Original Research Article

Perceived Indigenous Perspectives of Maternal Health Care Services among Women of Marakwet, Kenya

ABSTRACT

Background: Recognition of the vulnerabilities and differentials in maternal indicator is a pressing concern throughout safe motherhood literature. Uptake of skilled delivery by women in Marakwet remain 44%, compared to the national rate of 68%. Accountability for improving maternal indicators calls for interrogation of indigenous practices to amend complex social causes.

Methods: This was a qualitative study conducted in the thirteen patrilineal clans of Marakwet. Discussants were women of reproductive age while key informants included cultural anthropologist, traditionalist and gatekeepers. The data was analyzed manually through a process of data reduction, organization and emerging patterns interpretation then sub categories.

Results: Pregnancy and delivery are not just biomedical process but culturally biosocial practice. Discipline and socialization are critical elements. Adequate self, family and community care lead to noble pregnancy outcome. The community and midwife uses knowledge to jumpstart childbirth practices for expectant women for healthy prenatal period, delivery and postnatal running. Holiness and hygiene, controlled sex and sexual relationships, artefacts and dressing, food ways and diet, social interaction, livelihoods and lifestyle are key pregnancy and childbirth social aetiology.

Conclusion: cultural stimuli and remedies inform maternal health seeking behaviour and practices of women. Continued care, hygiene, geophagy, controlled food ways and social interaction as well as avoiding heavy duties and events that trigger emotions and pressure are sound indigenous ways of improving maternal and child health. However, norms such as visiting a midwife for pregnancy confirmation and massage as well as folk activities such as the use of charms and repertoires for protection and cleansing ceremonies provide false protection.

Recommendation: the results suggest the relative value for indigenous maternal health care services in enhancing client centered delivery health services. Review of policies and programs to integrate harmless indigenous practices into maternity care services may promote quality, satisfaction and uptake of facility based childbirth services.

Keywords: Indigenous Perspectives, maternal health Care, Marakwet

1. INTRODUCTION

Inequalities between the maternal health of minorities and marginalized populations continue to be prevalent [1, 2]. Globally, vulnerable women experience significantly worse maternal health outcome in pregnancy and childbirth more often than other women [3]. Patterns of substantial differences across continents and countries are documented [4, 5 &6].The United States has the highest African American mothers' maternal mortality rates among comparable developed countries [7]. American women are dying from preventable pregnancy-related complications at three to four times the rate of non-Hispanic white women [7]. The overall maternal mortality ratio for high-income countries (12 per 100 000 live births) is 46 times lower than the highest figure in sub-Saharan Africa (546 per 100 000) [8]. At national level, in Mexico, North America maternal mortality among marginalized women was five times higher than that of non-marginalized women [5]. In Australia, maternal death rate for marginalized women was three times higher compared to non-marginalized women between 2006-2010 [6]. African data has not been disaggregated into special minorities and marginalized women groups such as Berber, Haratin and Sahawi of North Africa, Batwa of Central Africa, Sengwer in Marakwet and IL Chamus of East Africa [9]. This makes comparative studies from Africa hard to find.

Recognition of the vulnerabilities and differentials is a pressing concern [10] both from a public health perspective as well as human rights eye [11]. Skilled birth assistants, enabling environment and a functioning referral system are critical components throughout safe motherhood literature [12]. Despite being essential to saving lives and reducing maternal mortality, statistics from vulnerable communities in Kenya, such as Sengwer of Marakwet, Ogiek and IL Chamus remain wanting [9, 13]. Two out of five deliveries translating to 44% are undertaken under skilled care compared to 68% nationally [11]. Additionally, the fraction of expectant women who make the envisaged standards antenatal visits or postnatal service are on the decline in contrast to the national [9]. Child spacing and exclusive breast-feeding, and malnutrition remain challenging issues [11].

Planning and accountability for improving maternal health indicators require initiatives amending complex social and structural causes [14, 15]. The burden is however, how to generate new, or adjust existing approaches to actualize patient centered discourses. Zimu-Biyela opines that studies to interrogate on valuable indigenous knowledge and practices to understand local situations and inform services provision are cognizant [1]. In the same tone, World Health Organization calls for cultural dynamic, needs preference of the recipient to be understood, recognized, anticipated and incorporated into maternity care services [16]. Lieberman adds that most health experts say there is no mystery surrounding what is needed to tackle maternal deaths but understanding context needs offers a starter template for continued progress [17]. In light of these, this paper highlights

perspectives; experience and expectation of giving birth among the women in Marakwet.

2. METHODS

Study Design and Setting

This descriptive explorative qualitative study focused on indigenous cultural practices as well as the interpretation of maternity service health seeking behaviour among women of reproductive age living in Sambirir, Kapyego, Endo, and Embobut/Embolot wards of Elgeyo-Marakwet County, Kenya. This study was part of cluster randomized controlled trial (CRT) investigating the effect of training health workers in cultural competence on satisfaction with maternity services among women.

Study site

The study was conducted in Marakwet East Sub County, Kenya. The topography of Marakwet East includes the northern part of the Kerio Valley, Elgeyo Escarpment and Highlands. Marakwet East is subdivided into Sambirir, Kapyego, Endo, and Embobut/Embolot wards. Sengwer are scattered pockets across Trans Nzoia, West Pokot but majority live in Marakwet East, Elgeyo-Marakwet County. The Sengwer in Marakwet East is one among five distinct territorial groups. The others are Almoo, Endoow, Sombirir, and Markweta. The territorial groups are cascaded into thirteen patrilineal clans, which further split into two or more exogamic sections distinguished by totems. Socio-cultural values are unique and intertwined. According to Kipchumba in a book titled aspects of indigenous religion among the Marakwet of Kenya, various cultural themes are important in various pedigrees across various sub tribes and clans among the Marakwet [18].The cultural themes include Marriage, Pregnancy, Delivery, Weddings, Initiation, Abortion, Murder, Death, Oath, Suicide, Aging, Diseases, and Hunger in the society. Healthcare facilities are evenly distributed [19], however, the proportion of births in health facilities is only 38% compared to the average county index of 65% [20]. Maternity-care needs vary within and between communities therefore a research exploring why women living in Marakwet East averse hospitals childbirth and perspective of giving birth is a priority action [17, 21].

Study population

Discussants were local Marakwet women of reproductive ages (15-49 years) who had not taken part in quantitative survey. The KII participants were community experts (cultural anthologist, Elders, and traditional healers), gatekeepers (chiefs, religious leaders, opinion leaders) and healthcare providers (nurses, midwives and facility administrators).

Sampling technique

Qualitative survey was conducted in catchment areas of the 14 health facilities in the three wards. These catchment community areas represented the thirteen patrilineal clans. Focus Group Discussion (FGD) and Key Informant Interviews (KII) were

undertaken in each patrilineal clan. Participants in each FGD were selected purposively with different demographic and sub cultural background. Key considerations were age, number of children, and experience, and sub tribe, level of education and income. The purposive sampling helped to select culturally grounded participants, experienced and exposed on maternity services as well as set conducive environment for peers to talk and express freely. Prior to the FGD session, the participants were screened appropriately; ground rules were set, study objectives and consent shared and discussant tagged for confidentiality. For optimum interaction, a semi-circle sitting arrangement was set and participants requested to speak one at time. The theme started with general questions to specific sub themes. The participants were given opportunity for co-create and simulate situations, phenomenon and needs where applicable. Co-creation approach provided a structured role-play to gather insights on how best discussant felt about current maternity services, important socio-cultural maternity dynamics and suggestive ways of integration for optimum benefits as well as success uptake. Renowned cultural experts from Marakwet open source teams moderated FGDs and took session notes after training. FGD proceedings was audio recorded.

Data Collection Tools

Data was collected using semi structured FGD and KII guides in the months of July-September 2018. The major themes in the tools included indigenous maternal care practices relative to conventional maternity services; cultured maternity needs, knowledge and beliefs, patients' behavioural patterns and expectations contextualizing community maternal health care services and needs.

Validity and Reliability

Content and concurrent validity were tested. The research material were crossed checked by cultural experts for consistency with study objectives. The study adopted equivalence approach to assess tool reliability, which according to Polit & Hungler, (1999), as quoted by Nandjila, is where two, or more observers (raters) use an instrument to measure the same phenomena then compare the results [22]. In this study, two independent persons who were not part of the study but experts in the area of cultural competence reviewed the tools. The experts and the scholar reviewed feedback and compared whether the experts interpreted the questions on the same scope and values in panel discussion.

Data Collection Procedures

Prior to the FGD session, the participants were screened appropriately. Studies were undertaken in private setting. Participant were tagged for confidentiality. Prior to the session, participant were informed of ground rules and study objectives. For optimum interaction, the semicircle sitting arrangement was set and participants requested to speak one at time. The theme started with general questions to specific sub theme. The participant were given opportunity to simulate situations, phenomenon and needs where applicable. The FGDs duration was 55 minutes to 97 minutes. Rapid analysis informed incorporation of emerging issues in the subsequent interviews. Moderation and data notes were taken intechangingbly by the team. The tenet of human subjects were followed. The purpose, risks, benefits and results use, were explained. Study participation was voluntary and respondents were informed of their right to consent, decline to participate and to withdraw from the interview at any point.

Data Analysis

The qualitative data was analyzed manually in two steps. Rapid analysis was undertaken upon completion of an FGD in order to note emerging issues for subsequent sessions and take care of data saturation. After completion of qualitative survey, Audios were transcribed and data analyzed manually through a process of data reduction (identification of key themes), organization and interpretation (establishing the emerging patterns) then sub categories for presentation.

3. RESULTS

Principle of midwifing

Most of the discussants recognized that rich norms, values, taboos, and traditions are the fabric of pregnancy and childbirth processes among Marakwet, Sengwer included. Additionally, majority of the study participants alluded that pregnancy and delivery as not just a child gateway process but culturally domiciled IK activity.

A discussant captioned '*selection of a midwife is socially and cultural ascribed function grounded on the reverence of the select midwife by the pregnant women and her family'*.

The community IK practices are anchored on a three-tier interaction; community, midwife *(Kokopo kaw*) and pregnant woman. Just as the principle of levers, the community and midwife use a bar (knowledge) to transfer an effort (pregnancy and childbirth practices) through a fulcrum (expectant women) for healthy prenatal period, delivery and postnatal running. A number of discussant agreed in the Marakwet community, a pregnant woman is 'married' to a midwife *(Kokopo kaw)* for pregnancy and childbirth support and services. One discussant explained 'a *primigravida (woman), suspecting of successful conception liaises with the mother-in-law or senior women in the society for guidance and support on selection of midwife. The team will consult widely and zero down on one or two midwifes from whom the pregnant woman will choose from'*. The discussant across the study settings unanimously agreed that the selected midwife becomes the mother mentor and supports the woman during her present and subsequent pregnancies and childbirth.

Midwife attributes

The results revealed that age and age set, gender specifications, initiation, good moral standings and birthing experience make general qualities of a midwife among the Marakwet. A discussant explained that *'pregnancy and childbirth support is the preserve of experienced, circumcised and mature women; rarely does young women support and mentor old woman. Likewise, it is a taboo for a mother-in-law to support her daughter-in-law*. Another discussant added, *'it is a distasteful to be supported or assisted by a male of the same age set ("husband") to a woman spouse'*. The interplay of these attributes inform the choice of birthing sites and birthing assistants.

Roles of a midwife

The first role of the midwife is confirmation of the pregnancy and review of the client's history. Diagnosis is through palpation of the abdomen usually at second trimester (commonly the fourth month). Thereafter, she initiates indigenous antenatal care. This entails inculcating pregnancy and childbirth norms, values, taboos and practices. The scribes are envisioned to shape the woman's social and nutritional etiquette and habit as well as pregnancy copying strategies. Principally, the pregnant woman behaviour and way of life is a customized. A discussant abstracted *'pregnant women are guided by values and norms. The values and norms are aimed at deterring disaster during pregnancy and childbirth'.*

Companion's support during emergencies and assist in placenta management, naming and giving feedback to the family outcome as verbalized. '*Naming is crucial activity and it's usually a preserve for senior women who understand the doctrine of naming among the Marakwet. For your information, labour and the baby's exit style and position during delivery informs naming. Delivery time, season and trending community activities are also key. These values are hardly in the prism of healthscapes'.* Community companionship and participation is the epitome of labour and Childbirth. A discussant abridged '*ordinarily, a baby is a blessing to a society, therefore an opportunity to usher a child to the world is treasured by all particularly grand's mothers. In this regards, a pregnancy and childbirth care are societal task'.* This phenomenon is threatened by civilization and medicalization of delivery process *"We are obsessed with westernizing at expenses of our heritage, why do health workers expel companions from delivery rooms? Why*?

Lifestyle during Pregnancy, and Childbirth

Discipline during pregnancy is a critical element that emerged in this study. Socialization is prescribed and limited during pregnancy, childbirth and postpartum. It is conceived that adequate self, family and community care lead to noble pregnancy and pregnancy outcome. Holiness and hygiene, sex and sexual relationships, artefacts and dressing, food ways and diet, social interaction, livelihoods and lifestyle are key pregnancy and childbirth social aetiology and discipline. The couple are forbidden from engaging in sexual activity and viewing dead bodies. Outlawing of sex is to shun 'white dirt' but primarily to avoid infections. Viewing of dead body is to avoid external pressure. Additionally, the pregnant woman forbidden from attending funerals while the spouse is forbidden from digging grave, engaging in fights, raids and wars are renounced. A discussant said, '*our fore fathers foresaw the effect of psychological distress, during pregnant. Therefore, they set rules prohibiting spouses from engaging in pressure trigger activities such as war, fights, trench building and carrying of corpses'*. It is believed that some behaviours are contagious and transferable therefore, this custom shields the couple and newborn from unworthy conducts of the function or that of the deceased.

One of the emboldened way of life is eating and drinking. Good pregnancy and health outcome are attributed to health diet and exercise. A discussant said *'a pregnant woman is gutted on drinking, eating, greeting and interacting with strangers'. It presupposed that people have extraordinary power or mystical powers to harm others through meals, drinks and fluid contacts.* A discussant alluded *'eating and drinking during pregnancy is personalized to avoid calamities from people with extraordinary powers. For this reason, the principle of regulated and*

controlled eating and drinking is applied. Limited are foods synonymous with excessive body. It is believed that these foods will culminate to strong, big and weighty child jeopardizing pushing during delivery. In contrast, food thought to add micronutrients for health child are encouraged but in piecemeal. There are therefore, special diet, recipe and herbs tailored made to enhance women and child immunity and nutrition. For geophagy (soil craving), she is directed to appropriate source. A discussant emboldened this narrative '*Health and immunity of pregnant woman is of primary importance. The adjuvant midwife prescribes special food and herbs to the pregnant woman'.*

Presentation and dressing are important attributes. A pregnant woman wears special necklace, laced with charms for protection. A discussant sounded '*in this society, there is a special necklace for pregnant women. It is laced with charms to protect the women and the unborn from sorceries, witchcraft and evil eyes which may lead to miscarriage. However, its use is diminishing'*. A cleansing ceremony (*Barbarisho) is an alternative way of neutralizing sorceries, witchcraft and evil eyes.* Furthermore, adverse pregnancy and pregnancy outcome are thought to be caused by supernatural causes such as spirits and ancestors. In the spirits and ancestors aetiology, bad omens are punishments for couples or extended family wayward behaviour. Therefore, the cleansing ceremony is to mitigate family and communal social misfortunes such as inter and intra conflicts. It is also a platform to appease unhappy ancestors, more importantly psyche, and prime the pregnant for delivery as captioned by a discussant. '*The woman is psyched into positive mindset; for example, she is dissed that labour is less painful compared to circumcision and that delivery is a normal process devoid of medication*'. Chores of the pregnant women are well defined. She is limited from heavy duties such as digging, fencing, grinding, fetching water and splitting firewood ostensibly to avoid miscarriage, bleeding, and preterm delivery and back pain. A discussant said, '*a pregnant woman is a delicate object, the community prescribe light duties for her to keep shape and health but forbids heavy duties for fear of miscarriage*, bleeding, and preterm delivery. Another added '*other than walking, cooking and nurturing young children, pregnant women are discouraged from undertaking any other duties'.*

Labour and delivery position

Labour and laboring process are undefined in Marakwet community. A key informant summed '*women labour in any style provided it is respectable*'. Prolonged labour is preconceived to be bad omen from bad social interaction or Gods punishment. For this reason, the woman or her husband are primed to behaviour holier during pregnancy. When prolonged labour occurs, cleansing and reconciliation efforts are undertaken to unearth smooth delivery. It is believed that spirits will foretell the offended party to an old man who will then advice on the appropriate recourse. Continuity of care by the nominated midwife is critical during labour and delivery. A caption envisioned thus: **'***in the last stages of pregnancy, mostly the nominated midwife, and women neighbors, accompany or monitor the pregnant women just in case'.* The tradition is support, monitor and mitigate challenges during labour and delivery.

The study revealed preference of delivery position varied. However, the community credence that child position informs appropriate delivery position. A discussant capped '*my understanding is that child position informs appropriate delivery style.*

For example, after examination, Kokopo kaw/ Kogo's explains the best and easy method for delivery. This is however not the case in Hospitals'. The lack of birthing positions other than supine negated hospitals deliveries. This is because birthing position, birthing site, place and circumstance inform the naming of a child. Women yearned for options such as squatting position. One discussant opined '*for women, with squatting experience, like me, the method is easy due to gravity support yet health workers are fixated with the use hospital delivery bed.* A participant who provided similar narrative complimented thus: *'At home, we delivery comfortably on the floor while others squat. I suggest for introduction of other birthing position (squatting position and delivering on the floor) in the facilities (positive whispers).*

Pregnancy and childbirth repertoire

A belt (leketio), a traditional strap made of animal skin and cowrie shells is an important indigenous Marakwet repertoire. Leketio is synonymous with women fertility and motherhood. *Leketio* is vital for the woman to strap up after delivery to protect and involute the uterus. The belt is sourced and handled reverently only by close and trusted relatives. A revered family member or friend makes the belt with cowrie's shell and goat's skin. Leketio is rarely shared and the companion carries to the delivery sites.

Communication after delivery and Placenta Management

Traditionally, delivery takes place in midwifes' *(kokopo kaw*) house. The midwife delivers the baby and manages the placenta appropriately. For every successful delivery, midwifes ululate in special "*sashei ooh*!" to communicate the delivery outcome. The pitch denotes the sex. High pitch (*alto*) signifies a girl whereas lower tone *(bass*) connotes a boy. Limited celebration in facilities deters hospital deliveries. Placenta is an important organ among the Marakwet. The placenta informs the number of children, sexuality, sequence of sexuality and miscarriages if any. Placenta interpretation is typical '*small dark blood clots on the left side of a spread-out placenta represent the total number of girls and bigger clots on the right side represent total number of potential boys to the woman respectively'*. It promotes health, stability and blessing of the family. It is a taboo to observe, examine and interpret self-placenta. Principally, it is the prerogative of the midwife (*kokopo kaw)* to examine and interpret the placenta. A discussant exemplified 'other *than the physical delivery, the midwife also interprets the placenta'.* Disposal of the placenta is orderly, systematic and shrouded with ethos. Disposal is secretive and in case of otherwise, cleansing is mandatory. A discussant put '*the disposal of the placenta is guided by Marakwet rites; a male child placenta is inclined to the right hand and a girls one to left of the delivery structure.*

Privacy and confidentiality in delivery sites

Privacy is key in delivery. This is contrast to hospital setting '*delivery rooms are open like wash rooms, people particularly male staff walk in and out yet your private parts are exposed.* Nonuse, misuse and over use of gloves. This crowned thus *'locally, only Mama Chumba is known to have gloves (she uses, washes, dries and reuses) while the rest do without (concerned murmurs). With the spreading of HIV/AIDS one cannot just risk'*. A discussant said, *'health providers know our HIV status and when a woman is positive health workers are hesitant to assist her during delivery or wear several gloves in front of the lady intimidating her'.*

Massage, lithotomy and family planning method

Delivery is normal childbirth process and introduction of lithotomy, episiotomy, caesarian section (CS) and particularly the prescription of family planning method negates the principle of motherhood. Another echoed '*patience and massage are central keys to unlocking labour. However, nurses tend to subject people to episiotomy and caesarian section (CS) or referral. For example, my friend was referred to Kapsowar hospital recently only to deliver one kilometer after leaving the hospital'*. One discussant criticized '*Other than frequent checks which not all may be necessary during labour, nurses have a trend of subjecting people to lithotomy yet a little effort will allow the birthing well'*. A clinician justified the need for frequent checks particularly for primigravida and weakly women. He said '*Many pregnant women enter labour with compromised energy levels or low hemoglobin levels. Evaluation informs labour inducement or referrals. Also, remember this is a security risk area compounded by poor roads therefore; we need to make informed decision quickly.*

Mother-child welfare services

Mother-child welfare services such as emotional care, supply of merchandise and food (porridge) provision are IK practices. A discussant quote appreciated the importance of mother-child welfare services. '*Women* opt for *friendly places where their welfare are taken care.* This resonates with the hypothesis that social ties link people with diffuse social networks that facilitate use of wide range of resources. Herbals medicine for infant is common IK practice. This may explain the high home deliveries. Shopping for the new baby is also a taboo. A discussant as captioned *'just as the saying- do not count your eggs before they hatch, the Marakwet norms and regulation do not advance any grocery shopping for the expected child'*.

4. DISCUSSION

Pregnancy and childbearing principles

The study revealed that pregnancy and childbearing are gateway process shaped by cultural norms, values, and experiences. The finding resonates with Birch, Ruttan, Muth, & Baydala, who reports that giving birth is a major life event for indigenous women and their families [23]. The difference of the methodologies notwithstanding, the two study findings implies a position of cultural relativism among indigenous communities in the world. Secondly, the study finding reveal that Marakwet people are endowed with indigenous prenatal and postpartum care practices. At the heart of these practices, is a mother mentor program suggesting that the concepts of continuum and continuous care are enshrined in Marakwet culture. Rono et al reported similar results and writes that the Marakwet have taboos, which guide the behaviour of pregnant woman until she gives birth [19]. Mogawane *et al.*, concurs and reports that pregnancy and childbearing in Africa are epitomized with indigenous practices (IPs) expressed in songs, dances, beliefs, rituals, cultural values, myths, and use herbs [24].Hickey et al enlists similar culturally competent maternity care practice and services [25].

Indigenous knowledge functions and responsibility

Pregnancy and childbearing are collective community functions and responsibilities overseen by one nominated midwife. Her primary is to guide and advices the

pregnant women on expected norms, values, practices and taboos including pregnancy-copying strategies. Howard et al., and Birch et al., documents similar roles [23, 26]. Birch et al., in a review in Australia reports that indigenous midwifery workforce aims at increasing culturally competent maternity care by developing dedicated and supporting programs for birthing [22]. Howard-Grabman et al preposition the concept of collective responsibility in metanalysis of factors affecting effective community participation in maternal and newborn health programme planning, implementation and quality of care interventions [26]. Howard-Grabman and co alludes that collective responsibility helps communities to plan and work together to towards a common good. The scholars' inference reinforces the current study findings that some cultural norms are intergral aspect of better maternal and newborn outcome. The phenomenon of one midwife per woman show that the ancient people were abreast of the concept of continuity care. The pregnancy, labour, childbirth and post childcare norms and values transcend all primary care approaches of care; promotive, preventive, curative and rehabilitative. Westernization and urbanization has however threatened this model. This finding compare positively with Hickey et al who reported that continuity of care is as an important characteristic of culturally safe motherhood care for women [25].

Another key component of the Marakwet cultural precepts is indigenous antenatal care underpinned by cultural safety and awareness. Its primary goal is to achieve smooth pregnancy and positive delivery outcome. Diagnosis and confirmation of pregnancy is the first critical step in pregnancy and childbearing. Diagnosis is by palpation usually at four months indicating that communities are aware of the importance and value of early antenatal care. This finding resonates with the results of Rono, and company that reports that when a woman is four months pregnant in Marakwet community, she is expected to visit a TBA for diagnosis [19]. Mogawane et al also described similar IPs used by pregnant women in Dilokong hospital in Limpopo province, South Africa [24]. However, the early visit to TBAs for indigenous antenatal practices may be a contributing factor to the late Anti Natal Care (ANC) visit among the Marakwet women. Emotional, psychosocial and nutritional support are other important indigenous antenatal care practices. According to the purveyors of Marakwet, indigenous antenatal care practices, management of stress, emotions and pain are important precepts during pregnancy and childbirth. Similarly, an increasing number of evidence has demonstrated that prenatal emotion management improves obstetric outcomes [27]. Huang et al notes that prenatal emotional management inform birthing choices and position reducing the cesarean section [27].

Attributes of childbirth Assistant

Initiation (circumcised women), age (older), and experience (previous deliveries) are critical attributes for birthing assistant. Rono et al supports this finding, and adds that only women who have delivery experience and are initiated can provide support that may be needed during delivery [19]. It is notable that cultural constructs and values exposed in this study inform women belief, systems and practices. Health belief model may explain this finding. The health belief model anticipates that a decision-making process governed by individuals and/or household behavior, community norms, and expectations as well as provider-related characteristics and behavior precedes health-seeking behavior [28]. Meanwhile, Marakwet culture negates delivery assists by male and 'mother-in-law'. Traditionally, a woman

assisted by uninitiated person was cleansed. Nonetheless, the practice is on its sunset period. It documented that Marakwet women may shun hospital delivery due to social and culturally values [19].The reasoned action theory might explain this phenomenon. Reasoned action theory states that attitudes and subjective norms result in the formation of behavioral intention, thereby influencing behaviors. Behavioral intention is a necessary step in the behavior implementation process [29].

Customized behaviour during pregnancy and childbirth

The study reported of a customized eating and drinking habit for women during pregnancy and birthing. This infers that the community perceive wrong diet as cause of complications in pregnancy. From the finding, special herbs and special diet are aspect of nutrition supplement in pregnancy and childbirth features and may inform the biosocial framework of delivery of Marakwet. The importance of diet and nutrition in pregnancy are well documented [19, 30]. The study's findings are supported by Rono et al who reports that herbs and special diet among the Marakwet as critical and add that Marakwet norms deters pregnant women from eating meat from a dead animal [10]. The special diet is to enhance mothers immunity and in case of geophagy (soil craving), she is directed on appropriate source. Riang'a and company however alleges that over consumption of meat makes the baby big and brings misfortune to mother or baby during delivery [30]. Additionally, communities abstract food such as eggs make the baby big; causes high blood pressure and colic pain in the baby therefore are prohibited [30]. From the finding, the biosocial food attributes appears to promote good eating habits. Secondly, understanding food beliefs and practices is critical to the development of dietary recommendations, nutritional programmes, and educational messages for vulnerable women. This finding aligns with a conclusion by Riang'a et al that pregnancy nutritional behaviour and practices of the Kalenjin women act as an adaptive response to the perceived pregnancy [30]. In this context, could the introduction of food education strategies in community health strategies spur uptake of food with supplements needed in areas where deterioration in the nutritional status of individuals is apparent whilst demystifying eating taboos?

Social interaction during pregnancy and childbirth

The study found that there are principle guidelines for socialization for a couple during pregnancy to childbirth. Stress trigger function/activities such as funerals, fights, raids and wars are outlawed. Similar cultural adaptive mechanisms that promote safe pregnancy and delivery and control the transmission of disease such as are well-documented [31]. Rianga et al in qualitative reports that restriction of diet and social mobility are key cultural maternal care and remedies adopted for health and safe pregnancy [31]. Social interaction with strangers as well as sex is also limited. Social interaction is to avoid dangerous people or circumstance. Riang'a and others, who had reported similar finding, add that pregnant women are confined to the homestead to avoid coming into contact with "evil people" and are encouraged to carry charms to counter evil [31]. Meanwhile, the primary reason for limited sex is to avoid infection and/or any physical damage. Similar results was reported by Rono et al who wrote that Marakwet have taboos, which serve as norms to guide the behaviour of the woman and her spouse during pregnancy period. For instance, the pregnant women is prohibited from viewing the body of a dead person [19]. In addition, Riang'a and company writes that abstinence from sexual

intercourse during pregnancy in African societies is a common phenomenon and it is aimed at protecting the unborn baby as well as fragile mother [31].This infers that prevention and promotive care were synonymous with Marakwet norms and values. Further, research and application of harmless indigenous prevention approaches may unearth mechanism of mitigating diseases and conditions prevalent in the Marakwet environs.

The study revealed that dressing during pregnancy is structured and customized among the Marakwet. A pregnant woman wears special necklace, laced with charms for protection. It is alleged that pregnancy complication are contagious compounded by "evil eye". Rono et al., writes that Marakwet charms confer protection to both the mother and the unborn baby. The scholars alludes that the necklace is removed to allow the woman to give birth when the woman experiences labour pains [19].This finding concurs with [31, 32]. Hlatywayo, et al in a qualitative research among the Ndau People of Zimbabwe who report that even with the emergency of modern care, women wear beads as headbands and anklets for protection [32]. Riang'a et al., adds that evil eyes unless countered are believed to cause a miscarriage in most African communities[31]. Further afield in Dilokong hospital in Limpopo province, South Africa, herbal charms is the most common therapeutic method used by the African traditional healers for protecting mothers from possible afflictions [24]. Fern also advance proper and designed clothing in Aborigin study [33].

Cleansing during pregnancy, labour and delivery position

Cleansing (*barbarisho*) prior to delivery is a very important indigenous care element of Marakwet. The pregnant women is cleansed in the last trimester, to appease the ancestors and more importantly psyche the woman for delivery. The finding concurs with Rono *et al*., who adds that, the newly delivered woman also goes through a cleansing ritual before interacting with other members of the community [19]. The finding is confirmed by Riang'a et al., who writes that cleansing rituals are performed to clear off the spirits of the bad blood, which may accrued during pregnancy [31]. The back and forth cleansing infers that health is community concept premised on perceived norms such as wellbeing and spirituality. Crivelli *et al.,* explained this phenomenon clearly with a hypothesis that indigenous person' concepts of health differ from western biomedical models [34].

The study found that philosophy of labour and childbirth differ among Marakwet subsets. Whereas as there are no prescribed labour ways or positions, delivery position is attributed to child position. Supine, squatting, kneeling positions and delivery on the floor were preference methods of delivery. Women advanced that these methods hardly exposes the private parts of during labour and delivery. There is concurrence with this finding in published literature [35]. Researchers in a cross sectional study in Busia district of Uganda write that women believe that the alternative delivery positions make labour and delivery private, easy and Karanja et al., study in a rural Maasai Community in Magadi sub-County, Kenya report the subjection to unfamiliar birthing position, such as lying on the back compared to squatting deter facilities deliveries [36]. Okawa et al., adds that the location where women deliver is influenced by placenta disposal, and delivery position [37].Goer concludes and writes that the denial of the right to informed choice or misinformation about delivery options is a human abuse [38].

The finding alludes that limited delivery options hinder uptake of hospitals deliveries and the preposition of deciding birthing position may changes this dynamics. Additionally, delivery environment was another key finding. Women are highly concerned of privacy and confidentiality during labour and childbirth. The practice of undressing and spreading legs before strangers is ant social behaviour in this study. Furthermore, control of human traffic in and out of the labour and delivery room was acknowledged. The evidence suggest that theft of privacy affect the mental and psychological state of women, which may in turn delay delivery or affect delivery outcome. Similar phenomena have been highlighted [39]. Tukur et al in a qualitative in Northwest Nigeria points out that the absences of privacy and exposure to strange women and men drive women away from facility delivery [39].

Companionship and support during pregnancy and post delivery

In this study, companion's support is critical element during pregnancy and delivery. Therefore, exclusion of companions from delivery rooms is hindrance to maternity service uptake. The evidence shows that the current model of exclusion fails to take into account the human need for companionship, support and social interaction. For Marakwet, companion's assist in placenta management, naming, delivery of belt (*leketio*) and giving feedback to the family on delivery process/outcome. The special belt *(leketio)* is a belt of life, a belt that protects children [40]. For this reason, it is imperative for Marakwet women to wear the *leketio* tightly after delivery or in special functions. According to Rono *et al*., leketio is tied to the abdomen to aid involution of the uterus and to guard the child from harm [19]. Several scholars have documented similar roles of companion [19, 36]. Karanja et al., writes that women companions to the health facility, assist in comforting women during labor, and help reduce the language barrier between the health workers [36]. More important, companions with birthing experience can provide psychological support that may be needed during delivery [19]. The study also revealed that successful delivery is a key milestone marked with customized celebration in Marakwet. The celebration are to welcome the baby and tie new generation to the old. Limited celebration in facilities deters hospital deliveries. The finding show that the social features of birth including celebration have an important impact on birth practice.

The finding concurs with Behruzi and other in a review titled Understanding childbirth practices as an organizational cultural phenomenon: a conceptual framework who demonstrates that women's social needs are not being adequately met in many birth units in hospitals [41]. Rituals and ceremonies that mark a child's birth are common worldwide. The gold standard are baptisms and circumcision. Laroia & Sharma reports that Hinduism is steeped in history, with ritual celebrations and ceremonies for marriage, birth, and lactation [42]. The scholar ass that birth of a baby is a celebration for family and society [42]. For example, Indians bless the mom, new born and pray for the wellbeing of the mother and the baby.

Placenta Management

The study found that placenta is an important organ among the Marakwet. The examination and interpretation of placenta is elaborate and systematic and involves taboos, ritual and practices. For example, it is a taboo to observe, examine and

interpret self-placenta. More important, the placenta informs the number of children, sexuality and sequence of sexuality. The finding mimics, Rono et al., who decribes that placent is disposed systematical and spiritual [19]. In the scholars own words: 'a placenta is taken to the bush, then held by the cut umbilical cord and laid as millet is spread on the ground. They add that for a male child it is taken to the right hand direction from the house of delivery and for a girl it is taken to the left hand direction'[19].In Samoa, the placenta is disposed by burying or throwing into the sea. Just like the current study, it is believed that the newborn or the mother is at risk if anything happens to the placenta [43].

From the evidence, placenta (the wool of the soul) is part of the family tree as well as community and individual wellbeing and health. Anyait et al who writes that in Uganda placenta is the "second child'' report similar attachment to the placenta [35]. It emerged that the lack of opportunity to examine and dispose culturally the placenta deters women from hospital delivery. This finding concurs with Okawa et al who writes that placenta management including examination, interpretation and disposal hinder birthing choices [36]. Likewise, Tukur et al in qualitative study in northwest Nigeria reported similar results [39]. On the other side, it is important to note that the inadequacy of home environment to deal with retained placenta steers women to hospitals.

Tocophobia, lithotophobia and family planning method

The study revealed that lithotomy; episiotomy, caesarian section (CS) and prescription of family planning method without consent are anti-social behaviours and keep women away from facility delivery. Similar phenomena is reported in America [38, 44]. Goer in a paper titled Cruelty in Maternity Wards: Fifty Years Later writes that elective primary cesarean initiated by the physician is the second common abuse in America [38]. Ishola et al in a systematic review of published quantitative and qualitative literature in Nigeria reports of non-dignified care in form of negative, poor and unfriendly provider attitude most abuse [44].Furthermore, frequent unexplained vaginal examination (VE), during labour and childbirth is another concern. Mishandling of women subjects is documented and is attributed to factors inherent to hospitals social culture [38].Goer reports that denial of the right to refuse invasive medical procedures such unexplained vaginal examination (VE) is the third category of abuse in America [38]. Inspite of enormous differences in labor and delivery management as well physical distance, women in American, Nigeria and Kenya share the phenomena of abuse and insensitivity to the rights during labour and delivery.

Mother-child welfare services

The study it is a taboo to undertake preparation such as shopping for the newborn. The study found that mother-child welfare services such as massage, supply of merchandise (leketio) and food (porridge) provision check the perception of maternity services. Karanja *et al.,* support this outcome. Karanja *et al.,* inscribes that availability of birth notification, drugs and other commodities given to women after delivering, such as diapers, towels, basins and mosquito nets, motivate women to deliver in a health facility [36]. The Maslow's principle of motivation that unsatisfied need can influence behavior may explain the commodity occurrences [45]. Goodie, bag concept is ongoing in certain facilities in Elgeyo Marakwet

County. Exploring the potential of free distribution of goodie bag in health facilities in increasing satisfaction and uptake is paramount. The study also revealed that lack of herbal medicine for the newborn in some hospital deter skilled deliveries. Pregnant women take the traditional herbs to ensure their health and that of their babies. The finding concurs with Rono *et al* who narrates that these herbs are composed of traditional roots, which are boiled and the women drink on a daily basis [19]. The use of herbs also documented in South Africa [24] and Asia [34].

5. CONCLUSION

Pregnancy and delivery are just not biomedical process but cultural domiciled biosocial function shaped by an interplay of individual, communal and supernatural functions. Continued care, known support, placenta management, geophagy, controlled food ways and regulated social interaction are sound maternal indigenous practices. However, folk activities such as the use of charms and repertoires for protection and cleansing ceremonies provide false hope.

6. RECOMMENDATIONS

There is need to filter, embrace and integrate harmless indigenous practices into maternity care services and course to enhance client centered maternal health services. Additionally, this paper suggest ANC health education and promotion include demystification of detrimental social remedies.

Ethical Approval And Consent

The study was approved Kenyatta University Ethical and Research Committee KU/ERC/APPROVAL/VOL.1 (164), Kenya-National Commission of Science, Technology and Innovation NACOSTI/P/18/41197/21776) and Elgeyo Marakwet County government EMC/CDMS/GC/2018 (39). Participant consent has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist

REFERENCES

1. Zimu-Biyela, A. N. (2016). The management and preservation of indigenous Knowledge in Dlangubo Village In Kwazulu-Natal, South Africa (Vol. 3). https://doi.org/https://doi.org/10.3929/ethz-b-000238666
2. Waterworth, P., Pescud, M., Braham, R., Dimmock, J., & Rosenberg, M. (2015). Factors influencing the health behaviour of indigenous Australians: Perspectives from support people. *PLoS ONE*, *10*(11), 1–17. https://doi.org/10.1371/journal.pone.014232
3. UNPFA, U. and U. W. (2018). *Fact Sheet · Indigen ous Women'S Maternal Health and Maternal Mortality 2 Average* Percentage of Women Who Did Not Receive Antenatal Care Average* Percentage of Women Who Did Not Receive Skilled Attendance At Birth Costa Rica Costa Rica Guyana Guyana Kenya*. Retrieved from https://www.unfpa.org/sites/default/files/resource-pdf/factsheet_digital_Mar27.pdf
4. World Health Organization (WHO). (2015a). *Trends in maternal mortality: 1990 to 2015: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division.*
5. Servan-Mori, E., Torres-Pereda, P., Orozco, E., & Sosa-Rubí, S. G. (2014). An explanatory analysis of economic and health inequality changes among Mexican indigenous people, 2000-2010. *International Journal for Equity in Health*, *13*, 21. https://doi.org/10.1186/1475-9276-13-21
6. AIHW. (2014). Australia's Health 2014. Australia's health series no. 14. Cat. no. AUS 178. *The Journal of Biological Chemistry*, *251*(14), 314–315. https://doi.org/Cat. no. AUS 178
7. Taylor, J., Novoa, C., Hamm, K., & Phadke, S. (2019). *Eliminating racial disparities in maternal and infant mortality: A comprehensive policy blueprint*. (May), 1–93. Retrieved from https://www.americanprogress.org/issues/women/reports/2019/05/02/469186/eliminating-racial-disparities-maternal-infant-mortality
8. Graham, W., Woodd, S., Byass, P., Filippi, V., Gon, G., Virgo, S., … Singh, S. (2016). Diversity and divergence: the dynamic burden of poor maternal health. *The Lancet*, *388*(10056), 2164–2175. https://doi.org/10.1016/S0140-6736(16)31533-1
9. Horn, P. (2014). Indigenous Peoples, Poverty, and Development. *The Journal of Development Studies*, *50*(11), 1588–1590. https://doi.org/10.1080/00220388.2014.972627
10. Miller, S., Abalos, E., Chamillard, M., Ciapponi, A., Colaci, D., Comandé, D., … Althabe, F. (2016). Beyond too little, too late and too much, too soon: a pathway towards evidence-based, respectful maternity care worldwide. *The Lancet*, *388*(10056), 2176–2192. https://doi.org/10.1016/S0140-6736(16)31472-6
11. Ishepe M.N, Kimuu, & P, W. (2015). Factors Associated with access and utilization of health care services by vulnerable and marginalized population in Kenya. *African Journal of Health Sciences*, *28*(5), 432–441. Retrieved from http://www.ajhsjournal.or.ke/?p=3495
12. Thorsen, V. C., Meguid, T., Sundby, J., & Malata, A. (2014). Components of maternal healthcare delivery system contributing to maternal deaths in Malawi: a descriptive cross-sectional study. *African Journal of Reproductive Health*, *18*(1),

16–26.
13. Kenya Agricultural Research Institute (KARI). (2006). *Indigenous Peoples Plan of Kenya Agriculture Productivity Sustainable LAnd Management Project*.
14. World Health Organization (WHO), R. H. library. (2018). *WHO recommendation on respectful maternity care during labour and childbirth*. (February), 1–11.
15. Dodzo, M. K., & Mhloyi, M. (2017). *Home is best : Why women in rural Zimbabwe deliver in the community*. 1–23.
16. World Health Organization (WHO). (2015b). *WHO recommendation on providing culturally appropriate skilled maternity care*. (May), 1–7.
17. Lieberman, A. (2016). Challenges for maternal health efforts. *Lancet (London, England)*, *388*(10050), 1146–1147. https://doi.org/10.1016/S0140-6736(16)31644-0
18. Kipchumba, P. (2017). Aspects of Indigenous Religion among the Marakwet of Kenya By Kipchumba Foundation. In *Kipchumba Foundation* (First). Retrieved from https://www.amazon.com/Aspects-Indigenous-Religion-among-Marakwet/dp/197320939X
19. Rono, A., Maithya, H., & Sorre, B. (2018). Culture and Birthing: Experiences from a Rural Community in Western Kenya. *Sociology and Anthropology*, *6*(1), 56–63. https://doi.org/10.13189/sa.2018.060105
20. Kenya National Bureau of Statistics, Ministry of Health, National AIDS Control Council, Kenya Medical Research, & National Council for Population and Development. (2014). *Kenya Demographic Health Survey Key Indicators 2014*. Retrieved from http://dhsprogram.com/pubs/pdf/PR55/PR55.pdf
21. Koblinsky, M., Moyer, C. A., Calvert, C., Campbell, J., Campbell, O. M. R., Feigl, A. B., … Langer, A. (2016). Quality maternity care for every woman, everywhere: a call to action. *The Lancet*, *388*(10057), 2307–2320. https://doi.org/10.1016/S0140-6736(16)31333-2
22. Nandjila, R. T. (2008). *Utilisation of post natal care services in the Grootfontein health district, Otjozondjupa region*. The University of Namibia.
23. Birch, J., Ruttan, L., Muth, T., & Baydala, L. (2009). Culturally Competent Care for Aboriginal Women: A Case for Culturally Competent Care for Aboriginal Women Giving Birth in Hospital Settings. *Journal of Aboriginal Health*.
24. Mogawane, M. A., Mothiba, T. M., & Malema, R. N. (2015). Indigenous practices of pregnant women at Dilokong hospital in Limpopo province, South Africa. *Curationis*, *38*(2), 1–8. https://doi.org/10.4102/curationis.v38i2.1553
25. Hickey, S., Roe, Y., Gao, Y., Nelson, C., Carson, A., Currie, J., … Kildea, S. (2018). The Indigenous Birthing in an Urban Setting study: the IBUS study : A prospective birth cohort study comparing different models of care for women having Aboriginal and Torres Strait Islander babies at two major maternity hospitals in urban South East Quee. *BMC Pregnancy and Childbirth*, *18*(1), 431. https://doi.org/10.1186/s12884-018-2067-8
26. Howard-Grabman, L., Miltenburg, A. S., Marston, C., & Portela, A. (2017). Factors affecting effective community participation in maternal and newborn health programme planning, implementation and quality of care interventions. *BMC Pregnancy and Childbirth*, *17*(1), 1–18. https://doi.org/10.1186/s12884-017-1443-0
27. Jian Huang, He-Jiang Li , Jue Wang , Hong-Jing Mao , Wen-Ying Jiang , Hong Zhou, S.-L. C. (2015). Prenatal emotion management improves obstetric

outcomes: A randomized control study. *International Journal of Clinical and Experimental Medicine*, *8*(6), 9667–9675.
28. Oberoi, S., Chaudhary, N., Patnaik, S., & Singh, A. (2016). Understanding health seeking behavior. *Journal of Family Medicine and Primary Care*, *5*(2), 463. https://doi.org/10.4103/2249-4863.192376
29. Huang, H. T., Kuo, Y. M., Wang, S. R., Wang, C. F., & Tsai, C. H. (2016). Structural factors affecting health examination behavioral intention. *International Journal of Environmental Research and Public Health*, *13*(4). https://doi.org/10.3390/ijerph13040395
30. Riang'a, R. M., Broerse, J., & Nangulu, A. K. (2017). Food beliefs and practices among the Kalenjin pregnant women in rural Uasin Gishu County, Kenya. *Journal of Ethnobiology and Ethnomedicine*, *13*(1), 1–16. https://doi.org/10.1186/s13002-017-0157-8
31. Riang'a, R. M., Nangulu, A. K., & Broerse, J. E. W. (2018). Perceived causes of adverse pregnancy outcomes and remedies adopted by Kalenjin women in rural Kenya. *BMC Pregnancy and Childbirth*, *18*(1), 1–16. https://doi.org/10.1186/s12884-018-2041-5
32. Hlatywayo, A. M. (2017). *Indigenous knowledge, beliefs and practices on Pregnancy and childbirth among the Ndau People of Zimbabwe*.
33. Fearn, T. (2006). A Sense of Belonging : Supporting Healthy Child Development in Aboriginal Families Written by : Terrellyn Fearn , Spirit Moon Consulting Best Start : Ontario ' s Maternal , Newborn and Early Child Development Resource Centre A Sense of Belonging : Support. *Child Development*.
34. Crivelli, V., Hautecouer, J., Llamas, A., & Stephens, C. (2013). Improving indigenous maternal and child health. *State of the World*, 11.
35. Agnes Anyait, David Mukanga, G. B. O. and F. N. (2012). Predictors for health facility delivery in Busia district of Uganda: a cross sectional study. *BMC Pregnancy and Childbirth*, *12*(132), 1–9. Retrieved from http://www.embase.com/search/results?subaction=viewrecord&from=export&id=L52314038%5Cnhttp://www.biomedcentral.com/1471-2393/12/132%5Cnhttp://dx.doi.org/10.1186/1471-2393-12-132
36. Karanja, S., Gichuki, R., Igunza, P., Muhula, S., Ofware, P., Lesiamon, J., … Ojakaa, D. (2018). Factors influencing deliveries at health facilities in a rural Maasai Community in Magadi sub-County, Kenya. *BMC Pregnancy and Childbirth*, *18*(1), 1–11. https://doi.org/10.1186/s12884-017-1632-x
37. Okawa, S., Jimba, M., Quansah Asare, G., Yeji, F., Enuameh, Y. A. K., Asante, K. P., … Agyekum, E. O. (2016). Factors Influencing Health Facility Delivery in Predominantly Rural Communities across the Three Ecological Zones in Ghana: A Cross-Sectional Study. *Plos One*, *11*(3), e0152235. https://doi.org/10.1371/journal.pone.0152235
38. Goer, H. (2010). Cruelty in Maternity Wards: Fifty Years Later. *Journal of Perinatal Education*, *19*(3), 33–42. https://doi.org/10.1624/105812410x514413
39. Ismail Tukur, Chan Cheekhoon , Tin Tinsu, Tukur Muhammed-Baba, M. A. I. (2016). Why Women Are Averse to Facility Delivery in Northwest Nigeria: A Qualitative Inquiry. *Iranian Journal of Public Health*, *45*(5), 586.
40. Karimi, M. (2004). Indigenous Democracy. *Management*, (January).
41. Behruzi, R., Hatem, M., Goulet, L., Fraser, W., & Misago, C. (2013). Understanding childbirth practices as an organizational cultural phenomenon: A conceptual framework. *BMC Pregnancy and Childbirth*, *13*.

https://doi.org/10.1186/1471-2393-13-205
42. Laroia, N., & Sharma, D. (2006). Practices Among the Hindus. *Breastfeeding Medicine*, *1*(2), 94–99.
43. Abbato, S. (2011). Community Profiles for Health Care Providers. *Division of the Chief Health Officer, Queensland Health. Brisbane*.
44. Ishola, F., Owolabi, O., & Filippi, V. (2017). Disrespect and abuse of women during childbirth in Nigeria: A systematic review. *PLoS ONE*, *12*(3), 1–17. https://doi.org/10.1371/journal.pone.0174084
45. Ballard, J. . (2006). The diffusion of Maslow's motivation theory in management and other disciplines. *Paper Presented at the Academy of Management Annual Meeting, Atlanta*.