1 **_Original Research Article_**
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3 **Perceived Indigenous Perspectives of Maternal Health Care Services among**
4 **Women of Marakwet, Kenya**

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6

7 **ABSTRACT**

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

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

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

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

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34 **Keywords:** Indigenous Perspectives, maternal health Care, Marakwet

UNDER PEER REVIEW

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

UNDER PEER REVIEW

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

UNDER PEER REVIEW

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.

UNDER PEER REVIEW

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 's*election 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

UNDER PEER REVIEW

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

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

230 **Lifestyle during Pregnancy, and Childbirth**

231

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

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

UNDER PEER REVIEW

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

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

287 **Labour and delivery position**

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

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

UNDER PEER REVIEW

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'.*

UNDER PEER REVIEW

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

UNDER PEER REVIEW

394 pregnant women on expected norms, values, practices and taboos including
395 pregnancy-copying strategies. Howard et al., and Birch et al., documents similar
396 roles [23, 26]. Birch et al., in a review in Australia reports that indigenous midwifery
397 workforce aims at increasing culturally competent maternity care by developing
398 dedicated and supporting programs for birthing [22]. Howard-Grabman et al
399 preposition the concept of collective responsibility in metanalysis of factors
400 affecting effective community participation in maternal and newborn health
401 programme planning, implementation and quality of care interventions [26].
402 Howard-Grabman and co alludes that collective responsibility helps communities to
403 plan and work together to towards a common good. The scholars' inference
404 reinforces the current study findings that some cultural norms are intergral aspect of
405 better maternal and newborn outcome. The phenomenon of one midwife per woman
406 show that the ancient people were abreast of the concept of continuity care. The
407 pregnancy, labour, childbirth and post childcare norms and values transcend all
408 primary care approaches of care; promotive, preventive, curative and rehabilitative.
409 Westernization and urbanization has however threatened this model. This finding
410 compare positively with Hickey et al who reported that continuity of care is as an
411 important characteristic of culturally safe motherhood care for women [25].
412
413 Another key component of the Marakwet cultural precepts is indigenous antenatal
414 care underpinned by cultural safety and awareness. Its primary goal is to achieve
415 smooth pregnancy and positive delivery outcome. Diagnosis and confirmation of
416 pregnancy is the first critical step in pregnancy and childbearing. Diagnosis is by
417 palpation usually at four months indicating that communities are aware of the
418 importance and value of early antenatal care. This finding resonates with the results
419 of Rono, and company that reports that when a woman is four months pregnant in
420 Marakwet community, she is expected to visit a TBA for diagnosis [19]. Mogawane
421 et al also described similar IPs used by pregnant women in Dilokong hospital in
422 Limpopo province, South Africa [24]. However, the early visit to TBAs for
423 indigenous antenatal practices may be a contributing factor to the late Anti Natal
424 Care (ANC) visit among the Marakwet women. Emotional, psychosocial and
425 nutritional support are other important indigenous antenatal care practices.
426 According to the purveyors of Marakwet, indigenous antenatal care practices,
427 management of stress, emotions and pain are important precepts during pregnancy
428 and childbirth. Similarly, an increasing number of evidence has demonstrated that
429 prenatal emotion management improves obstetric outcomes [27]. Huang et al notes
430 that prenatal emotional management inform birthing choices and position reducing
431 the cesarean section [27].

432 **Attributes of childbirth Assistant**

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

UNDER PEER REVIEW

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

449 **Customized behaviour during pregnancy and childbirth**

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

473 **Social interaction during pregnancy and childbirth**

474 The study found that there are principle guidelines for socialization for a couple
475 during pregnancy to childbirth. Stress trigger function/activities such as funerals,
476 fights, raids and wars are outlawed. Similar cultural adaptive mechanisms that
477 promote safe pregnancy and delivery and control the transmission of disease such as
478 are well-documented [31]. Rianga et al in qualitative reports that restriction of diet
479 and social mobility are key cultural maternal care and remedies adopted for health
480 and safe pregnancy [31]. Social interaction with strangers as well as sex is also
481 limited. Social interaction is to avoid dangerous people or circumstance. Riang'a
482 and others, who had reported similar finding, add that pregnant women are confined
483 to the homestead to avoid coming into contact with "evil people" and are
484 encouraged to carry charms to counter evil [31]. Meanwhile, the primary reason for
485 limited sex is to avoid infection and/or any physical damage. Similar results was
486 reported by Rono et al who wrote that Marakwet have taboos, which serve as norms
487 to guide the behaviour of the woman and her spouse during pregnancy period. For
488 instance, the pregnant women is prohibited from viewing the body of a dead person
489 [19]. In addition, Riang'a and company writes that abstinence from sexual

UNDER PEER REVIEW

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

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

510 **Cleansing during pregnancy, labour and delivery position**

511 Cleansing (*barbarisho*) prior to delivery is a very important indigenous care element
512 of Marakwet. The pregnant women is cleansed in the last trimester, to appease the
513 ancestors and more importantly psyche the woman for delivery. The finding concurs
514 with Rono *et al*., who adds that, the newly delivered woman also goes through a
515 cleansing ritual before interacting with other members of the community [19]. The
516 finding is confirmed by Riang'a et al., who writes that cleansing rituals are
517 performed to clear off the spirits of the bad blood, which may accrued during
518 pregnancy [31]. The back and forth cleansing infers that health is community
519 concept premised on perceived norms such as wellbeing and spirituality. Crivelli *et*
520 *al.,* explained this phenomenon clearly with a hypothesis that indigenous person'
521 concepts of health differ from western biomedical models [34].
522
523 The study found that philosophy of labour and childbirth differ among Marakwet
524 subsets. Whereas as there are no prescribed labour ways or positions, delivery
525 position is attributed to child position. Supine, squatting, kneeling positions and
526 delivery on the floor were preference methods of delivery. Women advanced that
527 these methods hardly exposes the private parts of during labour and delivery. There
528 is concurrence with this finding in published literature [35]. Researchers in a cross
529 sectional study in Busia district of Uganda write that women believe that the
530 alternative delivery positions make labour and delivery private, easy and Karanja et
531 al., study in a rural Maasai Community in Magadi sub-County, Kenya report the
532 subjection to unfamiliar birthing position, such as lying on the back compared to
533 squatting deter facilities deliveries [36]. Okawa et al., adds that the location where
534 women deliver is influenced by placenta disposal, and delivery position [37].Goer
535 concludes and writes that the denial of the right to informed choice or
536 misinformation about delivery options is a human abuse [38].
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UNDER PEER REVIEW

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

UNDER PEER REVIEW

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

UNDER PEER REVIEW

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

637 **5. CONCLUSION**

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

644 **6. RECOMMENDATIONS**

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

649 **ETHICAL APPROVAL**

650

651 The study was approved Kenyatta University Ethical and Research Committee
652 KU/ERC/APPROVAL/VOL.1 (164), Kenya-National Commission of Science,
653 Technology and Innovation NACOSTI/P/18/41197/21776) and Elgeyo Marakwet
654 County government EMC/CDMS/GC/2018 (39).

655

656 **STUDY LIMITATION**

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658 **COMPETING INTERESTS**

659 Authors have declared that no competing interests exist

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UNDER REVIEW

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832

UNDER PEER REVIEW