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## **An Article Review on Knowledge and Use of Traditional Contraceptives**

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### **ABSTRACT**

In developing countries, reported numbers of young women experiencing unintended pregnancies and unmet needs for contraceptives remain high [1]. Furthermore, unwanted pregnancies are linked to a higher likelihood of unsafe abortions.—which can have serious health consequences [2]. This journal review focuses on gathering and analyzing the knowledge and use of couples on the use of Traditional contraceptives as a method for pregnancy prevention. Utilized in this study were multiple databases to identify sources for its literature review, with google scholar as the most commonly used. In addition, precise and specific search terms were used to identify research articles that are related and relevant to this study. Traditional methods of contraception, namely, the lactation amenorrhea method, calendar method, withdrawal method, rhythm method, and abstinence, are shown to be less effective methods of contraception. The Millennium Development Goals (MDG) made increased access to contraception as well as other sexual and reproductive health services for all people a top priority [6,7]. However, for several reasons, traditional contraceptive use and common misconceptions about it are not publicly discussed, which puts young, unmarried women at a greater risk for unplanned or unintended pregnancies [8]. Expanding family planning services in the research context will require patient education on the numerous and current contraceptive alternatives, their adverse effects, and how to manage them. These traditional contraceptive methods are proven to be less successful in preventing pregnancies compared to modern contraceptive options and, thus, often lead to unwanted pregnancies. These traditional contraceptive methods are more prevalent in older women, usually those with little to no education regarding modern contraceptives or medication alternatives. Usual patrons of herbal contraceptive preparations are women ages 18-40 regardless of levels of education and knowledge on modern contraceptive alternatives.

Keywords: Traditional Contraceptives, Herbal Contraceptives, Withdrawal method, Folkloric Contraceptives

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### **1. Introduction**

In developing countries, reported numbers of young women experiencing unintended pregnancies and unmet need for contraceptives remain high [1]. Furthermore, unwanted pregnancies are linked to a higher likelihood of unsafe abortions. —which can have serious health consequences [2]. A working paper in the Philippines entitled “Ten Years of Traditional Contraceptive Method Use in the Philippines: Continuity and Change” revealed that although modern birth control methods have become increasingly popular, traditional methods still account for a third of contraceptive use from 2003 to 2013 [3]. Traditional methods of contraception widely used by Filipino couples include the rhythm/calendar method or periodic abstinence, withdrawal, and folkloric method (e.g., use of herbs). A study of data from 43 countries found that the failure rates for traditional methods, including withdrawal and periodic abstinence, are the highest. In contrast, the failure rates for longer-acting modern contraceptive methods, including implants, IUDs, and injectables, are the lowest. While short-term resupply methods like pills and male condoms rates have an intermediate failure rate [4].

However, despite these clear indications for the effectiveness of traditional and modern contraceptives, many Filipinos still prefer the traditional method for various reasons: to avoid negative side-effects of hormonal methods, including fear of permanent sterility caused by hormonal methods; to experience increased sexual pleasure; or for lack of knowledge and access to modern methods and inconvenience of use; Low levels of education; women’s and partners’ disapproval of modern family planning methods; and religious beliefs [4,9]. A study of poor urban women in Manila found that the withdrawal method, particularly, was the most preferred traditional contraceptive method due to the absence of side effects, safety, agreeability with partners, and ease of use [4]. A study in Turkey also revealed withdrawal as the primary method used amongst couples [5].

The Millennium Development Goals (MDG) made increased access to contraception as well as other sexual and reproductive health services for all people a top priority [6,7]. However, for several reasons, traditional contraceptive use and common misconceptions about it are not publicly discussed, which puts young, unmarried women at a greater risk for unplanned or unintended pregnancies [8]. Therefore, expanding family planning services in the research context will require patient education on the numerous current contraceptive alternatives, their adverse effects, and how to manage them.

This journal review aims to acquire and analyze information about how couples use traditional contraceptives for pregnancy prevention.

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### **2. Methodology**

This study focuses on analyzing the knowledge and use of traditional contraceptives. Multiple databases were utilized, such as PubMed, Medline, Cochrane, google scholar, Elsevier, and Scopus, to identify sources for its literature review, with google scholar as the most commonly used. In addition,

precise and specific search terms were used to identify research articles that are related and relevant to this study. One of the search terms used was "traditional contraceptives." Prevalence, percentage distribution, bivariate, and trivariate analyzes were performed to capture differences by sociodemographic background. This study also conducted a multinomial regression analysis using DLHS data (2007–2008) associated with high prevalence states to determine adjusted odds ratios for conventional contraceptive use. In this model, the dependent variable has three categories: using traditional methods, using modern methods, and using no method. Independent variables were the woman's age, place of residence, religion, caste, wealth, number of children alive, and at least one son [10].

### 3. Results and Discussion

**Table 1 - Traditional Contraceptive Methods Used in some countries**

	Author and Year	Locale	Traditional Contraceptives Used	Summary Points
1	Ehab Eshak (2020)	Minia, Upper Egypt	Lactation amenorrhea method, Calendar Method, Withdrawal method	A cross-sectional study of married women in urban and rural health centers in Minia revealed that 78 out of 1212 participants were currently using traditional and barrier methods of contraception [11].
2	Ajayi, A.I., Adeniyi, O.V. & Akpan, W. (2018)	South Western and North Central Nigeria	Withdrawal and rhythm methods	The data collected from 809 participants using a 3-stage cluster random sampling technique revealed that only 56.1 % prefer traditional contraceptive methods due to the fear of side effects resulting from modern contraceptive methods [12].
3	Jaravaza, D. C. (2013)	Mutasa District of Manicaland Province, Zimbabwe	Herbs, protracted breastfeeding, rhythm, and withdrawal	It was mentioned that the traditional methods of birth control employed in the Mutasa district include herbs, rhythm, withdrawal, holy water, and oil, continued breastfeeding and exposing testicles to higher than normal heat temperatures. People are becoming more aware of health issues and prefer using natural herbs and vegetables over sophisticated technologies [13].
4	Marquez, M. P. N., M. Kabamalan, and E. Laguna (2017)	Philippines	Periodic abstinence or rhythm method, withdrawal method	Contrary to the relative ease with which traditional contraceptive methods can be adopted, the most frequent reasons for not using them are worries about their adverse effects, ignorance of other techniques, and inconvenience of use. Additionally, education has a conflicting impact on the adoption of conventional contraceptive methods [3].
5	Goldberg, H. I., & Toros, A (1994)	Turkey	Withdrawal Method	It is found that fear of health problems and side effects and the opposition of husbands were the main reasons for not using modern methods of contraceptives which are considered to be highly reliable. Most couples who practice withdrawal also feel that it is as effective as modern methods [14].
6	Bertrand JT, Ross J, Glover AL. (2022)	CAR, Latin America; MENA, SSA-ES, SSA-WC	Rhythm (also known as periodic abstinence), withdrawal and 'other traditional methods' (including folkloric)	Traditional methods of contraception are preferred by many women, while others use them as a transition to modern methods. For some, traditional methods are the only option where access to modern methods is limited [9].
7	Ram, F, Shekhar, C and Chowdhury, B (2014)	India	Rhythm and withdrawal method	It is found that highly educated, urban, non-poor, and other than SCs/STs women carry relatively higher odds of using traditional methods [15].
8	Ahinkorah, B. O., Hagan Jr, J.	Ghana	Rhythm and withdrawal method	Pregnant adolescents were found to be more likely to possess knowledge of traditional contraceptive

	E., Seidu, A. A., Hormenu, T., Otoo, J. E., Budu, E., & Schack, T. (2021)			Methods. Results showed that the process of acquiring Contraceptives is often embarrassing. They also believe that contraceptives are for married people only. Hence, even when there is easy access to contraceptives, uptake may be inhibited by the societal stigma associated with non-marital sexual activity [16].
9	Shrivastava, S., Dwivedi, S., Dubey, D., & Kapoor, S. (2007)	Madhya Pradesh, India	Herbal oral contraceptives	The study revealed <i>Abrus precatorius</i> as the drug of choice for preventing pregnancy as a herbal oral contraceptive. However, herbs such as Neem ( <i>Azadirachta India Juss</i> ), Papita ( <i>Carica papaya L.</i> ), Palash ( <i>Butea monosperma P</i> ), Castor ( <i>Ricinus communis</i> ), Nirgudi ( <i>Vitex negundo</i> ), Gudhal ( <i>Hibiscus rosa sinensis Linn</i> ), Ratalu ( <i>Dioscorea bulbifera</i> ), Haldi ( <i>Curcuma longa valeton</i> ), and ten others also show potent contraceptive properties for both males and females [17].
10	Rabiu A, Rufai AA. (2018)	Nigeria	Herbal medicine, Withdrawal, Cervical mucus, Calendar method, Prolonged breastfeeding, Abstinence, and other TCMs (ex. charms, beads, religious prayers...)	The majority of people in the study were more knowledgeable about traditional contraceptive methods, particularly herbal medicine as the most commonly used method. There was poor utilization of modern contraceptive methods and fair utilization of TCMs [18].
11	Hettiarachchi, J., & Gunawardena, N. (2012)	Sri Lanka	Coitus interruption, periodic abstinence	Results reveal that a significantly higher proportion of Muslim women over 35 years preferred traditional methods over modern alternatives. Furthermore, not having received detailed education regarding modern family planning was associated with a preference for traditional methods of contraception [19].
12	Kadiri, A. B. (2009)	Lagos, Nigeria	Herbal Contraceptives	According to responses taken from Traditional medicine practitioners in seven major markets in Lagos, a number of local botanicals were regularly used in the contraceptive recipes they prescribed. These botanicals were identified using the flora and in the herbaria of the Forestry Research Institute of Nigeria, Universities of Lagos and Ibadan, and Obafemi Awolowo University. Women between the ages 18 and 40 years prefer these herbal contraceptives and those in the city outskirts prefer medicinal preparations to apply before pregnancy, while those in the metropolis markets prefer preparations made to apply before intercourse [20].
13	Rossier, C. & Corker, J. (2017)	Sub-Saharan Africa	Withdrawal, Rhythm Method or Periodic Abstinence	Results indicate that women in Sub-Saharan Africa adjust their method choice in accordance with their reproductive circumstances and ease of access to modern methods. They tend to choose the traditional use of contraceptives when they are willing to use less effective forms of contraception and when an intended pregnancy is easier to accept [21].
14	Perera, N. (2014)	Sri Lanka	Withdrawal, Rhythm Method	Findings reveal that traditional contraceptive use is relatively higher among educated women and that the fear of side effects of modern contraceptive methods is the main factor that influences the reliance on traditional contraceptive methods [22].
15	Aghajanian, A., Mehryar, A., Delavar, B., Kazemipour,	Iran	Withdrawal	Despite its historical roots of regression in Islamic culture, this method does not appear to be widespread in today's Muslim-majority countries are only five of the 26 Muslim-majority countries in North Africa and Asia with very high payment rates. It is noteworthy for several reasons that the

	S., & Zinab, H. (2007)			majority of Iranian couples continue to use hikikomori as one of the main forms of traditional contraception [10].
16	Alpu, Ö. & Fidan, H. (2006)	Turkey	Withdrawal, Periodic Abstinence, Folk Methods	The behavior and perception of women on contraceptive method use and choice are heavily associated with their attitude towards family planning, level of education, and ease of access to such methods [23].
17	Abdul-Rahman, L., Marrone, G., & Johansson, A. (2011)	Ghana	Withdrawal, Periodic Abstinence	The findings of this study indicate that though sexually active female adolescents are willing to use contraceptives, factors such as physical access, cost, and misconceptions about their effects limit their access and use [24].
18	Rhanama, P., Hidamia, A., Shokravi, F., Kazemnejad, A., Ghazanfari, Z., & Montazeri, A. (2010)	Eastern district of Tehran, Iran	Withdrawal	The results of this study suggest that abstinence patients misunderstand modern contraceptive methods and exaggerate the health problems associated with them. In fact, these are key questions for understanding Iranian women's attitudes and experiences. The findings of this study may be important in making evidence-based policy decisions and in planning, monitoring, and evaluating reproductive health programs in Iran and elsewhere [25].
19	World Health Organization (2011)	Africa, Asia, Latin America	Withdrawal, Periodic Abstinence	Data indicates that the lack of contraceptive use contributes to unwanted pregnancies, which are, in turn, linked to unsafe abortion and consequent maternal mortality and morbidity [26].
20	Nikolic, Z., & Djikanovic, B. (2015)	Serbia	Withdrawal, Lactational Amenorrhoea, Periodic Abstinence	The study suggests that, in contrast to Roma women, non-Roma women were much more likely to use modern methods of contraception. Education level and wealth also proved to be important predictors of contraceptive usage [27].
21	Nnenna Ukwuani-Kwaja, A., Habiba, S., & Abubakar, I. B. (2022)	Kebbi State, North-West Nigeria	Herbal Contraceptives	Data and surveys collected from residents of Kebbi identified 20 different medicinal plants used as herbal contraceptives. <i>Momordica charantia</i> , <i>Piliostigma thonningii</i> and <i>Moringa oleifera</i> were the most commonly used, and 50.37% of respondents reported having solely relied on herbal contraceptives [28].
22	Bajwa, S. K., Bajwa, S. J. S., Ghai, G. K., Singh, K., & Singh, N. (2012)	Punjab, India	Abstinence, Coitus interruption, Rhythm Method	The study has concluded and reaffirmed that most modern Indian women significantly rely on the traditional methods of contraception rather than the adoption of modern contraceptives due to preformed misconceptions about them [29].
23	Moroole, M. A., Materechera, S. A., Mbeng, W. O., & Aremu, A. O. (2019)	South Africa	Herbal Contraceptives	A total of 25 medicinal plants were identified as herbal contraceptives commonly used in South Africa. <i>Bulbine latifolia</i> , <i>Pouzolzia mixta</i> , <i>Salsola tuberculiformis</i> , <i>Securidaca longipedunculata</i> , and <i>Typha capensis</i> showed the most concrete evidence for contraceptive activity and are potential sources for the discovery and development of safe female and male hormonal contraceptives [30].
24	Cindoglu, D., Sirkeci, I., & Sirkeci, R. (2008)	Turkey	Withdrawal Method	The use of contraceptive methods in Turkey varies greatly. Better socioeconomic status, better education, modern and liberal attitudes towards women, and women's empowerment in terms of family planning seem to reduce the use of

					withdrawal as the primary method of contraception. They suggest a need for education (particularly for young women and couples), information, and the provision of modern contraceptive services, especially for disadvantaged groups [31].
25	Bationo, N., Ngangue, P., Soubeiga, D., Pafadnam, Y., & Barro, A. (2022)	Sub-Saharan Africa	Abstinence, Withdrawal, Breastfeeding, Rhythm Method		This review revealed some preferences and motivations leading to the use of traditional contraceptive methods. These results are taken into account in various family planning programs to help understand their role and better assess contraceptive prevalence [32].
26	Dey, S., Das, D., Chakraborty, A., Rovchoudhury, S., Choudhury, B., Choudhury, A., & Mandal, S. (2021)	India	Plant-Based Contraceptive	Traditional Herbal	Clinical experience with herbal medicine, as classified in traditional medicine, can simplify problems associated with poor prognosis. New functional evidence from a database of conventional knowledge and experience can help reduce three specific barriers to drug development: time, cost, and toxicity. In addition, the trend today is to seek biologically active compounds from plants to serve as lead compounds for synthetic or semi-synthetic development to ensure patent protection, especially in industrial settings [33].
27	Dali, G., Pappoe, A., & Akotoye, H. K. (2019)	Subri River Forest Reserve in the Mpohor Wassa East District of the Western Region, Ghana	Herbal Contraceptives		Field expeditions assisted by 12 informants from four communities revealed 18 medicinal plants from the angiosperm species distributed in 14 families to be efficacious as contraceptive agents. [34]
28	Yanikkerem, E., Acar, A., & Elem, E. (2006)	Manisa, Turkey	Withdrawal		It is important that midwives and nurses recognize the impact of cultural beliefs on female contraceptive use. Educational programs should be individualized to meet the specific needs of women and their partners [35].
29	Nagai M, Bellizzi S, Murray J, Kitong J, Cabral EL, Sobel HL (2019)	Philippines	Any contraceptive		In the Philippines, many chances to offer family planning counseling are missed. Wider legal, policy, social, cultural, and structural hurdles must be overcome in order to deliver effective contraceptive methods. Systems-based approaches must also be used to increase the availability and caliber of counseling at all primary healthcare encounters. [36]
30	Mortezo, Verra, L.	Philippines	rhythm and withdrawal		In order to encourage couples to use the most effective forms of contraception, the Outreach Program has to improve some of its motivational strategies in its information, education, and communication operations. Only 14% of women used modern contraception regularly. This low rate, along with the existence of the rural Outreach Program, suggests that future research on the unmet demand for contraception has to look into some reasons that go beyond the dissemination of information and the accessibility of contraceptive supplies. [37]
31	Tan, C., Ballweg, J. (2010)	Philippines	Rhythm, pill		A sizable portion of the women wanted medium-sized to big families. Women who sought small families but had never utilized effective family planning techniques likewise had inconsistent attitudes and behaviors. Most women who never used effective contraception also never engaged in family

planning. The pill was preferred by modern and demographic innovators who had previously used ineffective methods; Rhythm was the primary birth control method chosen by traditionalists and demographic innovators. A sizable fraction of traditionalists and innovators in demographics, as well as a smaller portion of innovators in contraception and moderns, did not currently use any form of birth control. [38]

**Table 2 – List of plant species utilized for herbal contraceptive preparations**

	<b>Plant Name and Family</b>	<b>Part/s Used</b>	<b>Method of Preparation</b>
1	<i>Xylopiya aethiopyca</i> (Annonaceae)	Fruit	Dried extraction
2	<i>Abrus precatorius</i> (Fabaceae)	Seeds	Grind to powder
3	<i>Tetrapleura tetraptera</i> (Fabaceae)	Fruit	Decoction
4	<i>Momordica charantia</i> (Cucurbitaceae)	Leaves, seeds	Decoction
5	<i>Carica papaya</i> (Caricaceae)	Bark	Decoction
6	<i>Ocimum sanctum</i> (Lamiaceae)	Leaves	Benzene Extract
7	<i>Moringa oleifera</i> (Moringaceae)	Stem Bark	Ethanollic Extraction
8	<i>Curcuma longa valetton</i> (Zingiberaceae)	Rhizome	Powdered
9	<i>Citrus Limon</i> (Rutaceae)	Juice	Decoction
10	<i>Papaver Somniferum</i> (Papaveraceae)	Latex	Alcoholic extraction
11	<i>Cassia fistula</i> (Fabaceae)	Fruits, bark	Aqueous extract
12	<i>Croton penduliflorus</i> (Euphorbiaceae)	Fruit	Grind into a paste
13	<i>Taxus baccata</i> (Taxaceae)	Leaf	Leaf Extract
14	<i>Ricinus communis</i> (Euphorbiaceae)	Seed	Aqueous extract
15	<i>Dysoxylum binectariferum</i> (Meliaceae)	Stem Bark	Ethanollic extract
16	<i>Calotropis gigantea</i> (Asclepiadaceae)	Leaves	Ethanollic extract
17	<i>Hibiscus rosasinensis</i> (Malvaceae)	Flower petals	Benzene Extraction
18	<i>Polygonum hydropiper</i> (Polygonaceae)	Roots and Leaves	Petroleum ether extraction
19	<i>Albizzia lebbeck</i> (Fabaceae)	Pods	Methanollic extract
20	<i>Azadirachta indica</i> (Meliaceae)	Seeds	Dry and grind to powder
21	<i>Piper nigrum</i> (Piperacea)	Fruits	Powdered
22	<i>Striga lutea</i> (Orobanchaceae)	All parts	Chloroform and petroleum ether extraction
23	<i>Quassia amara</i> (Simaroubaceae)	Bark	Chloroform extraction
24	<i>Juniperus phoenica</i> (Cupressaceae)	Cones	Ethanollic extraction

#### 4. Conclusion

Traditional methods of contraception such as lactation amenorrhea method, calendar Method, withdrawal method, rhythm method, and abstinence are shown to be less effective methods of contraception. These traditional contraceptive methods are proven to be less successful in preventing pregnancies compared to modern contraceptive alternatives and thus often lead to unplanned and unwanted pregnancies [12]. These traditional contraceptive methods are more prevalent in older women, usually those with little to no education regarding modern contraceptives or medication alternatives [11]. However, Traditional contraceptives in the form of herbal preparations are often favored in developing nations with very high populations, such as India, China, Africa (Nigeria), and Bangladesh. These plant species utilized in the herbal contraceptive preparations have been screened and are under ongoing study and investigation. However, so far, there is only limited evidence of efficacy and knowledge of their mode of action [39]. Usual patrons of herbal contraceptive preparations are women ages 18-40, regardless of levels of education and knowledge on modern contraceptive alternatives [20].

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