REVIEW ARTICLE

African indigenous contraception: A review

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Abstract

In Africa, indigenous methods of contraception continue to play a significant role in preventing unwanted pregnancies despite the introduction and popularity of modern contraceptives. The current review identified the common techniques and practices of African indigenous contraception, and examined their mechanisms and reasons for use. We searched data bases such as Google Scholar, Scopus, Web of Science, EBSCohost, African Journals, Science Direct, textbooks, thesis and dissertations for research articles on African indigenous contraception. The six common techniques of African indigenous contraception included periodic abstinence, withdrawal, breastfeeding, use of herbs, postpartum abstinence and waist bands, whilst practices relate to child (birth) spacing, postponement of first birth (virginity), stopping of reproduction and indigenous emergency contraception. Mother and infant health was stated as one of the reasons for using African indigenous contraception. African indigenous contraception continues to play a critical reproductive role in preventing unwanted pregnancies. However, there is lack of clarity regarding mechanisms, the safety, and efficacy of some techniques. *(Afr J Reprod Health 2020; 24[4]: 173-184).*

Keywords: Abstinence; Contraception; Indigenous knowledge; Traditional; Techniques; Practices

Résumé

En Afrique, les méthodes de contraception indigènes continuent de jouer un rôle important dans la prévention des grossesses non désirées malgré l'introduction et la popularité des contraceptifs modernes. L'examen actuel a identifié les techniques et pratiques courantes de la contraception autochtone africaine et a examiné leurs mécanismes et leurs raisons d'utilisation. Nous avons effectué des recherches dans des bases de données telles que Google Scholar, Scopus, Web of Science, EBSCohost, African Journals, Science Direct, manuels, thèses et mémoires pour des articles de recherche sur la contraception autochtone africaine. Les six techniques courantes de contraception indigène africaine comprenaient l'abstinence périodique, le retrait, l'allaitement maternel, l'utilisation d'herbes, l'abstinence post-partum et les ceintures, tandis que les pratiques concernent l'espacement des naissances, le report de la première naissance (virginité), l'arrêt de la reproduction et l'urgence indigène. la contraception. La santé maternelle et infantile a été citée comme l'une des raisons de l'utilisation de la contraception autochtone africaine. La contraception autochtone africaine continue de jouer un rôle reproductif essentiel dans la prévention des grossesses non désirées. Cependant, il y a un manque de clarté concernant les mécanismes, l'innocuité et l'efficacité de certaines techniques. *(Afr J Reprod Health 2020; 24[4]: 173-184).*

Mots-clés: Abstinence; La contraception; Connaissances autochtones; Traditionnel; Techniques; Les pratiques

Introduction

The human race is currently experiencing a second population explosion following one that occurred ten thousand or so years ago when there were 50 million people on the planet[1]. The world population, which was 2.5 billion in 1950, crossed the 7 billion mark in 2012 and is projected to reach 9.4 billion by 2050[2,3]. Human over-population will increase competition among people for the already limited resources, leading to increased poverty and reduced access to essential services especially the health care system[4]. Uncontrolled, excessive population growth may not only lead to poverty in all its forms, but when all the available natural resources have been exhausted, the very continuation of the human species may be threatened[5]. Demographers and social scientists have recommended drastic family planning programs and emphasized that contraception is the

only means to combat this devastating problem[2]. Contraception refers to prevention of pregnancy[6]. Contraception in this review is classified according to modern and indigenous contraception. Contraception has profound benefits for women and society, including reduced maternal and infant mortality and morbidity, empowerment of women to make informed choices about fertility, economic advancement, and a reduction in the number of children infected with HIV[7]. Modern techniques of contraception include sterilization (male and female); intrauterine devices and systems; subdermal implants; oral contraceptives; condoms (male and female); injectable; emergency contraceptive pills; patches; diaphragms and cervical caps; spermicidal agents (gels, foams, creams, suppositories); vaginal rings and sponge[8]. On the other hand, indigenous contraception is understood to include both natural and traditional contraception.

Although the use of herbs is sometimes referred to as a natural technique [9], this review considers the use of herbs as a traditional technique. Natural techniques of contraception therefore place emphasis on avoidance of sexual contact, whilst traditional techniques often require the intervention of a traditional healer. Western hegemony of knowledge and its colonial policies have emphasized the use of modern contraception as a matter of course [10], while indigenous contraception is often ignored[11]. The reported side effects associated with modern contraception aroused an interest in indigenous contraception. For example, the World Health Organization (WHO) factsheet list traditional methods of contraception for family planning/contraception[12]. However, people are still encouraged to adopt modern contraceptives such as contraceptive pills, injections, intrauterine devices (IUD), condoms and sterilization as a panacea to family planning despite their side effects[13,14]. Both natural and traditional techniques of African indigenous contraception can offer women safe and effective alternative contraceptive options for preventing unwanted pregnancies. The aim of this review was to determine common techniques and practices of African indigenous contraception and to examine their mechanisms and reasons for use.

Methods

We searched different online data bases such as Google Scholar, Scopus, Web of Science, African journals, and Science Direct for all published primary research articles from database inception through December 2019. Research articles on African indigenous contraception were searched by focusing on Africa's five regions (Southern; Eastern: Western; Central and Northern). Research articles discussing both modern contraception and African indigenous contraception were also included in the search. The search for research articles on African indigenous contraception was done alphabetically per African country. The following search terms and their combinations were used: Africa; traditional; indigenous; natural; contraception; contraceptives; population control; antifertility; over-population; methods; natural resources; population explosion; prevention of pregnancy; family planning, birth control, reasons; fertility regulation; techniques; and mechanisms. For inclusion, an article had to be a research article, mention/list/discuss African indigenous technique(s) of contraception and an African country for which the research was conducted or where the technique(s) is known or used had to be specified. Comments, editorials and articles not published in English language were excluded.

Results and Discussion

Common techniques of African indigenous contraception

Techniques, practices, mechanisms and reasons for use of African indigenous contraception per African country are summarized (Table 1). African countries have been listed alphabetically, from Angola to Zimbabwe. More than 40 techniques of African indigenous contraception are known or used across approximately 16 African countries. Results showed that few studies met the criteria in North Africa for selection in this review. This could imply that African indigenous contraception is mostly practiced in Sub-Sahara than in North Africa. Studies that met the criteria were mostly conducted in Nigeria. Techniques known or used across more than five countries

Table 1: An overview of indigenous contraception approaches across different African countries

Country	Techniques	Mechanism(s)	Practices	Reasons	Reference
Angola	Periodic abstinence	Unspecified	Unspecified	unspecified	[78]
Burkina Faso	Postpartum abstinence; Periodic abstinence; Withdrawal; Breastfeeding	Unspecified	Child spacing	For the health of the baby	[16;81]
Cameroon	Periodic abstinence; Withdrawal	Unspecified	Child spacing; Stopping reproduction; Postponement of first birth	To finish school or seek employment	[79;18]
D.R Congo	Burying menstrual blood; Placing curses of sterility on mother; Postpartum abstinence; Periodic abstinence; Withdrawal; Virginity; polygamy; Drinking herbs	Unspecified	To stop reproduction; Child spacing	As a punishment for marrying against the family will;	[65;77;23]
Egypt	Periodic abstinence; Withdrawal; Breastfeeding	Unspecified	Unspecified	Unspecified	[80]
Eswatini (Swaziland)	Breastfeeding	Unspecified	Unspecified	Unspecified	[75]
Ethiopia	Standard days method; Periodic abstinence; Withdrawal; Breastfeeding	Unspecified	Unspecified	Unspecified	[62]
Gambia	Total abstinence; Postpartum abstinence; Withdrawal; Waistband; Drinking of herbs	Young woman delays sexual relations for years	Stopping reproduction; Postponement of first birth;	When a woman gets old; For women with physical disabilities	[37]
Ghana	Postpartum abstinence; Withdrawal/; Drinking of herbs	Unspecified	Child spacing	Decoction of the bark is used for enema	[22;83]
Kenya	Postpartum abstinence; Breastfeeding	Breastfeeding blocks ovulation	Child spacing	To avoid an early future pregnancy	[81]
Mozambique	Burial of the umbilical cord; Burying menstrual blood; Waistband	Unspecified	Unspecified	unspecified	[2]
Nigeria	Douching; Alcoholic drinks; Armlet/armband; Padlock on labia; Standard days method; Traditional ring; Postpartum abstinence; Withdrawal; Waistband; Drinking herbs	Unspecified	Emergency contraception	Unspecified	[61;63;39; 82]
South Africa	Safety pin; Burial techniques; Soil eating; Thigh sex; Polygamy; Drinking ashes, holy water or oil; Postpartum abstinence; Periodic abstinence; Withdrawal/ Waistband; Breastfeeding; Drinking of herbs	Focusing on the pin delays vaginal secretions: No penetration during sex; Man move to another wife; Breastfeeding reduce fertility	Stopping of reproduction; Child spacing; Emergency contraception; Child spacing	Woman avoid sex until the child is one year old	[38;57]
Tanzania	Postpartum abstinence; Withdrawal; Breastfeeding; Drinking herbs	Unspecified	Child spacing	Unspecified	[35;28]
Uganda	Baby's foot inserted in womb's opening; Plants inserted in the vagina; Wearing amulets and	To stop menstrual cycle;	To stop reproduction; Child spacing	When the woman is old;	[26;60]

Country	Techniques	Mechanism(s)	Practices	Reasons	Reference
	charms; Burial of the umbilical cord and placenta Postpartum abstinence; Self-sterilization; Periodic abstinence; Withdrawal; Waistband; Breastfeeding; Drinking herbs	To prevent the semen from reaching the womb		For the health of the child	
Zimbabwe	Exposing testicles to above average heat; Drinking of ashes Drinking holy water or oil; Periodic abstinence/ Withdrawal*; Breastfeeding* Drinking/eating of herbs;	Heat weakens the sperms; Women herbs with faith; Noting of ideal days for sex. Prevent sperms from entering the women	Child spacing	Not to fall pregnant until the child is weaned.	[13]

were considered to be common and included periodic abstinence, withdrawal, breastfeeding, the use of herbs, postpartum abstinence, and waist bands. These are described below.

Periodic abstinence

Periodic abstinence is used in this review as synonymous to calendar, moon checking and rhythm methods. When a couple use periodic abstinence to avoid a pregnancy, they abstain from sexual intercourse during the potentially fertile phase of the woman's menstrual cycle[17]. Periodic abstinence is the most common technique used by women of most social categories[18]. However, its use is most prevalent among the young and nulliparous, the unmarried, and the educated[18]. In Cameroon, periodic abstinence accounts for more than half of all contraceptive use[18]. Periodic abstinence is the preferred technique in Cameroon because it is associated with self-discipline[18].

Withdrawal/coitus interruptus

Withdrawal, also known as *coitus interruptus* has been used as a contraceptive technique since biblical times[19]. An important advantage of withdrawal vis-a-vis many other methods is its safety[19]. Withdrawal might more aptly be referred to as a method that is almost as effective as the male condom, that is, at least when it comes to pregnancy prevention[20]. If the male partner withdraws before ejaculation every time a couple has vaginal intercourse, about 4% of couples will become pregnant over the course of a year[21]. Whilst some couples indicated the use of withdrawal to avoid male sperms entering the women, some elders in Zimbabwe indicated that it was a taboo to splash sperms outside (*Kurasa mbeu*)[13].

Breastfeeding/ lactational amenorrhea method

Lactation is a natural defence against pregnancy[24]. The lactational amenorrhea method (LAM) is the specific name given to use of breastfeeding as a dedicated technique of contraception[24]. Though lactational amenorrhea can rival efficacy of the best modern approaches, women must experience pregnancy to use it[1]. If the mother is nursing, she is delaying the return of fertility [24]. Suckling induces a reduction in gonadotropin releasing hormone, luteinizing hormone and follicle stimulating hormone release, resulting in amenorrhea[25]. Breastfeeding in Zimbabwe is used for child-spacing[13]. LAM is unquestionably cost effective, as breastfeeding alone provides adequate nutrition and fluid intake through the first 6 months, and breast milk is considered a healthier option than its substitutes for infants in low-resource settings[26,27]. LAM is 98-99% effective during the first six months after childbirth in women practicing exclusive breastfeeding[28]. While there are many benefits of LAM as a contraceptive method, an effective transition to another modern contraceptive method is critical for protecting LAM users against unplanned pregnancies during the postpartum period[29]. In controlled settings, two-thirds of women use LAM transition to another method effectively[30]. However, studies have suggested that a variable proportion of women between 48% and 86% that use LAM successfully transition to another contraceptive method, indicating some challenges within the transition period[30-32].

Use of herbs

Medicinal plants are the most easily accessible health resource available to many communities[33]. Various parts and extracts of medicinal plants have been used as contraceptive agents in different countries globally[34]. Several *madawa* (medicine men) in Tanzania confirmed the existence of certain herbs and roots that might act as contraceptives (ranging from indigenous trees to the juice of young papaya, to a cinnamon concoction) taken for several weeks after delivery of a baby[35]. Herbal contraceptives offer alternatives for women who have health problems with or lack access to modern contraceptives[36]. In Gambia, herbal preparations, usually taken orally, have probably been used as contraceptives for some time, as in much of Africa[37]. Given that herbs vary widely in composition, and because there has been little systematic study of herbal contraceptives anywhere in Africa, no definitive statements about how these methods work or their effectiveness, if any, can be made[37]. However, local women in Gambia generally describe them as having short-term effects and use certain herbs to ensure that the children are properly spaced[37].

In Zimbabwe, the roots of medicinal plants are ground and soaked in water, before being taken by women every day for child spacing[13]. Women also collect the bark of *Ziziphus mucronata*, boil it and drink the liquid every evening to prevent pregnancy. It is also reported that a Zimbabwean women drink the seed of *mbanje (Cannabis sativa)* once a year to avoid pregnancy[13]. In South Africa, herbs are mixed and taken orally for three months before engaging in sexual intercourse to prevent pregnancy in women[38]. In Nigeria, herbs used to prevent pregnancy can be drunk in the form of soup, be ground into powder, mixed with cold pap and eaten or herbal powder is rubbed in an incision near vagina[39]. It is now generally accepted that current modern fertility control methods are inadequate to meet the varied and changing personal needs of couples at different times in their reproductive lives, and in the widely differing geographical, cultural, and religious settings that exist around the world [40]. Medicinal plant extracts exhibiting reduction levels of testosterone, luteinizing hormone, and follicle stimulating hormone are thus potential agents in developing male contraceptives [41]. The central principle underlying male hormonal contraception involves the reversible suppression of the hypothalamic-pituitary-testicular axis, resulting in suppression of spermatogenesis[42,43].

An ideal male-directed hormonal contraceptive must have high efficacy, be universally effective (i.e., can be used by all men), be equivalent to female-directed methods, be safe and reversible, have no short or long-term health risks, must not interfere with libido, potency, or sexual activity, be convenient, economical, affordable, and easily available[44,45]. The discovery of plant-derived male contraceptives that are both reliable and reversible will help reduce unwanted pregnancies and risky abortions faced by women[46]. Herbal contraceptives may also be of assistance to women who experience health problems due to side effects associated with modern contraception[47].

Postpartum abstinence

Postpartum abstinence refers to abstaining from sexual relations after child birth[48]. This is a common technique deep rooted in the cultures of different communities worldwide with varying duration[48-50]. A major form of contraception in pre-colonial Nigerian societies was abstinence from sex during breastfeeding[51]. The practice of postpartum abstinence is closely linked to child spacing in Tanzania and Ivory Coast with additional connections to lactation and child health in Ghana, Côte d'Ivoire, and Malawi[52-56]. Postpartum abstinence in the D.R Congo is known in local terms as "separate beds"[23]. The period of abstinence varies from one cultural group to the next[23]. Many women, who live in *Matemwe* village in Tanzania, leave their husbands after birth of a baby (taking the child with them) and live in their maternal village for up to two years[35]. There appears to be some carry-over of traditional practice, in that (postpartum) abstinence is related to the age and nursing status of the last-born child for a substantial percentage of the women[23]. Although statistics reflect a strong motivation for postpartum abstinence to be used for child spacing in Republic of Congo, yet it is no longer the primary means of achieving this[23].

Waist bands

One of the common techniques of African indigenous contraception is the use of the waist bands/belt, such as tying a rope containing traditional medicine around the waist[57]. Women in South Africa reported that traditional healers

dipped a red string in a mixture of herbs and asked them to tie it around the waist as a contraceptive[58]. The technique of a waist band could be found in Malawi after a study on traditional family planning[59]. In Uganda, herbs are tied in a belt and the belt is tied on the body so that the woman does not become pregnant in[60]. Traditional beads are worn by women as waist bands or as armlets to prevent pregnancy in Nigeria[61]. These items were usually soaked in recipes available as concoctions or decoctions, and thereafter, believed to possess certain spiritual powers to protect women from getting pregnant during sex[40]. The waist bands among the Yoruba of South-western Nigeria involve herbal materials wrapped with animal skins and worn before sexual intercourse[39]. The taboo against this technique is that the woman must avoid wearing the waistband during menstruation[39]. In Gambia, charms are common, to which local lore attributes contraceptive properties, in the form of Quranic prayer amulets tied to the waist[37]. Most charms are thought to have effects that are easily reversible; special instructions for resuming fecundity might be as simple as removing the medicine from the pouch and smearing it on the face, or even simply turning over the amulet and wearing it the opposite way[37]. Women worry about their efficacy and most ritual specialists refuse to prepare them without the husband's consent[37].

Less common techniques of indigenous contraception in Africa

Less common techniques of African indigenous contraception in this review are those techniques known or used for contraception in two or three African countries. For example, an umbilical cord is tied around the waist in Uganda and put in glass bottle in Mozambique[2,26]. Holy water or tea is taken in Zimbabwe and South Africa[13,57]. A technique of avoiding sexual intercourse during a woman's fertile days, known as standard days, is used in Ethiopia[62]. Burial of menstrual blood is known in South Africa and Mozambique[57,52]. The placenta method is known in South Africa and used in Uganda[38,26]. Self-sterilization is used in Uganda, Tanzania and Nigeria[26,35,39]. In Uganda, the baby's foot is inserted back in the opening of the womb after delivery, and the person inserting it says *"let the productivity stop here"* [26]. The last-born is carried in the first-born's baby carrier and placed on the eaves of the house [26]. The burial technique of dead children is practiced in South Africa to prevent the mother from conceiving again[38]. Other less common techniques of African indigenous contraception include: exposing testicles to heat, safety pin, eating soil, use of snail shell, milking rope, use of spear head, traditional ring, standard days and padlock on labia[13,26,38,39,61,63].

Mechanisms of African indigenous contraception

In Zimbabwe, men expose their testicles to above average heat to weaken the sperm, making it weak to fertilize the egg[13]. A safety pin is used in South Africa because the young girl will focus on the pin and not on sex, as such delay vaginal secretions[38]. Thigh sex is useful in preventing pregnancy because man ejaculate on the thighs and no penetration occurs[38]. In Uganda, a mother wears son-in-law's clothes because this is said to stop her menstrual cycle[26]. Polygamy prevents pregnancy by allowing a man move to another woman until the child is more than a year old[38]. Plant parts such as leaves are inserted in the vagina to prevent the semen from reaching the womb[26]. Women in Zimbabwe drink holy water or oil every morning to prevent pregnancy through faith[13]. Terminal abstinence is used in Gambia to prevent pregnancy by young woman delaying sexual relations for years[37]. During post-partum abstinence, a woman is not allowed to sleep with her husband[38]. Women relying on the calendar technique prevent pregnancy by noting ideal days to have sex[38]. Withdrawal prevents pregnancy by preventing male sperms from entering the women[13]. The natural mechanism triggered by breastfeeding interrupts ovulation and the menstrual cycle[24]. Breastfeeding is associated with a significant reduction in fertility and blocks ovulation[38,81].

Practices of African indigenous contraception

Child (birth) spacing

Child spacing is clearly the most common practice of African indigenous contraception. Child or birth spacing means to provide adequate birth spacing between two or more consecutive pregnancies[64]. Long before the influx of Western ideas, the understanding of the importance of child spacing to maternal and infant health was widespread among African cultures[65]. Ninety-five percent of current

users in a study undertaken in Nigeria reported using traditional contraceptive for child spacing[39]. Although most cultures in Africa, such as Ghana encourage large families, they disrespect a woman whose children's birth is closely spaced[22]. Such a woman is said to produce children like a chicken, which is derogatory. She is expected to abstain from sexual intercourse after birth for some time[22]. Therefore, a woman should practice traditional methods of family planning to ensure that children are properly spaced.

In Botswana, sexual relations between husband and wife are not forbidden, but the husband is expected to practice *coitus interreptus* until the child is weaned[66]. It is said that if a woman becomes pregnant again while still weaning a child (which may take two or three years), the child at her breast will become foolish or sickly or suffer in some other way[66]. A child thus afflicted is known as *serathane*, which is also derogatory. A major theme in African indigenous contraception is the nearly universal practice of post-partum abstinence among traditional societies in tropical Africa[23]. The importance of spacing is deeply ingrained into the value systems of these societies, as it enhances the survival of the last born[23]. The actual period varies from as little as two to three months to well over three years, depending on the culture[23]. The main purpose of practicing traditional contraception in Uganda was to increase birth interval[26]. In South Africa, the mother is advised to sleep with the grandmother until the child is 6 months to a year old, thus preventing the woman from sleeping with the husband because there is a possibility of her getting pregnant[38]. In Namibia, women over 60 years of age mentioned breastfeeding indirectly as a measure to control reproduction by explaining that breastfeeding was usually done until the baby started walking, which was usually after a year[6]. During this time, they abstained from sexual contacts as they were warned it would harm the baby and the mother herself. If possible, those women moved in with their own mothers and stayed with her and the baby until the abstinence taboo[6].

Polygamy is also a method used in South Africa for child spacing, because the man will leave the pregnant woman and have sexual intercourse with other wives until the child is more than a year old[38]. In Zimbabwe, medicinal plants used for contraception are prepared, and thereafter taken every day by women for child spacing[13]. Some apostolic sects in Zimbabwe provide "holy water and oil" to women, and are instructed to drink the "holy concoction" with faith every evening to assist in child spacing[13]. Ashes of maize cobs are collected and mixed with hot water in a sieve, the liquid is then drunk everyday by women to aid in child spacing[13]. Child spacing is in no way intended to limit family size, but to increase the number of surviving children[23.] The subject of over-population has not been considered a problem among Africans and has in fact, received least attention in folk medicine[67.] African traditional marriages believe in having many children and a big family[41]. However, whilst the married women have been allowed to produce as many children as possible, the unmarried ones (girls) were in general, not permitted to have children[67]. A period of two years or more of contraception after childbirth is traditionally encouraged[68]. Prevention of pregnancy after birth is important as research has shown that pregnancies occurring within a year of the mother's preceding birth are riskier for the health of both mother and child than those occurring later[16]. Women who have short-interval pregnancies are at higher risk of preterm birth as well as giving birth to infants with low birth weight[64].

Postponement of first birth

A study on indigenous contraception in KwaZulu-Natal, South Africa, showed that virginity testing (*ukuhlolwa kwezintombi*) is one of indigenous techniques used mostly in rural areas to prevent teenage pregnancy[69]. Virginity is one technique used in the D.R. Congo to prevent pregnancy for "births pacing[65]. In this review, virginity is considered a technique for postponing first birth. Maturity examination is also one other method used by the Zulus of South Africa to prevent pregnancy[38]. Maturity examination is usually conducted by grandmothers[38]. In Gambia, charms are often prepared for young married women who are deemed physically not mature enough to carry a child to term and deliver it safely[37]. Furthermore, a young woman may be allowed to delay full sexual relations (abstain) for several months or even years after the public announcement of the union (the distribution of kola nuts in the mosque) so that she can mature physically[37]. Prevention of pregnancy for postponement of first birth is important as a measure to prevent teenage pregnancy, especially among school attendees. For instance, one in three

women in South Africa give birth before reaching the age of 20 years, with some schools reporting as many as 20 pregnant teenagers per annum[70].

Stopping of reproduction

There are indigenous techniques of contraception that are used for stopping the mother from further reproduction. These techniques are performed when the woman is considered too old to produce children, and when her children are old enough themselves to have children[26]. It appears, therefore that, women are motivated to practice contraception when they become grandmothers[26]. In the past, this used to be a common practice in the society to avoid the embarrassment of "old" women competing with their daughters in child bearing, and to keep the respect of the younger generation[71,26]. The practice of stopping reproduction in Uganda, known as the "grandmother effect", involves five methods: putting a child on the eaves of the house, hot foods, firstborn behind the house, son in law's clothes and baby's foot[26]. In South Africa, indigenous knowledge systems burial techniques of dead children are practiced so that the mother of the dead child must not conceive again[38]. The Yoruba of Nigeria also use traditional devices to stop reproduction[39].

Indigenous emergency contraception

The word "emergency contraception" is generally associated with modern "morning-after" pills. Interventions to avoid pregnancy after sexual intercourse already existed among women in pre-colonial sub-Saharan Africa, such as the use of amulets and herbal decoctions[2]. In South Africa, ash is mixed with water so that the woman can drink it immediately after sex to prevent her from getting pregnant[38]. Whilst Zimbabwean women drink the powdered roots of *Flueggea virosa* before sexual intercourse[72], *Pouzolzia mixta* is however, taken the morning after sexual intercourse to prevent pregnancy[72,73]. *Pouzolzia mixta* therefore has post-coital contraceptive properties. Medicinal plants that have post-coital contraceptive effects can play a reproductive role in acting as contraceptive emergencies to prevent unwanted pregnancies[74].

Reasons for the practice and preference of African indigenous contraception over modern contraceptives

Although it is used for postponing the first birth and stopping reproduction, periodic abstinence is particularly important in Cameroon for spacing births[18]. It appears that the main purpose of practicing traditional contraception is to increase the birth interval for the health of the child, rather than for family planning reasons[26]. The reason behind child spacing is that, even if the mistake can happen the next child will be born after the first one has two years and more, then the mother will be able to care for the new born child"[38]. Reasons for indigenous contraceptive use among women in Urhobo land, Nigeria were to prevent pregnancy; for child spacing; to reduce a family size; to be wealthier and to look healthier (in this review, child spacing is considered a practice, not a reason)[63]. The reason for postponing first birth is for young married women who are deemed physically not mature to carry a child to term and deliver it safely[37]. The other reason for postponing first birth is for young boys and girls to finish school and seek formal sector employment[18]. The reason for stopping reproduction in African indigenous contraception is because the woman is too old to produce children[2,26,39]. Another reason for stopping reproduction was to prevent another pregnancy after a series of difficult pregnancies or punish a daughter for marrying against the family will[65].

Some women use African indigenous contraception than modern contraceptives because of the fear of perceived side-effects of modern contraceptives and opposition by husbands on the high costs associated with modern contraceptives[13,18,28,37,60,63]. The difficulty in getting modern contraceptives was also another reason stated for preferring African indigenous contraception over modern contraceptives[60,39,28]. Other women mentioned the assurance of privacy during consultation and failing to conceive when they eventually want children[13,39]. Another reason is that modern contraceptives are perceived as things that are used by prostitutes and taking them may defile the family and anger spirit mediums[13]. Periodic abstinence is preferred over modern contraceptives because it is perceived as honourable, as it conforms almost perfectly to local notions of self-discipline, temporal management, and measured self-restraint[18].

Conclusion

Despite the introduction and popularity of modern contraception, African indigenous contraception continues to play a reproductive role among

African indigenous communities. Four of the six common techniques mentioned in this review are natural techniques. Natural techniques are cost free, safe and relatively effective when compared to traditional techniques. The lack of clarity regarding mechanisms of some of the techniques raises concerns about their efficacy and safety. Practices of African indigenous contraception such as birth-spacing are important for ensuring mother and infant health. Therefore, attempts must be made to include African indigenous contraception as part of government interventions to prevent unwanted pregnancies in Africa, instead of relying only on modern contraceptives. However, more ethnographic and scientific research is needed to understand the mechanisms, efficacy, and safety of African indigenous contraception.

Contribution of Authors

MAM researched, contributed to writing and submitted final manuscript. SAM conceived and designed the study, contributed to writing and edited final draft of the manuscript. WOM and AOA contributed to writing and edited final draft of the manuscript. All authors mentioned in the article approved the final manuscript.

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