgasm (climax). Table 4.11 presents the study results.

Table 13: Sexual Stimulation

Sexual stimulation	Frequency (N=205)	Percent
No sexual activity	27	13.2
Extremely difficult or impossible	15	7.3
Very difficult	26	12.7
Difficult	12	5.9
Slightly difficult	96	46.8
No sexual activity	29	14.1
Reach Orgasm		
No sexual activity	27	13.2
Very dissatisfied	15	7.3
Moderately dissatisfied	20	9.8
About equally satisfied and dissatisfied	20	9.8
Moderately satisfied	96	46.8
Very satisfied	27	13.2
Satisfied to reach orgasm		
No sexual activity	27	13.2
Very dissatisfied	15	7.3
Moderately dissatisfied	14	6.8
About equally satisfied and dissatisfied	25	12.2
Moderately	97	47.3
Very satisfied	28	13.7

Table 4.11 showed that 96(46.8%) of the respondents indicated that have found it slightly difficult to have sexual stimulation or intercourse and how often did they reach orgasm (climax). The study findings revealed that 96(46.8%) of the respondents indicated that they are moderately satisfied with sexual stimulation or intercourse and how difficult it was to reach orgasm (climax). Further, the study findings showed that 97(47.3%) of the

respondents indicated that they were moderately satisfied with their ability to reach orgasm (climax) during sexual activity or intercourse.

The study results also sought to know how satisfied they have been with the amount of emotional closeness during sexual activity between them and their partner. Table 4.12.

Table 14: Emotional Closeness

Emotional Closeness	**Frequency**	**Percent**
Very dissatisfied	50	24.4
Moderately dissatisfied	31	15.1
About equally satisfied and	11	5.4
Moderately satisfied	85	41.5
Very satisfied	28	13.7
Total	205	100.0

Table 4.12 showed that 85(41.5%) of the respondents indicated that they are moderately satisfied with the amount of emotional looseness during sexual activity between them and their partners.

The study also sought to establish how satisfied the respondents are with their sexual relationship with their partners. Table 4.33 showed the study results.

Table 15: Sexual Relationship Satisfaction

How Satisfied	Frequency (N=205)	Percent
Very dissatisfied	44	21.5
Moderately dissatisfied	20	9.8
About equally satisfied and dissatisfied	27	13.2
Moderately satisfied	86	42
Very satisfied	28	13.7
Satisfaction with Overall Sexual Life		
Did not attempt intercourse	29	14.1
Almost or always	22	10.7
Most times (More than half the time)	18	8.8
Sometimes (about half the time)	63	30.7
A few times (less than half the time)	59	28.8
Almost never or never	14	6.8
Level (Degree) Of Discomfort		
Did not attempt intercourse	36	17.6
Very high	13	6.3
High	14	6.8
Moderate	86	42
Low	36	17.6
Very low or none at all	20	9.8

Table 4.13 showed that 86(42.0%) of the respondents indicated that they were sometimes satisfied with their sexual relationship with their partners. The study findings further showed that 63(30.7%) of the respondents indicated that they are sometimes (about half the time) satisfied with their overall sexual life. Finally, showed that majority 86(42.0%) of the respondents indicated that they were not satisfied with their level (degree) of discomfort or pain during or following vaginal penetration.

4.6.2 Sexual Function of Women Who Experience Perineal Birth Trauma

The study sought to describe the sexual function of women who experience perineal birth trauma in Kapenguria County Referral Hospital. The study results are presented in Table 4.14.

Table 16: Sexual Function of Women Who Experience Perineal Birth Trauma

	Sexual	Frequency	Percent	Mean	Std.
Desire					
	dysfunction	126	61.5	1.39	0.49
	Function	79	38.5		
Arousal					
	dysfunction	96	46.8	1.53	0.5
	Function	109	53.2		
Lubrication					
	dysfunction	67	32.7	1.67	0.47
	Function	138	67.3		
Orgasm					
	dysfunction	60	29.3	1.71	0.46
	Function	145	70.7		
Satisfaction					
	dysfunction	66	32.2	1.68	0.47
	Function	139	67.8		
Pain					
	dysfunction	86	42	1.58	0.49
	Function	119	58		

The study findings in Table 4.14 revealed that on sexual function majority 126(61.5%) of respondents had dysfunction on desire to sexual activities with a mean score of 1.39(0.49). The study findings also revealed that 96(46.8%) of the respondents had dysfunction on

arousal to sexual activities with a mean score of 1.53(0.5). Further, the study findings indicated that 67(32.7%) of respondents had dysfunction on lubrication during sexual activities with a mean score of 1.67(0.47). In addition, the study findings revealed that 60(29.3%) of respondents had dysfunction on reaching orgasm during sexual activities with a mean score of 1.71(0.46).

Furthermore, the study findings noted that 66(32.2%) of respondents had dysfunction of reaching satisfaction during sexual activities with a mean score of 1.68(0.47). Lastly the study findings revealed that 86(42.0%) of respondents had dysfunction of pain during sexual activities with a mean score of 1.58(0.49).

4.7 Association Between Perineal Birth Trauma and Sexual Function Among Postpartum Women

The study sought for the association between perineal birth trauma and sexual function among postpartum women in Kapenguria County Referral Hospital.

4.7.1 Association Between Perineal Birth Trauma and Sexual Function Among Postpartum Women

The study findings are presented in Table 4.15.

Table 17: Association Between Perineal Birth Trauma and Sexual Function

		Perineal Trauma Experience				
		Yes n (%)	**No n (%)**	**χ2**	**df**	**P-value**
Desire	dysfunction	50(16.4%)	126(41.4%)	3.289[a]	1	0.07
	Function	49(16.1%)	79(26.0%)			
Arousal	dysfunction	37(12.2%)	96(31.6%)	2.425[a]	1	0.119
	Function	62(20.4%)	109(35.9%)			
Lubrication	dysfunction	22(7.2%)	67(22.0%)	3.528[a]	1	0.06
	Function	77(25.3%)	138(45.4%)			
Orgasm	dysfunction	20(6.6%)	60(19.7%)	2.830[a]	1	0.093
	Function	79(26.0%)	145(47.7%)			
Satisfaction	dysfunction	18(5.9%)	66(21.7%)	6.556[a]	1	0.01
	Function	81(26.6%)	139(45.7%)			
Pain	dysfunction	28(9.2%)	86(28.3%)	5.322[a]	1	0.021
	Function	71(23.4%)	119(39.1%)			

The study findings in Table 4.15 revealed that there was no statistical association between perineal trauma experience and desire $\chi^2(1, N = 304) = 3.289$, $p = .07$, arousal $\chi^2(1, N = 304) = 2.425$, $p = .119$, lubrication $\chi^2(1, N = 304) = 3.528$, $p = .06$, orgasm $\chi^2(1, N = 304) = 2.830$, $p = .093$ respectively. However, the study findings revealed that perineal trauma experience is statistically significantly associated with sexual satisfaction $\chi^2(1, N = 304) = 6.556$, $p = .01$. Further, the study findings revealed that perineal trauma experience is statistically significantly associated with sexual pain $\chi^2(1, N = 304) = 5.322$, $p = .021$.

4.7.2 Difference in Sexual Function between those who Experienced Perineal Trauma and did not

This section presented study results on the deference in sexual function for the respondents who experienced perineal birth trauma and those who did not experienced.

Table 18: Difference in Sexual Function

	Prevalence	N	Mean	Std. Deviation	Std. Error Mean
Desire	No	99	1.4949	.50252	.05051
	Yes	205	1.3854	.48787	.03407
Arousal	No	99	1.6263	.48626	.04887
	Yes	205	1.5317	.50022	.03494
Lubrication	No	99	1.7778	.41786	.04200
	Yes	205	1.6732	.47020	.03284
Orgasm	No	99	1.7980	.40355	.04056
	Yes	205	1.7073	.45611	.03186
Satisfaction	No	99	1.8182	.38766	.03896
	Yes	205	1.6780	.46837	.03271
Pain	No	99	1.7172	.45267	.04549
	Yes	205	1.5805	.49469	.03455

The study results in Table 4.16 indicated that the mean for women who experienced perineal birth trauma and affected their desires for sexual activities is 1.3854. The mean for women who experienced perineal birth trauma and affected their arousal on sexual desire is 1.5317. The mean for women who experienced perineal birth trauma and affected their lubrication during sexual activities is 1.6732. The mean for women who experienced perineal birth trauma and affected their orgasm during sexual activities is 1.7073. The mean

for women who experienced perineal birth trauma and affected their satisfaction during sexual activities is 1.6780. The mean for women who experienced perineal birth trauma and caused pain during sexual activities is 1.5805. The number of participants for those experience perineal birth trauma (N) is 205 while those who did not experienced perineal birth trauma (N) is 99.

Table 19: Difference in Sexual Function between those who Experienced Perineal Trauma and did not

		Levene's Test for Equality of Variances		**t-test for Equality of Means**						
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**95% Confidence Interval of the Difference**	
									Lower	**Upper**
Desire	Equal variances assumed	5.43	0.02	1.82	302	0.07	0.11	0.06	-0.01	0.23
	Equal variances not assumed			1.8	188.74	0.07	0.11	0.06	-0.01	0.23
Arousal	Equal variances assumed	10.69	0.00	1.56	302	0.12	0.09	0.06	-0.02	0.21
	Equal variances not assumed			1.57	198.82	0.12	0.09	0.06	-0.02	0.21
Lubrication	Equal variances assumed	16.79	0.00	1.88	302	0.06	0.1	0.06	0	0.21
	Equal variances not assumed			1.96	215.75	0.05	0.1	0.05	0	0.21

Orgasm	Equal variances assumed	13.06	0.00	1.69	302	0.09	0.09	0.05	-0.02	0.2
	Equal variances not assumed			1.76	216.61	0.08	0.09	0.05	-0.01	0.19
Satisfaction	Equal variances assumed	33.51	0.00	2.58	302	0.01	0.14	0.05	0.03	0.25
	Equal variances not assumed			2.76	229.97	0.01	0.14	0.05	0.04	0.24
Pain	Equal variances assumed	26.27	0.00	2.32	302	0.02	0.14	0.06	0.02	0.25
	Equal variances not assumed			2.39	210.07	0.02	0.14	0.06	0.02	0.25

The study results in Table 4.17 revealed that the Sig (2-Tailed) *p* value for desire = .070, arousal = .120, lubrication = .061 and orgasm = .093 which all were greater than .05. This implied that there was no statistically significant difference between those experienced perineal birth trauma and those who did not in terms of sexual function (desire, arousal, lubrication and orgasm). This implies that differences between those experienced perineal birth trauma and those who did not are likely due to chance and not likely due to the perineal birth trauma manipulation. The results revealed that the mean number of those experienced perineal birth trauma was not much different from those who did not. However, the Sig (2-Tailed) *p* value for Satisfaction (.010) and Pain (.021) were less than .05. This implied that there was a statistically significant difference between those who experienced perineal birth trauma and those who did not in terms of sexual function (Satisfaction and Pain). From the means it implied that those women who experienced

perineal birth trauma had lower sexual satisfaction during sex than those who did not experienced perineal birth trauma, $\bar{x}$ = 1.678 and $\bar{x}$ = 1.818 respectively. Further, those women who experienced perineal birth trauma had lower pain during sexual activities than those who did not experienced perineal birth trauma, $\bar{x}$ =1.581 and $\bar{x}$ = 1.717 respectively.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter discusses the implication of the research findings on association between perineal birth trauma and postpartum sexual function among women in Kapenguria County Referral Hospital, West Pokot, Kenya.

5.2 Demographic Characteristic of the Respondents

The study findings showed that most of the respondents indicated that they were Christians. This implies that the majority of the residents in West Pokot were Christians. The study concurred with (Ngeiywo, 2018), who noted that there is a spread of Christianity among the Pokot community. A majority of the respondents were married. The study findings concurred with (Ward's, 2020) results that sexual activity in the past four weeks was reported by women who had a partner. They noted that emotional closeness during sex was associated with more frequent arousal, lubrication, and orgasm; estrogen therapy was not. A majority of the respondents had a secondary level of education. The study agrees with (Lehmiller, Garcia, Gesselman & Mark,2021) that women with some college education experience less often having sexual arousal than those without. A majority of the respondents indicated that they were farmers. The study findings concurred with (Khatib-Chahidi, 2021), who noted that sexual activity did not vary by the occupation of the head of household.

The study findings revealed that the majority of the respondents indicated that they had not undergone female genital mutilation. The study findings concurred with (Jewkes, Flood & Lang (2015), who noted that the prevalence of FGM among women aged 15-49 years in

Kenya has been gradually declining from 38% in 1998 to 21% in 2014. Kenya is one of the few countries where there is some evidence that FGM prevalence is declining, indicating that legal and policy responses may be having an effect. This is after world leaders pledging to eliminate FGM, which affects an estimated 200 million girls and women worldwide. However, according to (Oyolo, 2020) findings Kenya has seen a setback in its progress to eradicate female genital mutilation (FGM) after an open parade in defiance of the government clampdown on the practice took place this week. Almost 2,800 girls from the Kuria community in south-western Kenya have undergone FGM. A 2020 report by (UNICEF, 2020) states that Kenya's progress towards the eradication of FGM is stronger than that of other nations in eastern or southern Africa. The report states that more than 4 million girls and women in the country have undergone FGM.

5.3 Prevalence of Perineal Birth Trauma Among Postpartum Women in Kapenguria County Referral Hospital

The study findings revealed that the prevalence of perineal birth trauma among postpartum women in Kapenguria County Referral Hospital is 67.4%. The study for (Abedzadeh-Kalahroudi, Talebian, Sadat & Mesdaghinia, 2019) revealed that the incidence of perineal trauma was 84.3%. The chance of birth trauma in the cases of younger maternal age, increasing gestational age, induction of labour, fundal pressure, Iranian nationality and nulliparity are increased. The study findings further agreed with (Jansson *et al.*, 2020) who noted that perineal tears affect about 80% of women during childbirth.

According to (Blomquist, Muñoz, Carroll & Handa, 2018) up to 9 in every 10 first time mothers who have a vaginal birth will experience some sort of tear, graze or episiotomy. It is slightly less common for mothers who have had a vaginal birth before. For most women,

these tears are minor and heal quickly. However, according to (Silva-Jose *et al.,* 2021) only 2% of women endure the most severe form of perineal tearing during birth, involving the vagina, perineum and sometimes the anus. Around 27% of women experience no tearing at all, while 23% have a very minor vaginal tear or graze that often does not require stitches and heals on its own.

The study findings in Figure 4.1 revealed that majority 205(67.4%) of the respondents indicated that they experienced a tear beyond vagina during birth. This implied that the prevalence of perineal birth trauma among postpartum women in Kapenguria County Referral Hospital is 67.4%. This study findings concurred with (Gommesen, Nøhr, Qvist & Rasch, 2019) who noted that more than half of the women with a third-degree/fourth-degree tear experienced dyspareunia. Women delivering with no/labia/first-degree tears reported no persistent or recurrent genital pain that occurs just before, during or after sex. Thus, it is important to minimise the extent of perineal trauma and to counsel about sexuality during and after pregnancy. This is because impairment of sexual health is common among primiparous women after vaginal delivery. Further the study findings concurred with (Abedzadeh-Kalahroudi *et al.,* 2019) that there is high incidence of perineal trauma among postpartum women.

The study findings revealed that most of the women indicated that they experienced a tear beyond the vagina during birth. The study findings concurred with Wiseman, Rafferty, Stockley, Murrells & Bick (2019) who noted that around 27% of women experience no tearing at all during delivery. After birth, majority of women experienced difficulty walking. The study findings agreed with (Ganiga, Sharma & Pitty, 2022) who noted that if perineum was torn during the birth, the stitches may make it painful to walk for a little

while during healing. After delivery, they were unable to use the restroom for a week or so due to pain. The study findings agreed with (Gold, 2022) who noted that the stretching of muscles during delivery can cause pain when pass urine (pee).

The study results imply that the perineal trauma experience of patience includes using the restroom for a week or so due to pain and a little bit for the first time they had sex after birth. The study concurred with (Rådestad, Olsson, Nissen & Rubertsson, 2008) who noted that tears in the vagina are associated with a delay in women's resumption of sexual intercourse 6 months after childbirth in Sweden. Further, according to (FitzPatrick, Brown, Hegarty, Mensah & Gartland, 2022) pain during sex can happen after any type of birth. One of the most common reasons for discomfort during sex after giving birth is vaginal dryness, often caused by hormones. Low levels of estrogen are normal for about two months after giving birth.

5.4 Factors Associated with Perineal Birth Trauma Among Women in Kapenguria County Referral Hospital.

The study findings revealed that perineal trauma experience is statistically significantly associated with age bracket. The study findings concurred with (Sánchez-Ávila *et al.*, 2018) who noted that young mothers represent a vulnerable group for the development of high-grade perineal tears during vaginal birth delivery. The study findings revealed that perineal trauma experience is statistically significantly associated with marital status. The study disagreed with findings of (Bowling *et al.*, 2009) that there is no statistically significant association between perineal trauma experience and marital status.

The study findings revealed that perineal trauma experience is statistically significantly associated with education level. The study findings concurred with (Rezaei-Abhari *et al.,* 2019) who noted that education level of the mother and informative health education during the process of childbirth might decrease Perineal trauma. Women's participation in the process of delivery through effective health information and education could decrease Perineal trauma and might decrease the level of pain during normal childbirth. The study findings revealed that perineal trauma experience is statistically significantly associated with occupation.

The study findings revealed that perineal trauma experience is statistically significantly associated with episiotomy during delivery. The study disagreed with (Cockcroft, 2018), who concluded that there is little support for the claim that episiotomy prevents tears in normal deliveries and that the rationale for the practice of episiotomy is in need of reappraisal. The non-episiotomy group experienced more virginal tears. On the other hand, there was a tendency towards an increased risk for second-and third-degree tears. The study findings revealed that perineal trauma experience is statistically significantly associated with weight of the child. The study concurred with (Ahmed, Abdollah & Al-Tawil, 2019) whose findings revealed that birth weight of the child is associated risk factors for perineal trauma resulting in vaginal tearing.

Further, the study findings revealed that perineal trauma experience is statistically significantly associated with parity. The study failed to concur with (Birri, Kreft, Zimmermann & Kimmich, 2019), who noted that high vaginal tear was fairly common among women irrespective of parity. Further, the study findings concurred with (Hauck *et al.,* 2015) parity is associated with an increased incidence of severe perineal trauma. The

study further concurred with (Kituku, Getanda & Mwangi 2019) who noted that adjusting for other factors, the odds of sustaining perineal trauma decreased with increasing parity. According to (Angioli *et al.,* 2000) findings parity was significantly associated with the Severe perineal birth trauma among women. Further, the study findings concurred with (Abedzadeh-Kalahroudi *et al.* 2019) who noted that a high incidence of perineal trauma is associated with parity.

5.5 Sexual Function of Women Who Experience Perineal Birth Trauma

A majority of the respondents sometimes have a sexual desire or interest. The study findings agreed with the study done by (O'Loughlin, Basson & Brotto, 2018), who noted that A temporary reduction in sexual interest is common, often caused by temporary conditions, such as fatigue. In contrast, sexual interest/arousal disorder causes interest in sexual activity and response to sexual stimulation to be decreased or absent for a longer period of time and to decrease more than would be expected for a woman's age and the length of the sexual relationship. Lack of sexual interest and inability to be sexually aroused are considered disorders only if they distress the woman and if interest is absent throughout the sexual experience.

Usually, when women are sexually stimulated, they feel sexually excited, mentally and emotionally. They may also be aware of certain physical changes. For example, the vagina releases secretions that provide lubrication (causing wetness). Blood flow to the genitals increases, causing the tissues around the vaginal opening (labia) and the clitoris (which corresponds to the penis in men) to swell, the breasts swell slightly, and these areas may tingle. In sexual interest/arousal disorder, all or some of these responses are absent or significantly decreased.

Most of the respondents indicated that they were moderately sexually aroused ("turned on") during sexual activity or intercourse. The current study results were similar to those of (Meston & Stanton, 2019), who noted that some women might struggle with one or more aspects of arousal hence making them have moderate sexual arousal. Sexual arousal causes a person to want sex. A majority of the respondents indicated that they sometimes feel sexually aroused ("turned on") during sexual activity or intercourse. The study findings agree with the study by (Basson, 2001), who cited that a woman can become aroused from sexual stimulation alone or with a partner, fantasizing or having sexual thoughts, or reading, watching, or listening to erotic materials (like porn). Arousal can also happen when certain parts of their body are touched that is very sensitive (also called "erogenous zones"). But not everyone feels sexually aroused from touch.

A majority of the respondents indicated that their rate level of sexual arousal ("turn on") during sexual activity or intercourse were moderate. The study concurs with (Bradford 2016), who concluded that a diminution in one aspect of physiologic sexual arousal causes moderate arousal. A majority of the respondents indicated that they have moderate confidence in becoming sexually aroused during sexual activity or intercourse. The study findings concur with (Foong *et al.,* 2021) which found out that two-thirds of sexually active women were moderately or very satisfied with their sex life, as were almost half of sexually inactive women. A majority of the respondents indicated that they sometimes get satisfied with their arousal (excitement) during sexual activity or intercourse. This study agrees with (Rathfisch *et al.,*.2018) who noted that women who had perineal tears, had lower level of arousal, orgasm, and sexual satisfaction and more pain during intercourse.

Most of the respondents were sometimes satisfied with their arousal (excitement) during sexual activity or intercourse. The study differs from (Carpenter, 2009), who stated that one's sexual needs are the strongest factor in achieving sexual satisfaction. Women who are highly sexually assertive tend to have higher levels of desire, orgasm ability, and sexual satisfaction than their non-assertive counterparts. A majority of the respondents indicated that they find it slightly difficult to get lubricated ("wet") during sexual activity or intercourse. (Robinson, 2018) stated that vaginal dryness can have physical or psychological causes. Vaginal lubrication is often closely tied to levels of the hormone estrogen, which changes at various life stages. Medications (including hormonal birth control) may cause vaginal dryness.

A majority of the respondents indicated that they sometimes find it difficult to get lubricated ("wet") during sexual activity or intercourse. The study results concurred with (Goncharenko *et al.*, 2019) findings that vaginal dryness can happen when Estrogen levels change due to childbirth, which causes perineal birth trauma. This happens when the skin inside the vagina becomes thinner, dryer, and less stretchy, caused by changes in the levels of estrogen and other hormones in the body. This can often cause dryness, discomfort, or pain during sex. A majority of the respondents indicated that they slightly maintain their lubrication ("wetness") until the completion of sexual activity or intercourse. The study results concurred with (Espitia, 2018) findings that most women experience difficulty maintaining lubrication, and the frequency of lubrication during sexual activity decreases with the duration of sex.

A majority of the respondents indicated that sometimes they find it difficult to maintain their lubrication ("wetness") until sexual activity or intercourse is completed. The current study findings concurred with (Babakhanian *et al.,* 2018) that when women have stress, they can experience the persistent or recurrent inability to attain or maintain sufficient sexual excitement, which causes personal distress. It may be expressed as a lack of lubrication. A majority of the respondents indicated that they found it slightly difficult to have sexual stimulation or intercourse and how often they reached orgasm (climax). The study findings concurred with (Castellini & Ricca, 2018) findings that women's difficulty having sexual stimulation can be caused by psychological problems such as depression, anxiety, stress, concern with body image, or a history of abuse that can contribute to decreased arousal.

Most of the respondents indicated that they were moderately satisfied with sexual stimulation or intercourse and how difficult it was to reach orgasm (climax). The study by (Moura, 2020) concurs that orgasmic difficulties are one of the most common sexual complaints. Although models of sexual dysfunction propose that cognitive-affective factors are involved in the development and maintenance of sexual difficulties. A majority of the respondents indicated that they were moderately satisfied with their ability to reach orgasm (climax) during sexual activity or intercourse. The study findings concurred with (Kontula & Miettinen, 2016) study results which found that only 6 percent of women said that they always had an orgasm during penile-vaginal intercourse, 40 percent said they had an orgasm nearly always, 16 percent of women had an orgasm half the time, and 38 percent had one infrequently. A total of 14 percent of women under the age of 35 had never had an orgasm from intercourse.

A majority of the respondents indicated that they are moderately satisfied with the amount of emotional looseness during sexual activity between them and their partners. The study findings concurred with (Zeleke, *et al.* 2017) that most sexually active women were moderately satisfied or very satisfied with the amount of emotional closeness during sex with their partner. Satisfaction with the amount of emotional closeness during sexual activity with a partner was associated with more frequent arousal, lubrication, and orgasm.

Most of the respondents indicated that they were sometimes satisfied with their sexual relationships with their partners. The study concurred with (Evans, 2017) findings that sexual relationship satisfaction was reported by the majority of women with or without recent sexual activity. Two-thirds of the sexually active women were moderately or very satisfied with their sex life, as were almost half of sexually inactive women. In this study, sexual activity was not always necessary for sexual satisfaction. Those who were not sexually active may have achieved sexual satisfaction through touching, caressing, or other intimacies that have developed over the course of a long relationship.

A majority of the respondents indicated that they were moderately satisfied with their overall sexual life. The study findings agree with the study cited by (Isik, 2017), who agrees that Women experience less satisfaction with sexual activity, which can be affected by age, vaginal dryness, physical pain, and impaired function due to the disease. A majority of the respondents indicated that they were moderately satisfied with their level (degree) of discomfort or pain during or following vaginal penetration. This finding agrees with the study done by (Montanari, 2013), who cited that most women can experience pain during or after sex, either in the vagina or deeper in the pelvis, which is very discomforting.

5.6 Association Between Perineal Birth Trauma and Sexual Function Among Postpartum Women

The study findings revealed that there was no statistically significant association between perineal trauma experience and desire, arousal, lubrication and orgasm respectively. The study disagreed with (Ejegård, Ryding & Sjögren, 2008) who noted that women who had perineal trauma experience reported a higher frequency low desire, arousal and insufficient lubrication and orgasm than women who had given birth without tear. However, the study agreed (Lurie *et al.,* 2013) who noted that arousal, orgasm and satisfaction with sex were not affected.

However, the study findings revealed that perineal trauma experience is statistically significantly associated with sexual satisfaction. Further, the study findings revealed that perineal trauma experience is statistically associated with sexual pain. The study findings concurred with (Gutzeit, Levy & Lowenstein, 2020) findings which revealed that women who experienced any perineal trauma, namely episiotomy or rupture, had lower libido, orgasm and sexual satisfaction and experienced more pain during sexual intercourse. Presence of at least one sexual problem (lower libido, decreased sexual arousal, decreased vaginal lubrication, reduced frequency of orgasm, dissatisfaction with sex life and dyspareunia) was statistically significantly more common after childbirth.

The study concurred with (Signorello, Harlow, Chekos & Repke, 2001) who found women pain during intercourse after perineal birth delivery. The problems of pain, lack of vaginal lubrication, and loss of sexual desire all increased significantly with perineal birth delivery. The further concurred with (Signorello, 2001) who noted that the degree of perineal

trauma was related to pain on first postpartum sexual intercourse in a dose-response manner.

The study findings concurred with (Gutzeit, Levy & Lowenstein, 2020) that sexual health problems are common postpartum. After delivery, many women experiences reduced sexual desire, decreased vaginal lubrication and weaker and shorter orgasms. Further, (McBride & Kwee, 2017) noted that compared to women with an intact perineum, those who had both episiotomy and second-degree perineal tears had lower levels of libido, orgasm, sexual satisfaction and more pain during intercourse. The presence of at least one sexual problem (reduced sexual desire, reduced vaginal arousal, reduced vaginal lubrication, reduced frequency of orgasm, dissatisfaction with sexual life and dyspareunia) was statistically significantly more common after birth.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusions

The study concluded that Perineal trauma is highly prevalent in labour and delivery, and almost half the cases were due to episiotomies. Nulliparous women experience more perineal trauma compared to multiparous women.

This study revealed that in the postpartum period the most common disorder appeared to be that of sexual pain as a consequence of perineal trauma. However, the presence of at least one sexual problem like reduced sexual desire, vaginal arousal, lubrication, reduced frequency of orgasm and reduced satisfaction with sexual life was statistically common after perineal birth trauma. It was also noted that, compared to the women who did not experience perineal birth trauma, those who experienced perineal birth trauma reported significantly low sexual satisfaction and low sexual pain.

It is important therefore to note that perineal birth trauma will influence postpartum sexual functioning forcing an individual to either cope or compromise with the sexual encounters, and resulting in poor social functioning, psychological health and poor quality of life.

6.2 Recommendations

Limiting perineal trauma during delivery is important for the resumption of optimum sexual intercourse after childbirth. There is need to emphasize on selective / restrictive episiotomy practice.

Health care workers need to be made aware of this silent affliction as sexual morbidity can have a detrimental effect on a women's quality of life impacting on her social, physical and emotional well-being.

The study recommends that training and retraining need to be carried out by the County Reproductive Health Department on how to minimize factors associated with perineal birth trauma such as education level, episiotomy during delivery, weight of the child and parity.

While sexual problems are very common in the postpartum period, they are not reported in most cases. Health care providers should design appropriate programs such as extended postpartum counselling for the women in the postpartum period.

6.3 Suggestions for Further Study

The study suggests that further research is required to evaluate long-term effects of episiotomy on sexual satisfaction and pelvic floor disorders in our setting.

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APPENDICES

APPENDIX I: CONSENT FORM FOR WOMEN CONSENT TO PARTICIPATE IN THE STUDY

SERIAL NUMBER ……

Background

You are being asked to participate in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Read the following information carefully and ask us if there is anything that is not clear or if you would like more information. Please take time to decide whether you want to take part in this study

The purpose of the study is to investigate the effect of perineal birth trauma on postpartum sexual experience among women in Kapenguria County Hospital, West Pokot. My study is for research purposes only.

Study Procedure

The respondents will be requested to fill the questionnaires and give them back to the researcher the same day.

Risks

The researcher can face the risk of stressed respondents however researcher can manage risk by providing counseling if the research subject is likely to become distressed; advice about services or help as a result of discussing needs which are not being met; offering the benefits of an intervention after completion of research.

Benefits

There are no material goods benefits to you for participating in this study. A potential benefit of the study will be knowing the effect of perineal birth trauma on postpartum sexual experience among women in Kapenguria County Hospital, West Pokot. With this information, you and women would know the estimated risk and take preventive measures to prevent perineal birth trauma.

Alternative Procedures

You may choose not to participate in this study

Confidentiality

This research will be conducted in accordance with all the Kenyan laws and regulations that protect rights of human research subjects. All records and other information obtained will be kept strictly confidential and protected health information will not be used without permission. All data collection tools will be identified by number or otherwise coded to protect any information that could be used to identify you. Results of this study may be published, but no names or other identifying information will be released.

Person to Contact

If you have questions, complaints or concerns about this study, you can contact the investigator from School of Medicine, Moi University.

Pauline Ogake Okari

+254725121868

Voluntary Participation

It is up to you to decide whether you will take part in this study. Refusal to participate or the decision to withdraw from this research will involve no penalty or loss of benefits to which you are otherwise entitled. This will not affect your relationship with the investigators.

Right of investigator to withdraw

The investigator can withdraw you from the research without your approval.

Costs and Compensation to participants

There is no cost to you, and there is no compensation to subjects for participation in this study.

Authorization for use of your protected health information

This study does not entail the use of protected health information.

Thank you for your participation in this research and I truly appreciate your help.

CONSENT

By signing this consent form, I confirm I have read the information in this consent form and have had the opportunity to ask questions. I will be given a signed copy of this consent form. I voluntarily agree to take part in this study.

Name of parents/guardian ……Signature……... Date……...

Name of Investigator ……Signature…… Date……...

APPENDIX II: QUESTIONNAIRE

Section A: Demographic profile of the Respondents

Kindly tick appropriately where applicable to you.

1. **Your Age**…….
2. **Your Religion** [a] Christian [b] Muslim [c] atheist
3. **Your Marital status** [a] married [b] divorced [c] separated [d] single [e]window
4. **Your Education level** [a] primary [b] secondary [c] college [d] university
5. **What is your Occupation** [a] employed [b] farmer [c] house wife
6. **What were the interventions during delivery**

   [a] An episiotomy [b] a vacuum extraction [c] a forceps delivery
7. **What was your child Birth weight**……
8. **Have you undergone Female Genital Mutilation**: [a] Yes [b] No.
9. **What is your parity (number of children)**……..

Part B: Perineal birth trauma experience

Kindly tick yes or no against the Statement below

	Your response			
Statement	A little bit	Moderate	high/big	Not at all
During birth, I experienced tear beyond vagina	A little bit	Moderate	high/big	Not at all
After birth, I experienced difficulty walking	A little bit	Moderate	high/big	Not at all
After delivery, I was not able to use rest room for a week or so due to pain	A little bit	Moderate	high/big	Not at all
My frequency of urination has changed after birth	A little bit	Moderate	high/big	Not at all
I felt pain when having sex for the first time after birth	A little bit	Moderate	high/big	Not at all

Part C: Female Sexual Function Index

Kindly respond to the following questions to the best of your knowledge. The answer options are provided on the right side of the paper.

	Statement	**Your Response**
1.	Over the past 4 weeks, how **often** did you feel sexual desire or interest?	5 = Almost always or always 4 = Most times (more than half the time) 3 = Sometimes (about half the time) 2 = A few times (less than half the time) 1 = Almost never or never
2.	Over the past 4 weeks, how would you rate your level (degree) of sexual desire or interest?	5 = Very high 4 = High 3 = Moderate 2 = Low 1 = Very low or none at all
3.	Over the past 4 weeks, how **often** did you feel sexually aroused ("turned on") during sexual activity or intercourse?	0 = No sexual activity 5 = Almost always or always 4 = Most times (more than half the time) 3 = Sometimes (about half the time) 2 = A few times (less than half the time) 1 = Almost never or never
4.	Over the past 4 weeks, how would you rate your **level** of sexual	0 = No sexual activity 5 = Very high

	arousal ("turn on") during sexual activity or intercourse?	4 = High 3 = Moderate 2 = Low 1 = Very low or none at all
5.	Over the past 4 weeks, how **confident** were you about becoming sexually aroused during sexual activity or intercourse?	0 = No sexual activity 5 = Very high confidence 4 = High confidence 3 = Moderate confidence 2 = Low confidence 1 = Very low or no confidence
6.	Over the past 4 weeks, how **often** have you been satisfied with your arousal (excitement) during sexual activity or intercourse?	0 = No sexual activity 5 = Almost always or always 4 = Most times (more than half the time) 3 = Sometimes (about half the time) 2 = A few times (less than half the time) 1 = Almost never or never
7.	Over the past 4 weeks, how **often** did you become lubricated ("wet") during sexual activity or intercourse?	0 = No sexual activity 5 = Almost always or always 4 = Most times (more than half the time) 3 = Sometimes (about half the time) 2 = A few times (less than half the time) 1 = Almost never or never

8.	Over the past 4 weeks, how **difficult** was it to become lubricated ("wet") during sexual activity or intercourse?	0 = No sexual activity 1 = Extremely difficult or impossible 2 = Very difficult 3 = Difficult 4 = Slightly difficult 5 = Not difficult
9.	Over the past 4 weeks, how often did you **maintain** your lubrication ("wetness") until completion of sexual activity or intercourse?	0 = No sexual activity 5 = Almost always or always 4 = Most times (more than half the time) 3 = Sometimes (about half the time) 2 = A few times (less than half the time) 1 = Almost never or never
10.	Over the past 4 weeks, how **difficult** was it to maintain your lubrication ("wetness") until completion of sexual activity or intercourse?	0 = No sexual activity 1 = Extremely difficult or impossible 2 = Very difficult 3 = Difficult 4 = Slightly difficult 5 = Not difficult
11.	Over the past 4 weeks, when you had	0 = No sexual activity 5 = Almost always or always 4 = Most times (more than half the time)

	sexual stimulation or intercourse, how **often** did you reach orgasm (climax)?	3 = Sometimes (about half the time) 2 = A few times (less than half the time) 1 = Almost never or never
12.	Over the past 4 weeks, when you had sexual stimulation or intercourse, how **difficult** was it for you to reach orgasm (climax)?	0 = No sexual activity 1 = Extremely difficult or impossible 2 = Very difficult 3 = Difficult 4 = Slightly difficult 5 = Not difficult
13.	Over the past 4 weeks, how **satisfied** were you with your ability to reach orgasm (climax) during sexual activity or intercourse?	0 = No sexual activity 5 = Very satisfied 4 = Moderately satisfied 3 = About equally satisfied and dissatisfied 2 = Moderately dissatisfied 1 = Very dissatisfied
14.	Over the past 4 weeks, how **satisfied** have you been with the amount of emotional looseness during sexual activity between you and your partner?	0 = No sexual activity 5 = Very satisfied 4 = Moderately satisfied 3 = About equally satisfied and dissatisfied 2 = Moderately dissatisfied 1 = Very dissatisfied

15.	Over the past 4 weeks, how **satisfied** have you been with your sexual relationship with your partner?	5 = Very satisfied 4 = Moderately satisfied 3 = About equally satisfied and dissatisfied 2 = Moderately dissatisfied 1 = Very dissatisfied
16.	Over the past 4 weeks, how **satisfied** have you been with your overall sexual life?	5 = Very satisfied 4 = Moderately satisfied 3 = About equally satisfied and dissatisfied 2 = Moderately dissatisfied 1 = Very dissatisfied
17.	Over the past 4 weeks, how **often** did you experience discomfort or pain during vaginal penetration?	0 = Did not attempt intercourse 1 = Almost always or always 2 = Most times (more than half the time) 3 = Sometimes (about half the time) 4 = A few times (less than half the time) 5 = Almost never or never
18.	Over the past 4 weeks, how **often** did you experience discomfort or pain following vaginal penetration?	0 = Did not attempt intercourse 1 = Almost always or always 2 = Most times (more than half the time) 3 = Sometimes (about half the time) 4 = A few times (less than half the time)

		5 = Almost never or never
19.	Over the past 4 weeks, how would you rate your **level** (degree) of discomfort or pain during or following vaginal penetration?	0 = Did not attempt intercourse 1 = Very high 2 = High 3 = Moderate 4 = Low 5 = Very low or none at all

APPENDIX III: CONSENT FORM AND QUESTIONNAIRE IN POKOT

CHOMUT KERUMUNO KISHIAKAT SERIAL NUMBER ……

MWOWONOTE

Kakusominyi lo chama rumuneno kishakatanete. Kutomonye mutanyi chomut, po kinyiwut ingitunonyi lo ombo nee tokegh kishakatanete akeghoi lo nee. Somono lasiny ngalechu ruptoi atolopoi itepecha ato mi kigh nyo mopkochinyinye lasiny. Kaikai chenga poroyin tertena kutomo muta lo ichomenyi rumunone kishakatanete.

Kerut nyopo kishakatanete ku kekut lasiny kisusut cho weru koru ombo porywoyikwa atakikuyiyo ombo skutalpo county nyopo kapenguria, West Pokot. Kishakatenyan kupo kutut kule.

W**olo toptoi kishiakate**

Mchinote chi kunyighit molyongutkachi ombo teputchete akuyokchi kishiokin aswanini

Ghoyin

Muchoo kunyoru kishiokinto ghoyintin kiweruno kisusutpo chichino molyongu teput, wolo muchoi kishiokin kungarach kuweruno gholonchinogh ngorochoi kishiokinto kumwowu lo nee nyo karam ompo soromuu kishiakatanete. .

Sukunoghto

Mominyinye sukunogh nyopo tukun ompo nyi ompo kishiakatanete .Sukunoghto nyo wow nyopo kishiakatanete ku kengutu kisusut cho nyoru yotuno atakakuyiyo ompo porwoi cho

le chikwa ompo skutal nyo wow nyopo kapenguria , West Pokot county. Ompo kingutunoighnete, nyi ngo korka ongutunekwa lo tia kisusut akekortoi lo nee kisusutchoni ompo yiyo.

Oree anga

Imukenyi tagha rumuneno kishiakat.

Wung'ut

Kighoi kishiakatanete kirupatakegh ngo kirurutpo Kenya ngo kerip manpa chi nyomi oripo kishiakat. Kikirut lapai ngo ngale walak keroroi akerip lasiny amopoghisioghonye chi kpurio chomutyengu Tukwin lowur cho kapoghisiegho kekrchi ngaleku keroroi akerip lasiny. Mukoo keparta molyoghutpo kishiakatnete wolo mominye kainatachi nyo kiportoi anta kugh nyomukoi kuportoi chi.

Kiporunot chopo chi

Oto itingetenyi teput kingurngurat ompo kishiakatanete imukenyi nyoruno kishiokin ompo skutalpo sokit nyopo, Moi University.

Pauline Ogake Okari

+254725121868

Chomutyengu rumuneno.

Kulatengu rumuneno anda merumuno kishiakat. Mominye sitot ngo chopat nyopo kingorokut nyo kenyorunenyi ato itaghanyi irumuno kishiakat. Mesusoinye tiliantanegu ngo kutin.affect.

Manpa kutin kutiachta

Mukoi kutin kutiachtinyi kpurio chamatengu.

Oliot nyopo chichu kengun.

Mominye oliot ngo kingorokut ompo chichu kacham krumuno kishiakat.

Chomut nyopo kepoghisiogho ngalaku cho ripote chopo tililin.

Mpoghisieghonye kishiakatanete nglaku chopo tililin.

Soro nyo wow ompo rumunoghtongu ompo kishiakatanete. Kagharakan ompo kingorokutiengu.

CHOMUT

Ompo otokonon palaliatanu. Kachaman lo,kosomonon ngalachi mi palaliantanu po chomut akatepan teput.kukonanun wop nyo tokonote nyopo palalianta chomut. Kachaman ongut lo orumunenan kishiakatanete.

Kainata ripin/yiyin ……Tokonote……... asist……...

Kainata kutin …… Tokonote …… Asista……...

Wop A: Ngala chi kegh

Kaikai swang'a le ato muko.

10. **konyisweku**…….
11. **kanisengu** [a] Christian [b] Muslim [c] atheist
12. **Ompo kensieng'u** [a] kensiote [b] kiyonsio [c] kitaranyi kegh [d] ichinyi akonga [e]msukian
13. **Kisomononyi nyo tya** [a] primary [b] secondary [c] college [d] university

    Ighenyi ighisio nee [a] kikikirinyi kasi [b] ngorin [c] yoopo kaw
14. **Nee nyo kikiwunyii atakiminyi iyiyoi**

    [a] kikuwatinyi [b] kikichuteninyi karin [c] kikichuto Karin monta
15. **Kityaa motangu otini kiyui**……
16. **Kiwenyi rotwo**: [a] owoi [b] ewoo
17. **Tya yiyen'gu (ata moneku)**……..

Wop B: korerupo araa yiyo

Kaiakai swang'a lo owoi anda ewoo ompo ngalachu riptoi.

	Your response			
Ngolionte	Munugh kite	mikwen	wow	mominye
Otini kiyiyan. kikareranun araa yiyo	Munung kite	mikwen	wow	mominye
Otini kimucho lusiogh, kisukon kisusutpo westogh	Munung kite	Mi kwen	wow	mominye

Otini kimucho lusiogh, kimamuchanye opoghisio kopo kiminy ompo wiki akonga ompo kichir	Munung kite	Mi kwen	wow	Mominye
Kiwoyokishio wolo kikantanun sikororu otini kimucho yiyo	Munung kite	Mi kwen	wow	Mominye
Kialumtan ngwonun otini kiariaman ngo mron nyo tagh otini kukumucho yiyo	Munung kite	Mi kwen	wow	Mominye

Wop C: Chamata korka nyopoaraa riwon

Kakai molyonguno teputchu riptoi ompo ngoghomieng'u nyopo barak .kikekonu molyong'utko ompo wopto nyo okumpo tagh.

	Statement	**Your Response**
20.	Ompo wikin 4 chokewre ,kesukonyu pirchin nyopo muten kunyul ata ?	5 = ompo osis lowur 4 = kunyul cho chang 3 = ompo osis walak (ompo kwenu osis) 2 = ompo osis chong'oru 1 = mominye ompo asis akong
21.	Ompo wikin 4 cho kewer ,imukenyi mwagha lo tia purchin nyo itingetenyi riamaena por ng'o muren?	5 = mi parak tia 4 = mi parak 3 = mi kwen 2 = mi too 1 = mi too tia anda mominye kony

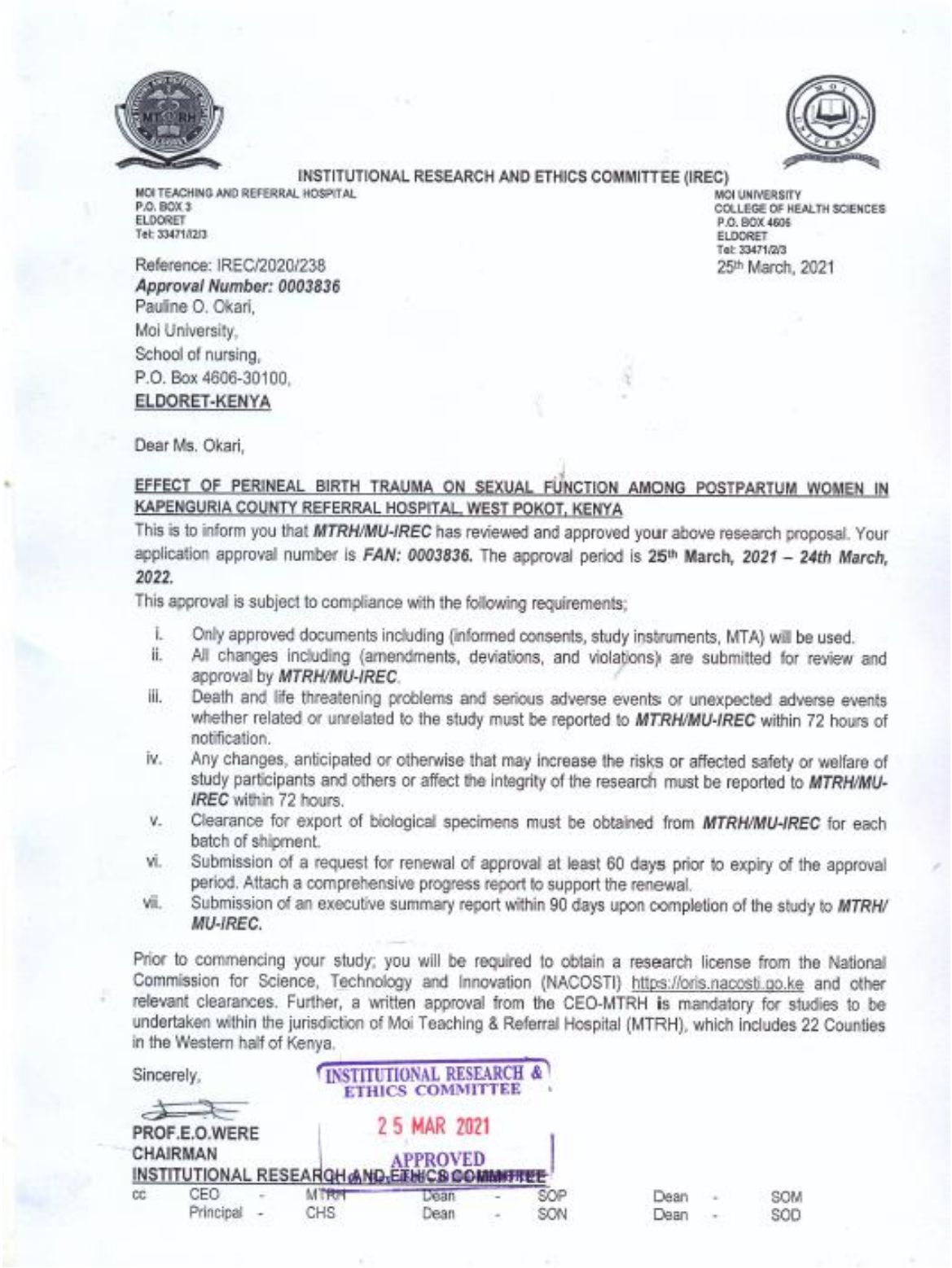
22.	Ompo wikin 4 cho kewer ,kunyul ata nyo kilimtenyi pirchinpo nyoriogh nyopo por ng'o muren?	0 = mominye purchin 5 = ompo osiswe lowur 4 = ompo osiswe cho chang 3 = ompo osiswe walak 2 = ompo osiswe cho ng'oru 1 = mominye nyoni kuny
23.	Omp[o wikin 4 cho kewer ,imukenyi mwagha lo tia purchin nyo itingetenyi ompo kiriamataa porr ngo muren?Over	0 = mominye kiriamata 5 = mi parak tia 4 = mi parak 3 = mi kwen 2 = munung 1 = mi too tia
24.	Ompo wikin 4 cho kewer kitingetenyi, nyakanat kitiaa ompo sukonyi putchin nyopo muren?	0 = mominye kiriamata 5 = mi parak tia nyakanata 4 = mi parak nyakanata 3 = mi kwen nyakanata 2 = munung nyakanata 1 = mi too tia anda mominye nyakanata
25.	Ompo wikin 4 cho kewre ,kunyul cho tia nyokighaminyi chomnyoghpo nyoriogh ngo muren?	0 = mominye nyoriogh 5 = ompo osiswe lapai anda chik. 4 = ompo osiswe cho chang 3 = ompo osis walaka

		2 = ompo osis cho ngoru. 1 = mominye nyonu kuny.
26.	Ompo wikin 4 cho kewer kunyul ata nyo kepurunyi pogh chopo kopo yiyo otini keminyi ighisio nyopo kiriamat ngo muren.	0 = mominye nyoriogh 5 = ompo osiswe lapai anda chik. 4 = ompo osiswe cho chang 3 = ompo osis walaka 2 = ompo osis cho ngoru. 1 = mominye nyonu kuny.
27.	Ompo wikin 4 cho kewer, kikampalal kutyaa kuchapchapit nyi kopo yiyo otini iminyi ngo muren ompo piroo poroi?	0 = mominye nyoriogh 5 = ompo osiswe lapai anda chik. 4 = ompo osiswe cho chang 3 = ompo osis walaka 2 = ompo osis cho ngoru. 1 = mominye nyonu kuny.
28.	Ompo wikin 4 cho kewer , kumukanyi ripo chopchopio nyo tia ompo portangu tokuteno kumucho piroo poroi?	0 = mominye nyoriogh 5 = ompo osiswe lapai anda chik. 4 = ompo osiswe cho chang 3 = ompo osis walaka 2 = ompo osis cho ngoru. 1 = mominye nyonu kuny.

29.	Ompo wikin 4 cho kewer , ki ang'er kutyaa riponyi chopchopyio portong'u tokumucho piroo poroi?	0 = mominye piroo poroi 1 = kampalal nyoman anda memukonye 2 = kampalal tia 3 = kampalal 4 = kamapalal mut 5 = mominye kompolelyo
30.	Ompo wikin 4 cho kewer ,kilumtenyi onyinyo kunyul ata otini iminyi oripo piroo poroi	0 = mominye nyoriogh 5 = ompo osiswe lapai anda chik. 4 = ompo osiswe cho chang 3 = ompo osis walaka 2 = ompo osis cho ngoru. 1 = mominye nyonu kuny
31.	Ompo wikin 4 cho kewer kikampalal le nee ompo nyi lumtenanyi onyinio ompo oripo piroo poroi?	0 = mominye piroo poroi 1 = kampalal nyoman anda memukonye 2 = kampalal tia 3 = kampalal 4 = kamapalal mut 5 = mominye kompolelyo

32.	Ompo wikin 4 cho kewer, kighaminyi le nee otini kireltenyi onyinio ompo oripo piroo poroi?	0 = mominye piroo poroi 5 = kighamanun lasiny 4 = kigham nyomi kwen 3 = kigham ama ghamnye lasiny 2 = moghamnye nyomi kwen 1 = moghamaninnye nyoni kuny
33.	Ompo wikin 4 cho kewer , kighaminyi le nee oto potio kinonutkoku ompo chamanagu ompo oripo piroo poroi?	0 = mominye proo poroi 5 = kighamanun lasiny 4 = kigham nyomi kwen 3 = kigham ama ghamnye lasiny 2 = moghamnye nyomi kwen 1 = moghamaninnye nyoni kuny
34.	Ompo wikin 4 cho kewer , kighaminyi kityaa chitang'u ompo piroo poroi ?	5 = kighamanun lasiny 4 = kigham nyomi kwen 3 = kigham ama ghamnye lasiny 2 = moghamnye nyomi kwen 1 = moghamaninnye nyoni kuny
35.	Ompo wikin angwan cho kewer ,kimghaminye kutyaa piroo poroi ompo poghisiengu kumukul?	5 = kighamanun lasiny 4 = kigham nyomi kwen 3 = kigham ama ghamnye lasiny 2 = moghamnye nyomi kwen 1 = moghamaninnye nyoni kuny

Appendix VI: IREC APPROVAL



INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE (IREC)

MOI TEACHING AND REFERRAL HOSPITAL
P.O. BOX 3
ELDORET
Tel: 33471/2/3

MOI UNIVERSITY
COLLEGE OF HEALTH SCIENCES
P.O. BOX 4606
ELDORET
Tel: 33471/2/3

Reference: IREC/2020/238
Approval Number: 0003836
25th March, 2021

Pauline O. Okari,
Moi University,
School of nursing,
P.O. Box 4606-30100,
ELDORET-KENYA

Dear Ms. Okari,

EFFECT OF PERINEAL BIRTH TRAUMA ON SEXUAL FUNCTION AMONG POSTPARTUM WOMEN IN KAPENGURIA COUNTY REFERRAL HOSPITAL, WEST POKOT, KENYA

This is to inform you that ***MTRH/MU-IREC*** has reviewed and approved your above research proposal. Your application approval number is ***FAN: 0003836.*** The approval period is **25th March, *2021 – 24th March, 2022.***

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by ***MTRH/MU-IREC.***
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to ***MTRH/MU-IREC*** within 72 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to ***MTRH/MU-IREC*** within 72 hours.
v. Clearance for export of biological specimens must be obtained from ***MTRH/MU-IREC*** for each batch of shipment.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to ***MTRH/MU-IREC.***

Prior to commencing your study; you will be required to obtain a research license from the National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and other relevant clearances. Further, a written approval from the CEO-MTRH is mandatory for studies to be undertaken within the jurisdiction of Moi Teaching & Referral Hospital (MTRH), which includes 22 Counties in the Western half of Kenya.

Sincerely,

INSTITUTIONAL RESEARCH & ETHICS COMMITTEE
25 MAR 2021
APPROVED

PROF.E.O.WERE
CHAIRMAN
INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE

cc CEO - MTRH Dean - SOP Dean - SOM
Principal - CHS Dean - SON Dean - SOD

APPENDIX V: PERMISSION TO CONDUCT RESEARCH

COUNTY GOVERNMENT OF WEST POKOT

MINISTRY OF HEALTH AND SANITATION

Telephone: +254 736 182216
Email: kapenguriad@yahoo.com

OFFICE OF THE MEDICAL SUPERINTENDENT
P.O BOX 63-30600,
KAPENGURIA

KAPENGURIA COUNTY REFERRAL HOSPITAL

DATE: 15th April 2021

Ms Paulne O. Okari

Moi University

School Of Nursing

P.O Box 4606-30100

Eldoret,Kenya

PERMISSION TO CONDUCT RESEARCH IN KAPENGURIA COUNTYREFERRAL HOSPITAL

This is to confirm that Ms. Pauline Ogake Somoni Okari –SN/PGMNH/02/17 of Moi University has been permitted to conduct research for the thesis titled ' **Association Between Perineal Birth Trauma And Sexual Function Among Postpartum Women In Kapenguria County Referral Hospital'.**

This permission is valid for the period ending 15th April, 2022. The Research shall submit a copy of the final report to the institution of completion

MINISTRY OF HEALTH & SANITATION
MEDICAL SUPERINTENDENT
APR 2021
KAPENGURIA COUNTY REFERRAL HOSPITAL
P. O. Box 63-30600, KAPENGURIA

Medical Superintendent

Kapenguria County Referral Hospital

Appendix VI: NACOSTI LICENSE

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 963114

Date of Issue: 13/April/2021

RESEARCH LICENSE

This is to Certify that Ms.. Pauline Ogake - Somoni Okari of Moi University, has been licensed to conduct research in Westpokot on the topic: ASSOCIATION BETWEEN PERINEAL BIRTH TRAUMA AND POSTPARTUM SEXUAL FUNCTION AMONG WOMEN IN KAPENGURIA COUNTY REFERRAL HOSPITAL, WEST POKOT, KENYA for the period ending : 13/April/2022.

License No: NACOSTI/P/21/9923

963114

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

APPENDIX VII: MAP OF WEST POKOT COUNTY

West Pokot County (painted Red)