

Original Research Article

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

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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.

There is no recommendation in this abstract

Keywords: Indigenous Perspectives, maternal health Care, Marakwet

35 1. INTRODUCTION

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

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

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

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

77 **2. METHODS**

78 **Study Design and Setting**

79

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

87

88 **Study site**

89

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

109 **Study population**

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

115

116 **Sampling technique**

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

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

137 **Data Collection Tools**

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

143 **Validity and Reliability**

144 Content and concurrent validity were tested. The research material were crossed
145 checked by cultural experts for consistency with study objectives. The study adopted
146 equivalence approach to assess tool reliability, which according to Polit & Hungler,
147 (1999), as quoted by Nandjila, is where two, or more observers (raters) use an
148 instrument to measure the same phenomena then compare the results [22]. In this
149 study, two independent persons who were not part of the study but experts in the
150 area of cultural competence reviewed the tools. The experts and the scholar
151 reviewed feedback and compared whether the experts interpreted the questions on
152 the same scope and values in panel discussion.

153 **Data Collection Procedures**

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

167 **Data Analysis**

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

174 **3. RESULTS**

175 **Principle of midwifing**

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

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

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

197 **Midwife attributes**

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

207 **Roles of a midwife**

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*

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.*

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

313 **Pregnancy and childbirth repertoire**

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

321 **Communication after delivery and Placenta Management**

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

340 **Privacy and confidentiality in delivery sites**

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

349 **Massage, lithotomy and family planning method**

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

364 **Mother-child welfare services**

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

374 **4. DISCUSSION**

375 **Pregnancy and childbearing principles**

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

391 **Indigenous knowledge functions and responsibility**

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

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

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

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’s
 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].

537

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

549 **Companionship and support during pregnancy and post delivery**

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

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

579

580 **Placenta Management**

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

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

593 From the evidence, placenta (the wool of the soul) is part of the family tree as well
 594 as community and individual wellbeing and health. Anyait et al who writes that in
 595 Uganda placenta is the “second child” report similar attachment to the placenta
 596 [35]. It emerged that the lack of opportunity to examine and dispose culturally the
 597 placenta deters women from hospital delivery. This finding concurs with Okawa et
 598 al who writes that placenta management including examination, interpretation and
 599 disposal hinder birthing choices [36]. Likewise, Tukur et al in qualitative study in
 600 northwest Nigeria reported similar results [39]. On the other side, it is important to
 601 note that the inadequacy of home environment to deal with retained placenta steers
 602 women to hospitals.

603 **Tocophobia, lithophobia and family planning method**

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

620 **Mother-child welfare services**

621 The study it is a taboo to undertake preparation such as shopping for the newborn.
 622 The study found that mother-child welfare services such as massage, supply of
 623 merchandise (leketio) and food (porridge) provision check the perception of
 624 maternity services. Karanja *et al.*, support this outcome. Karanja *et al.*, inscribes that
 625 availability of birth notification, drugs and other commodities given to women after
 626 delivering, such as diapers, towels, basins and mosquito nets, motivate women to
 627 deliver in a health facility [36]. The Maslow’s principle of motivation that
 628 unsatisfied need can influence behavior may explain the commodity occurrences
 629 [45]. Goodie, bag concept is ongoing in certain facilities in Elgeyo Marakwet

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**

657

658 **COMPETING INTERESTS**

659 Authors have declared that no competing interests exist

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