**ORIGINAL RESEARCH ARTICLE**

# Knowledge, attitudes, and perceptions of Batswana women towards indigenous contraception

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## Abstract

Indigenous contraception can play a significant role in reducing unwanted pregnancies in Africa. The objective of the study was to evaluate women's knowledge, attitudes, and perceptions towards indigenous contraction. Three hundred and eighty-three (383) women were sampled randomly. Data was collected using a research questionnaire that included multiple choice questions and a 5-point Likert scale. Descriptive statistics and Pearson's Chi-square (x2) test of independence were used for data analysis, with P-value < 0.05. The overall knowledge was poor, with abstinence being the only technique known by majority women. Most young women (20-40 years) had a negative attitude and bad perception about indigenous contraception. Older women were associated with more knowledge and better attitudes toward indigenous contraception (P<0.05). Older women need to assist in awareness campaigns to improve young women's knowledge, attitudes, and perceptions towards indigenous contraception. *(Afr J Reprod Health 2026; 30 [4]: 64-72).*

**Keywords:** Abstinence; Birth-spacing; Taboos; Teenage pregnancy.

## Résumé

Les méthodes contraceptives traditionnelles peuvent jouer un rôle important dans la réduction des grossesses non désirées en Afrique. Cette étude visait à évaluer les connaissances, les attitudes et les perceptions des femmes concernant ces méthodes. Un échantillon aléatoire de 383 femmes a été constitué. Les données ont été recueillies à l'aide d'un questionnaire comprenant des questions à choix multiples et une échelle de Likert à 5 points. Des statistiques descriptives et le test du $\chi^2$ de Pearson ont été utilisés pour l'analyse des données ($p < 0,05$). Les connaissances générales étaient faibles, l'abstinence étant la seule méthode connue de la majorité des femmes. La plupart des jeunes femmes (20-40 ans) avaient une attitude et une perception négatives des méthodes contraceptives traditionnelles. Les femmes plus âgées présentaient de meilleures connaissances et des attitudes plus positives à leur égard ($p < 0,05$). Il est nécessaire que les femmes plus âgées participent aux campagnes de sensibilisation afin d'améliorer les connaissances, les attitudes et les perceptions des jeunes femmes concernant ces méthodes. *(Afr J Reprod Health 2026; 30 [4]: 64-72).*

**Mots-clés: :** Abstinence ; Espacement des naissances ; Tabous ; Grossesse chez les adolescentes

## Introduction

Good knowledge of contraception has been associated with increased contraceptive use.[1] There is significant association between the participants' knowledge of contraception and their perceptions and attitudes regarding contraceptives.[2]

There is also a significant relationship between knowledge and the utilization of contraceptives.[3] Thus knowing at least one method of contraception is an essential precondition for practice of contraception.[2] A study on college students showed that increased knowledge on contraception had an influence on women's perception and attitudes towards contraception.[4] Furthermore, students with a good level of knowledge regarding contraception generally showed positive attitudes toward the utilization of contraceptives.[4] Unwanted pregnancies among South African teens attending school continues to be a challenge, despite modern contraceptives being freely available, publicised and advertised, and taught at schools as part of the Life Orientation subject.

The second largest political party in South Africa, the Democratic Alliance (DA) has called for urgent

action to address the alarming rise in teenage pregnancies in South Africa. The DA was alarmed by the report that more than 122 000 teenagers gave birth in 2024, with 2 716 young girls aged 10 to 14 years and 119 587 teens aged 15 to 19 facing parenthood while still being children themselves.[5] Teenage pregnancy in South Africa is driven by factors such as poverty, poor access to contraceptives, gender inequalities, sexual taboos, high levels of gender-based violence, and inadequate sex education.[5] Indeed, this complex issue requires a comprehensive approach to address these multifaceted drivers. The problem is that governments, policy makers, research institutions and councils, including Non-Governmental Organizations put too much focus and emphasis on western methods of contraception such as condoms, pills, and injections, whilst ignoring indigenous methods of contraception. A comprehensive approach is required, which should consider integration or inclusion of African indigenous methods of preventing pregnancy.

Contraception refers to the prevention of conception, but generally means the prevention of pregnancy.[6] The act of controlling childbirth among Africans is as old as African Traditional medicine and these methods, techniques and practices have been long being used to prevent unwanted pregnancies.[7] The Egyptians wrote the first document on contraception in 1850 BC and used coitus interruptus (withdrawal) and vaginal plugs formed from magic portions, seeds, and herbs to prevent pregnancy.[7] Some other preventive methods used by the Egyptians were sex taboos, limiting the time and frequency of sex, prolonged lactation (breastfeeding), delayed marriages and celibacy.[7] Even in in pre-colonial Sub-Saharan Africa, interventions to avoid pregnancy after sexual intercourse already existed among women.[8] For example, The Maasai tribe of Kenya and the South African Tsonga tribe adopted coitus interruptus, including coitus reservatus (i.e., suppression of male orgasm) to prevent pregnancy.[9] In Southern Africa, women regulated their fertility through a range of cultural practices that ensured effective child spacing.[10] For example, The Batswana, another traditionally spaced their families by means of breastfeeding and abstinence for a period of two years after childbirth.[11] Prevention of conception through coitus interruptus and abstinence continued until the baby began to crawl, the end of which was marked a ceremonial rite.[7] Indigenous contraception among Africans was thus both magical and rational.[7]Practices, taboos and techniques of African indigenous contraception used by Batswana traditional healers to prevent pregnancy have been documented.[12] Some of the documented practices included birth spacing and virginity or postponement of first birth, whilst six sex taboos were: *no sex after death*; *following divorce, during breastfeeding, after miscarriage, after abortion, and during menstruation.*[12] Techniques included the use of *abstinence, animal intestines, burial and waist techniques, drinking water, vaginal stitching, avoidance of certain foods, withdrawal and soil eating.*[12]. A study in Limpopo province, South Africa, showed that secondary school learners had poor knowledge, negative perceptions, and bad attitudes towards indigenous contraception.[13]

However, the study focussed on indigenous contraception in general without specifying the practices and techniques of indigenous contraception. The objective of this study was to evaluate Batswana women's knowledge, attitudes, and perceptions towards indigenous contraception, with specific focus on indigenous practices, taboos, and techniques of contraception mentioned above. No study has so far investigated women's perceptions towards these practices, taboos, and techniques of indigenous contraception.

## Methods

A quantitative research approach was followed in this study and can be defined as research that explains phenomena according to numerical data, which are analysed by means of mathematically

based methods, especially statistics.[14] A cross-sectional survey was used to investigate the knowledge, attitudes, and perceptions of women towards indigenous contraception. Surveys that are carried out at a just one point in time are known as a cross-sectional in design[15] and describes a method of data collection in which questionnaires were delivered in person by the researcher to collect information on people's knowledge, opinions, perceptions, attitudes, and values.[16] The target population for this study included all Batswana women in Mafikeng local municipality, North West province of South Africa.

According to StatsSA,[17] the population of women in Mafikeng local municipality at the time was 161 300. The inclusion criteria for participation included women residing in Mafikeng, aged 20 years or older. A sample size of three hundred and eighty-three women from a population of 101 495 was determined using a *Raosoft calculator*.[18] Three hundred and eighty-three (383) Batswana women aged 20 years old and above were randomly sampled. The research questionnaire was validated by conducting a pilot study.

There were complaints from respondents during the pilot study that some questions lacked clarity and others were repetitive. The total number of items were also reduced from 30 to 18 to reduce time required for completion and avoid repetition. The final research questionnaire was shorter, with clarity and comprehensiveness.

Data was collected by requesting participants to complete the revised research questionnaire. All research questionnaires were distributed by the researcher and administered face to face to participants. Most participants completed the questionnaires in the presence of the researcher, whilst few were collected hours or few days after completion. A structured research questionnaire written in Setswana (Batswana language) and English was used. The questionnaire consisted of four sections that included sections A; B; C and D. Section A investigated women's knowledge regarding practices, taboos, and techniques of indigenous contraception through multiple-choice questions, whilst sections B and C investigated their attitudes and perceptions respectively using a 5-point Likert scale. The last section of the questionnaire requested women to provide their demographic information. The research questionnaire consisted of eighteen items in total.

### *Data analysis*

Data analysis in quantitative studies is conducted to reduce, organize, and give meaning to the data to address the research objectives.[16] Before data analysis, the researcher arranged the questionnaires chronologically and went through each questionnaire to verify that it was correctly completed. The raw data was recorded on an Excel program 2016 version and imported into the IBM-Statistical Package for Social Science (SPSS version 24.0) data sheet for statistical analysis. Descriptive statistics was first used to analyse the data. The possible associations between dependent (knowledge, attitudes, and perceptions) and independent variables (demographic characteristics) were determined using Pearson's Chi-square (x2) test of independence. For statistical significance, P-value $< 0.05$ was considered in all cases.

### *Ethical considerations*

Consistent with the ethical standards of the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards, authors submitting the findings of research investigation that involve human subjects, the North-West University Health Research Ethics Committee (NWU-HREC) approved the protocol. The North-West University Health Research Ethics Committee then issued the study's ethics certificate with ethics number: NWU-596-19-A5

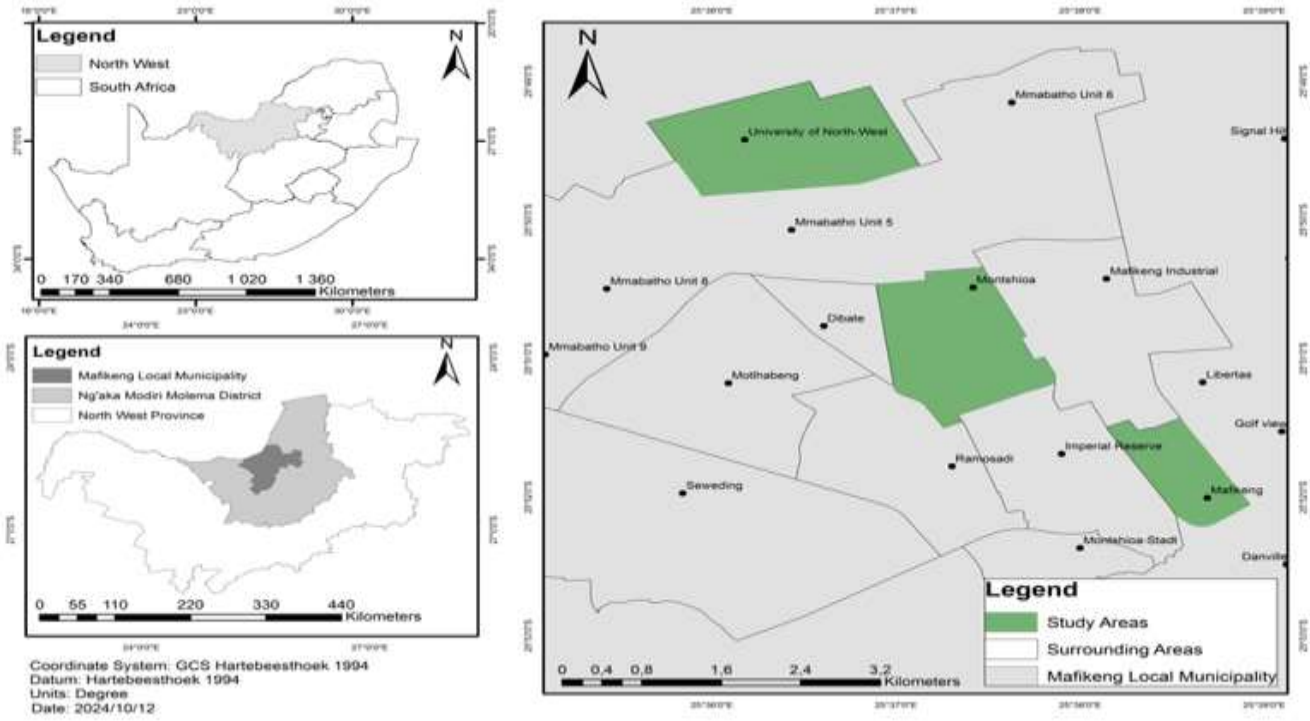


**Figure 1:** Study site

## Results

### *Demographic characteristics of participants in the study*

The majority (60%) of women in this study were still within their reproductive age. Women aged 40 to 49 constituted 17% of the respondents, whilst 24% of the participants were 50 years and above. Eleven percent (11%) and 13% of respondents were 50 to 59 years and 60 years and above respectively. The majority (56%) of women who participated in this study were single, followed by those who were married (33%).

About 8% of participants were widows. Only 3% of women were divorced. Approximately 26% of women in this study had no children, whilst 44% had one to three children. Approximately 5% of women had four to six children in this study. The percentage of women that had more than six children was like that of women that had four to six children. About 4% of participants had no formal schooling, whilst 14% of women had primary education. Approximately 45% of women had secondary education whilst 37% had higher education. Of the respondents in this study, approximately 72% had either secondary or higher education. This high percentage of women that had secondary or higher education could also be attributed to the high proportion of the youth in this study. About 57% of the women in this study were unemployed, only 24% employed and 19% self-employed. The percentage of self-employed women (19%) was close to that of the employed (24%).

### *Knowledge regarding indigenous contraception among women in the study*

Each participant knew at least one of the practices, taboos, or techniques of indigenous contraception.

**Table 1:** Demographic characteristics of participants in the study (383 women)

| Variables | | Frequency | % |
|---|---|---|---|
| **Age (in year)** | 60+ | 50 | 13 |
| | 50--59 | 41 | 11 |
| | 40--49 | 66 | 17 |
| | 30—39 | 92 | 24 |
| | 20--29 | 134 | 35 |
| **Marital status** | Single | 216 | 56 |
| | Married | 125 | 33 |
| | Divorced | 42 | 11 |
| **Number of children** | 0 | 100 | 26 |
| | 1--3 | 169 | 44 |
| | 4--6 | 94 | 25 |
| | 6+ | 20 | 5 |
| **Employment status** | Unemployed | 217 | 57 |
| | Employed | 92 | 24 |
| | Self-employed | 74 | 19 |

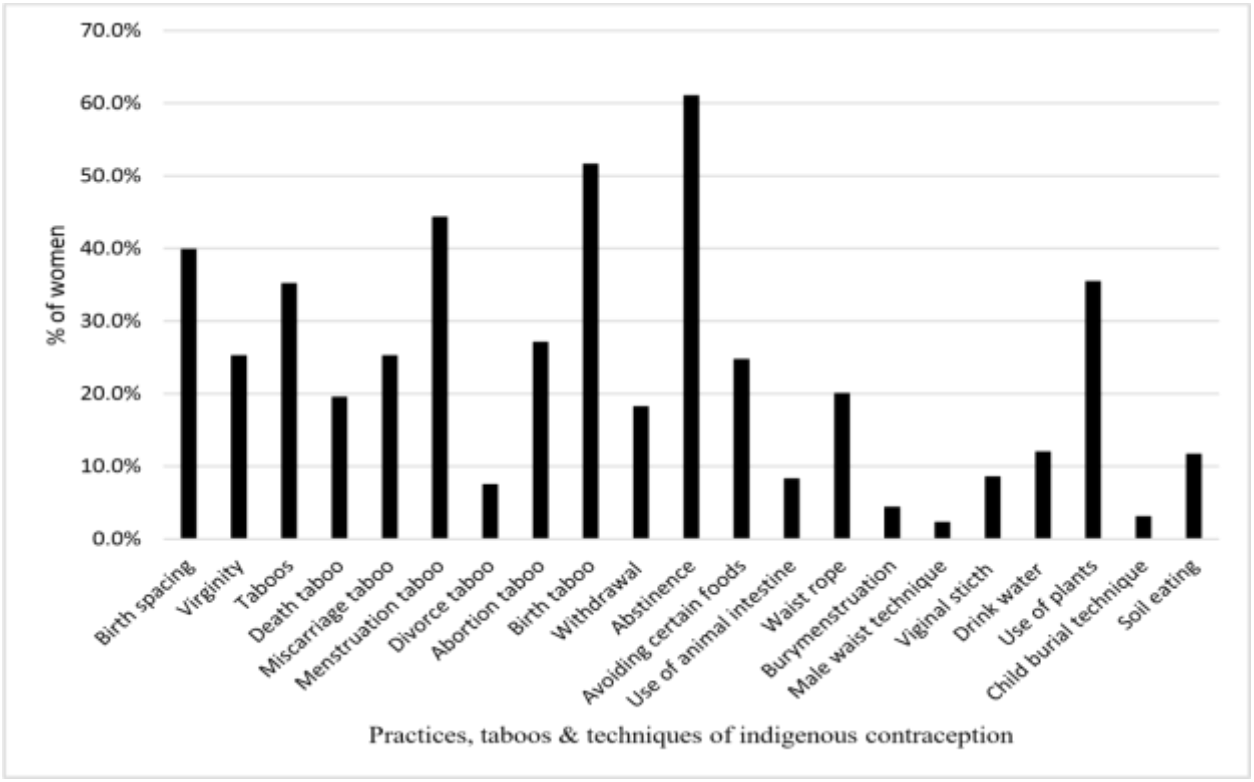


**Figure 2:** Women's knowledge concerning practices, taboos, and techniques of indigenous contraception.

However, women's knowledge regarding each practice of indigenous contraception was very poor. Results illustrated that the most known practice of indigenous contraception among the participants was birth spacing, known by 39.9% of the women. Women further knew all six sex taboos of indigenous contraception. The most known taboo of indigenous contraception, known by majority of the women (51.7%) was birth taboo (no sex after birth), followed by menstruation taboo (44.4%) and abortion taboo (27.2%) respectively. The least known taboo was no sex after divorce, known only by 7.6%. Women also knew most of the techniques of indigenous contraception. Abstinence was the most known technique of indigenous contraception (61.1%), followed using medicinal plants (35.5%). The least known techniques were male waist and child burial techniques, known by 2.3% and 3.1% respectively.

About 70.5% of women knew the roots as part of the plant used for contraception, followed by the leaves (28.7%) and seeds (7.8%). About 15% of women did not know part of the plant used for contraception. Only 9% of women knew specific medicinal plant(s) used for contraception, despite 35.5% knowing the technique of using medicinal plants for contraception. Therefore, knowledge regarding the specific medicinal plants used for contraception was very poor among participants in general. However, the Pearson's Chi-square (x2) test showed associations between knowledge and age (P-value < 0.05), with older women having more knowledge about indigenous practices, techniques and taboos of contraception than younger ones.

### *Attitudes towards indigenous contraception among women in the study*

The study showed that about 90% of the women aged 20-29 years strongly disagreed while 81.8% disagreed towards usage and documentation of indigenous contraception. The study further showed that about 66.7% strongly disagreed towards provision of indigenous contraception at clinics and 10.5% strongly disagreed towards teaching of indigenous contraception. About 43.3% of women, aged 20-29 years old agreed and 27.8% strongly agreed towards indigenous contraception being taught in schools. Women aged 20-29 years old therefore felt that indigenous contraception needed to be taught at schools before it is provided at clinics or used by the community. In addition, none of women aged 30-39 years old strongly disagreed towards documentation of indigenous contraception, whilst 13.6% strongly disagreed towards usage of indigenous contraception.

About 47.4% of women aged 40-49 years old strongly disagreed towards teaching of indigenous contraception at schools. Only 4.5% of women aged 60 years and above strongly disagreed towards usage of indigenous contraception. This figure is significantly lower when compared to that for women aged 20-29 years old (81.8%). None of women aged 50-59 years old strongly disagreed towards usage of indigenous contraception and documentation of indigenous contraception, including its usage at clinics, or being taught at school. Results showed that women aged 20-49 years old had a negative attitude towards indigenous contraception compared to older women aged 50-60+ years old.

### *Perceptions regarding indigenous contraception among women in the study*

Approximately 45% and 42% of women, aged 20-29 years had a bad perception regarding the safety and effectiveness of indigenous contraception respectively. Approximately 61.9% and 67.1% of these women (20-29 years old) had a bad perception about the safety and efficacy of indigenous contraception. The study showed that 28.2% and 22.9% of women aged 20-29 years old had a good perception about the safety and effectiveness of indigenous contraception, respectively. Most women perceived indigenous contraception as very accessible, whilst 37.5% perceived the affordability of indigenous contraception as incredibly good.

### *Determinants of knowledge of indigenous contraception*

Practices, taboos, and techniques of indigenous contraception can be categorised according to natural or traditional methods. Traditional methods of indigenous contraception are those practices, taboos and techniques that require intervention and assistance from a traditional healer such as the child burial techniques whilst natural methods such as abstinence or withdrawal are self-regulated. More women knew natural methods of indigenous contraception such as abstinence and withdrawal than they knew traditional methods such as child burial and male waist techniques that require assistance from traditional healers. Age was also a determinant of knowledge regarding indigenous contraception, with older women being more knowledgeable than younger ones. Women with less western education also showed more knowledge about indigenous contraception than those that attended western education.

## Discussion

The use of birth spacing to prevent pregnancy among Africans have been reported.[12,19,20] 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 ways.[20, 21]

In Zimbabwe, women use the roots of the *Mukina tree* and ashes of maize cobs for child spacing.[22] Results in this study showed that the actual period for birth spacing varied, from as little as two to three months to well over five years, depending on the culture.[19]. These findings were consistent and in line with the observation by other authors who observed that a period of two years or more of contraception after childbirth was traditionally encouraged in Africa.[11] However, in some cultures, age is not a determining factor, rather the maturity of the child, e.g., if the child can speak, walk, dress and feed her/himself.

A study on indigenous contraception in South Africa, showed that virginity testing is one of indigenous practices used mostly in rural areas to prevent teenage pregnancy.[21] This practice is usually conducted by grandmothers who ask girls to show their bottoms as a symbol of being proud of being virgins.[21] Most women knew this practice, which is important when a woman is to be considered for *lobola* (token given to family of the woman to be married). Virginity, or postponement of first birth is critical among Africans. However, virginity testing practices have faced intense pressure and scrutiny from human rights activists.

In this study, all six taboos of indigenous contraception among the Batswana were known among women, with "birth taboo" (no sex after birth) known by 51.7% of women. The least known contraceptive taboo was the divorce taboo (no sex after divorce). Similarly, to this study, minority of women in Zimbabwe knew medicinal plants used for contraception.[22] Furthermore, in Uganda, nearly half of the participants knew abstinence and withdrawal, nearly like the results in this study.[23] However, the percentage of women that new withdrawal technique in this study was too small when compared to that of women in Nigeria that knew the technique of withdrawal.[24] The reason why abstinence is so much known in South Africa could be that abstinence is also encouraged and promoted from a modern (western) perspective of contraception, especially among the teenagers.

The results of this study have shown that a small percentage (%) of women agreed to the use of indigenous contraception by the community and provision at clinics. However, most women agreed towards documentation of indigenous contraception and that it be part of school curriculum. Like our study, participants in another study agreed that herbal contraceptives were effective and that they had no side effects.[24] However, unlike in our study, majority of women perceived indigenous contraception as accessible.[24] Indigenous contraception was perceived by women as good, for mother's health; improves family

economic situation; increases provisions to each child; brings family happiness; and offered a chance for mother to work.[25]

Women in our study had negative perceptions towards indigenous contraception. Other women in another study perceived indigenous contraception negatively because it was considered against religion; harmful to the woman's health; required too much effort and costs; and a desire for large families.[25]

Overall, women had more knowledge about natural contraceptives such as abstinence and withdrawal, compared to traditional contraceptives such as child burial or waist belt techniques which normally requires the intervention from a traditional health practitioner. In addition, due to experience, older women had more knowledge about indigenous contraception than younger ones. This finding shows that knowledge regarding indigenous contraception is fading away. The documentation and recording of these techniques, taboos and practices is significant to prevent the loss of such knowledge. As it is known, when an African elder dies, it is like the burning of a library. These older women need to play the role of mentors in teaching the younger generations about indigenous methods of contraception.

## Strengths and weaknesses

This quantitative study is an extension of a published qualitative study that documented practices, taboos and techniques of indigenous contraception used by traditional healers in the same study area. The sample size for this study was high. However, given that adequate sample size was used in the study, the authors should have considered doing a logistic regression analysis to show the determinants of knowledge of indigenous contraception among the study participants. This could have increased the validity of the results and the discussion.

## Conclusion

Batswana women had low knowledge about indigenous contraception, with abstinence the only technique known 60% of all participants. Overall, natural techniques such as abstinence and withdrawal were known by most women compared to traditional techniques such as child burial techniques that required the intervention of a traditional healer. Most young women had a negative perception towards safety and effectiveness of indigenous contraception, with the majority also perceiving indigenous contraception as very accessible. There is a need for women awareness campaigns, empowerment workshops and seminars on practices, techniques, and taboos of indigenous contraception. Awareness campaigns regarding indigenous contraception will assist in the improvement of women's attitudes and perceptions towards indigenous contraception. It is therefore crucial that indigenous contraception become part of school curriculum western health care facilities. Older women had more knowledge regarding the practices, techniques, and taboos of indigenous contraception than their younger counterparts. These older women can play the role of mentors in teaching the younger generations about indigenous methods of contraception. However, the safety, efficacy, and mechanisms of these indigenous methods of pregnancy prevention need to further investigation.

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