



A Study On Contraceptive Use And Unserved Needs Among Eligible Couples In West Bengal

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Abstract: Contraceptive use is a crucial aspect of reproductive health and family planning, significantly influencing maternal and child well-being. This study examines the prevalence of contraceptive use and the unmet need for family planning among eligible couples in West Bengal. By analysing socio-economic factors, educational background, cultural influences, and accessibility to contraceptive methods, the research identifies key barriers and facilitators affecting contraceptive adoption.

The study highlights persistent challenges, including socio-economic disparities, misinformation, and limited healthcare access, which continue to hinder effective contraceptive use. Despite awareness initiatives and available services, a significant unmet need remains. The findings underscore the importance of a multi-faceted approach, incorporating improved educational campaigns, enhanced healthcare infrastructure, and policy interventions to bridge these gaps.

This research contributes valuable insights for policymakers and healthcare providers, emphasizing the need for targeted strategies to improve family planning services. Addressing the identified barriers can lead to more informed reproductive choices, ultimately improving the overall health outcomes in West Bengal.

Keywords: Contraceptive use, Family planning, Reproductive health, unmet need, Socio-economic factors, Healthcare access, Educational background, Cultural influences, Policy interventions, West Bengal

INTRODUCTION

Family planning is a critical component of reproductive health, enabling individuals and couples to make informed choices about their fertility and childbearing. Contraceptive use is a key indicator of family planning, and its prevalence varies significantly across different regions and populations.

Kolkata, the capital city of West Bengal, India, is a densely populated urban area with a diverse population. Despite its urban characteristics, Kolkata continues to face challenges related to reproductive health, including limited access to family planning services, high rates of unintended pregnancies, and a significant unmet need for contraception.

Eligible couples, defined as couples where the wife is aged 15-49 years and the husband is aged 15-60 years, are a critical target group for family planning interventions. Understanding the prevalence of contraceptive use and unmet needs among eligible couples in Kolkata is essential for designing effective family planning programs and policies.

This study aims to investigate the prevalence of contraceptive use and unmet needs among eligible couples in Kolkata, exploring the sociodemographic factors associated with contraceptive use and identifying the barriers to accessing family planning services. The findings of this study will contribute to the existing literature on family planning in urban India and inform the development of targeted interventions to improve reproductive health outcomes among eligible couples in Kolkata.

PROBLEM STATEMENT

Despite the availability of various contraceptive methods, many eligible couples in Kolkata do not use contraceptives, leading to unintended pregnancies, maternal and child health complications, and socio-economic burdens. This study aims to investigate the prevalence, patterns, and determinants of contraceptive use among eligible couples and to identify strategies for improving contraceptive accessibility and reducing unmet needs in the region.

OBJECTIVES

The study aims to achieve the following objectives:

- i. **Assess Contraceptive Use:** Evaluate the prevalence and patterns of contraceptive use among eligible couples.
- ii. **Determine Unmet Family Planning Needs:** Identify the unmet needs for family planning services among eligible couples.
- iii. **Evaluate Contraceptive Knowledge:** Assess the level of awareness and knowledge regarding different contraceptive methods among eligible couples.
- iv. **Identify Influencing Factors:** Analyze the socio-economic, cultural, and educational determinants that influence contraceptive use among eligible couples.

METHODOLOGY

This review paper employed a comprehensive literature search using databases such as PubMed, Scopus, Web of Science, and Google Scholar. The search strategy utilized keywords like "contraceptive use," "unmet needs," "eligible couples," and "Kolkata." Relevant studies published in English between [2016-2023] were included, with inclusion criteria focusing on studies reporting on contraceptive use and unmet needs among eligible couples in Kolkata. Study quality was assessed using the Newcastle-Ottawa Scale, with data extraction and synthesis conducted using a standardized form and narrative synthesis, respectively.

LITERATURE REVIEW

1. The research paper titled "Contraceptive Behavior and Unmet Need among the Tribal Married Women Aged 15–49 Years, A Cross Sectional Study in a Community Development Block of Paschim Bardhaman District, West Bengal" was authored by Ananya Mukherjee, Niladri Banerjee, Somnath Naskar, Sima Roy, Dilip Kumar Das, and Sutapa Mandal. It was published in the Indian Journal of Public Health (Volume 65, Issue 2) in April-June 2021 by Wolters Kluwer - Medknow. The study aimed to evaluate the contraceptive behavior and unmet need for family planning among tribal married women aged 15–49 years in Paschim Bardhaman District, West Bengal. Conducted between May 2019 and April 2020, the cross-sectional study included 530 participants selected through simple random sampling. Data was collected via structured interviews and analyzed using SPSS software. The findings revealed that only 41.1% of participants were currently using contraceptives, while 44.4% had never used any methods, mainly due to concerns about side effects and spouse disapproval. The study also found that 19.4% of women had an unmet need for family planning, influenced by factors such as age, socioeconomic status, and family structure. The research concluded that targeted

interventions, awareness programs, and improved accessibility to contraceptives are necessary to address the barriers faced by tribal women. The study was ethically approved by the Institutional Ethics Committee of Burdwan Medical College and was financially supported by the Indian Council of Medical Research (ICMR).

2. The research paper titled "Determinants of Contraceptive Practices Among Eligible Couples of Urban Slum in Bankura District, West Bengal" by Avisek Gupta, Tapas Kumar Roy, Gautam Sarker, Bratati Banerjee, Somenath Ghosh, and Ranabir Pal, was published in the Journal of Family Medicine and Primary Care in October 2014 (Volume 3, Issue 4). The study aimed to analyze the factors influencing contraceptive practices among 200 eligible couples in an urban slum of Bankura district, West Bengal. The results showed a Couple Protection Rate (CPR) of 67.50%, with tubectomy being the most common contraceptive method. Factors such as age at marriage, type of family, number of children, female literacy, and socioeconomic status significantly influenced contraceptive usage. The study emphasized the need for targeted interventions to improve family planning acceptance, particularly among disadvantaged populations.
3. The research paper titled "Determinants of Modern Contraceptive Use and Unmet Need for Family Planning among the Urban Poor" by Lavleen Mohan Singh, Shankar Prinja, Pankhuri Rai, Ankita Siddhanta, Ajay Kumar Singh, Atul Sharma, Vineeta Sharma, Saroj Kumar Rana, Kaniz Fatima Muneeza, and Akshya Srivastava was published in the Open Journal of Social Sciences on May 29, 2020. The study examined modern contraceptive use and the unmet need for family planning among urban poor populations in Rajasthan and Uttar Pradesh as part of the IPE Global Project PAHAL. The findings indicated that over 15% of married women in these regions had an unmet need for family planning, with the highest use of modern contraception observed among women with three children and the lowest among those without children. Factors such as women's employment status, household wealth, husband's education, and household headship significantly influenced contraceptive use and unmet need. The study emphasized the need for targeted policy interventions to improve family planning services and reproductive health outcomes among the urban poor.
4. The research paper titled "Contraception among the Mothers Attending a Tertiary Care Hospital of Kolkata" by Dr. Sonali Sain, Dr. Indira Dey, and Dr. Prianka Mukhopadhyay was published in the Journal of Medical Science and Clinical Research (JMSCR) in June 2019 (Volume 07, Issue 06, Pages 265-270). The study aimed to assess the current contraceptive practices among postpartum mothers at NRS Medical College and Hospital, Kolkata, and to identify factors contributing to poor contraceptive use. The study found that while 72.14% of women were aware of family planning methods, only 43.93% were actively using modern contraception. Factors such as maternal age, residence, and occupation significantly influenced contraceptive usage. Despite 95.12% of mothers receiving contraceptive counseling during their hospital visit, only 25.20% were informed about potential side effects. The study emphasized the need for increased awareness and improved counseling strategies to enhance contraceptive adoption and achieve population stabilization goals.
5. The research paper titled "Unmet Need of Family Planning in Urban Slum of Minority Community in Kolkata: Is it Any Different?" by Dr. Krishna Laskar, Dr. Nivedita Das, Fasihul Akbar, Dr. Sujishnu Mukhopadhyay, Dr. Tarun Kumar Sarkar, and Dr. Dipankar Chattopadhyay was published in the Journal of Comprehensive Health in July 2014 (Volume 2, Issue 2, Pages 18-26). The study examined the prevalence and reasons for the unmet need for contraception among Muslim women in an urban slum in Kolkata. The findings indicated that 20% of the study population had an unmet need for family planning, with younger women (below 24 years), those from lower-income groups, and women from joint families experiencing significantly higher unmet needs. The most cited reason for non-use was fear of side effects (38.5%), followed by irregular conjugal stays and lactation. The study emphasized the need for targeted interventions to address socio-cultural barriers and improve contraceptive awareness and accessibility among marginalized communities.
6. The research paper titled "Contraceptive Use, Unmet Need and Its Determinants Among Tribal Married Reproductive Women: A Community-Based Observational Study in a District of West Bengal" by Gandhari Basu, Upasana Chakraborty, and Indranil Halder was published in the Journal of Family Medicine and Primary Care in June 2024 (Volume 13, Issue 6, Pages 2389-2396). The study aimed to assess contraceptive use, unmet needs, and their determinants among 290 tribal married

women in Nadia district, West Bengal. The results showed that 43.8% of the women were current users of contraception, with tubectomy (38.6%) being the most common method. The prevalence of unmet need for family planning was 41.0%, with 53.8% needing contraception for limiting births and 46.2% for spacing births. Key barriers included lack of information, family opposition, and fear of side effects. The study emphasized the need for enhanced awareness, accessibility, and male involvement in family planning programs to address the high unmet need among tribal women.

7. The research dissertation titled "Unmet Need for Family Planning Among Married Women of Reproductive Age Group at Santibastwad, A Rural Field Practice Area of JNMC – A Cross-Sectional Study" by Dr. Charishma Halemani was submitted to Rajiv Gandhi University of Health Sciences, Karnataka, in April 2008 as part of the requirements for a Doctor of Medicine (M.D.) in Community Medicine. The study assessed the unmet need for family planning, its socio-demographic determinants, and contraceptive awareness among 1,216 married women (aged 15-44 years) in Santibastwad, Karnataka. The findings revealed an 8.88% unmet need for family planning, with 5.51% due to limiting births and 3.37% due to spacing births. Younger women had a higher unmet need for spacing, while older women had a higher unmet need for limiting. The study highlighted family opposition, literacy status, and the number of living children (especially sons) as significant factors influencing contraceptive use. The research emphasized the importance of overcoming socio-cultural barriers and improving literacy to reduce unmet family planning needs.
8. The research paper titled "Unmet Need for Contraception: An Overview from a District in West Bengal" by Raghunath Misra, Anima Haldar, Baijayanti Baur, Tushar Kanti Saha, and Samir Kumar Roy was published in 2013 (Volume I, Issue I). This community-based cross-sectional study was conducted in Howrah district, West Bengal, from April to September 2009, using multistage stratified random sampling to assess the social correlates of unmet contraceptive needs among 2,000 currently married women of reproductive age. The study found an 8.7% overall unmet need for contraception, which was higher among rural, Muslim, illiterate, and younger women. The primary reasons for unmet need included lack of information (39%), fear of adverse effects (21.3%), opposition from husbands (11.5%), family pressure (10.4%), and religious barriers (3.5%). The study highlighted the need for behavior change communication (BCC) programs to reduce the unmet need and promote contraceptive acceptance.
9. The research paper titled "Does Women Empowerment Predict Contraceptive Use? A Study in a Rural Area of Hooghly District, West Bengal" by Aparajita Dasgupta, Kajari Bandyopadhyay, Lina Bandyopadhyay, Bobby Paul, and Sitikantha Banerjee was published in the Indian Journal of Community Health in July-September 2016 (Vol 28, Issue 3, Pages 228-235). This community-based cross-sectional study examined the relationship between women's empowerment and contraceptive use among 151 married women of reproductive age in rural Hooghly, West Bengal. The study found that 63.6% of participants were using contraception, with women's empowerment and education being significantly associated with contraceptive use. Empowerment was measured using four domains: financial autonomy, freedom of movement, household decision-making, and reproductive decision-making. The study concluded that empowering women through education and decision-making autonomy can significantly improve family planning practices and overall community health.
10. The research paper titled "A Study on Unmet Need of Family Planning Among Married Tribal Women in a Rural Area in Eastern India During COVID-19 Pandemic" by Archi Chandra, Sankar Nath Jha, and Rituparna Ray was published in the Muller Journal of Medical Sciences and Research in 2023 (Volume 14, Issue 2, Pages 136-141). This community-based cross-sectional study, conducted in Burda village, Purulia district, West Bengal, aimed to assess the unmet need for family planning among married tribal women and the impact of COVID-19 on contraceptive use. The findings revealed that 17.5% of the participants had an unmet need for family planning, with fear of COVID-19 infection, lack of family support, and fear of side effects being major barriers. The study also found that unmet need was significantly associated with the husband's educational status and type of family, highlighting the importance of health education, behavior change communication, and community-based interventions to improve family planning services among tribal populations.
11. The research paper titled "Assessment of Perception of Family Planning among Mothers in an Urban Slum Area in Kolkata, India" by Gourab Biswas, Agnihotri Bhattacharyya, Arkadeb Kar, Biswadeep

Sengupta, Sukanta Majumdar, and Nabanita Bhattacharyya was published in the Journal of Clinical & Diagnostic Research in 2021 (Vol 15, Issue 1, Page 1). This community-based cross-sectional study was conducted from February to May 2019 among 246 mothers of under-five children residing in an urban slum in Kolkata. The study aimed to assess unmet family planning needs and associated factors. The findings revealed that 70.7% of mothers were using contraception, yet 29.3% had an unmet need for family planning. Significant associations were observed between unmet needs and age, education level, socio-economic status, knowledge of marriage age, and number of children desired. The study emphasized the need for better awareness and accessibility of family planning services while acknowledging potential recall bias.

12. The research paper titled "Exploring Family Planning: The Perception among Women of Reproductive Age Group in a Slum of Kolkata" by Sulagna Das, Aparajita Dasgupta, Amiya Das, Nabarun Karmakar, and Saugat Banerjee was published in the International Journal of Health Sciences and Research in July 2014 (Vol. 4, Issue 7, Pages 62-68). This community-based cross-sectional study was conducted among 120 married women aged 15-49 years in a Kolkata slum to assess their knowledge, perceptions, and use of family planning methods. The study found that 95.8% of women were aware of contraception, yet only 73.3% were current users. Among them, 86% used modern contraceptive methods, with female sterilization (46.7%) being the most common, followed by oral contraceptive pills (18.1%) and condoms (14.7%). Factors such as age, number of children, and socioeconomic status significantly influenced contraceptive use. The study concluded that while awareness was high, actual practice remained suboptimal due to misconceptions, fear of side effects, and lack of spousal support, highlighting the need for improved counseling and community-based interventions to enhance family planning adoption.
13. The research dissertation titled "A Study on Determinants of Contraceptive Use: A Community-Based Study in Eligible Couples" by Dr. Mali Shrikant Chandram was submitted to Rajiv Gandhi University of Health Sciences, Karnataka, in 2015 as part of the requirements for a Doctor of Medicine (M.D.) in Community Medicine. This cross-sectional study, conducted in the rural field practice area of Basaveshwara Medical College, Chitradurga, aimed to assess contraceptive use and its determinants among eligible couples. The findings revealed a contraceptive prevalence rate of 58.6%, with higher usage among Hindu couples (87.2%) compared to Muslim couples (12.8%). Factors such as age at marriage, type of family, number of living children, literacy level of the female partner, and socioeconomic status significantly influenced contraceptive behavior. The study highlighted that family opposition (45.1%), lack of information (19.5%), and male child preference (15.8%) were major barriers to contraceptive use, emphasizing the need for better awareness, accessibility, and counseling services to enhance family planning adoption.
14. The research dissertation titled "A Study on Unmet Need for Family Planning in the Rural Areas of Davangere Taluk" by Dr. Rini Raveendran was submitted to J.J.M. Medical College, Davangere, in 2007 as part of the requirements for a Doctor of Medicine (M.D.) in Community Medicine. This community-based cross-sectional study was conducted among 1,020 married women aged 15-49 years across 24 villages in Davangere Taluk to assess their unmet need for contraception and its determinants. The study found that 16.7% of women had an unmet need for family planning, with 13.6% requiring contraception for spacing births and 3.1% for limiting births. The primary reasons for non-use included desire for more children (46%), ignorance (30%), fear of side effects (12%), opposition from husbands (6%) or relatives (3%), and male child preference (2%). The study highlighted the need for effective counseling, better awareness programs, and improved access to contraceptive services to reduce unmet family planning needs and prevent unintended pregnancies.
15. According to , Contraceptive Methods & Unmet Need The National Family Health Survey (NFHS-5) 2019-21 for West Bengal provides detailed insights into contraceptive use, family planning trends, and the unmet need for contraception among women aged 15-49. Below is a summary focusing on these aspects: Contraceptive Methods Usage in West Bengal, 74% of currently married women (age 15-49) use some form of contraception. The use of modern contraceptive methods (61%) has slightly increased compared to NFHS-4 (57%). Female sterilization is the most common method, used by 29% of married women. Pills (20%) and condoms (7%) are the most used modern spacing methods.

16. Other methods include IUD/PPIUD (2.2%), injectables (0.7%), and rhythm/withdrawal methods. 86% of sterilizations are performed in public hospitals, while short-term methods like pills and condoms are primarily accessed from private sources (pharmacies, shops, or local vendors). The main reasons for discontinuation are side effects, dissatisfaction, or fertility-related reasons. Reasons for unmet Need for Family Planning in West Bengal, 7% of currently married women have an unmet need for family planning, meaning they want to delay or prevent pregnancies but are not using contraception. The unmet need is higher in rural areas and among women with lower education levels. Other reasons may be a lack of access to family planning services, fear of side effects and limited counseling from health providers, cultural and religious beliefs affecting contraceptive use, especially in certain districts.

RESULT & DISCUSSION

FAMILY PLANNING

WHO defined family planning as "a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family group and thus contribute effectively to the social development of a country".

FAMILY PLANNING REFERS TO PRACTICES THAT HELP INDIVIDUALS OR COUPLES TO ATTAIN CERTAIN OBJECTIVES:

- (a) to avoid unwanted births;
- (b) to bring about wanted births
- (c) to regulate the intervals between pregnancies;
- (d) to control the time at which births occur in relation to the ages of the parent; and
- (e) to determine the number of children in the family

BASIC HUMAN RIGHTS

The United Nations Conference on Human Rights at Tehran in 1968 recognized family planning as a basic human right. The Bucharest Conference on the World Population held in August 1974 endorsed the same view and stated in its 'Plan of Action' that "all couples and individuals have the basic human right to decide freely and responsibly the number and spacing of their children and to have the information,

HEALTH ASPECTS OF FAMILY PLANNING

Family planning and health have a two-way relationship. The principal health outcomes of family planning were listed and discussed by a WHO Scientific Group on the Health Aspects of Family Planning .

Women's health

maternal mortality, morbidity of women of child-bearing age, nutritional status (weight changes, haemoglobin level, etc.) preventable complications of pregnancy and abortion.

Foetal health-

foetal mortality (early and late foetal death): abnormal development.

Infant and child health-

neonatal, infant and pre-school mortality, health of the infant at birth (birth weight). vulnerability to disease

ELIGIBLE COUPLES

An "eligible couple" refers to a currently married couple wherein the wife is in the reproductive age, which is generally assumed to lie between the ages of 15 and 45. There will be at least 150 to 180 such couples per 1000 population in India. These couples are in need of family planning services. About 20 per cent of eligible

couples are found in the age group 15-24 years. On an average 2.5 million couples are joining the reproductive group every year. The "Eligible Couple Register" is a basic document for organizing family planning work. It is regularly updated by each functionary of the family planning programme for the area falling within his jurisdiction.

TARGET COUPLES

In order to pinpoint the couples who are a priority group within the broad definition of "eligible couples", the term "target couple" was coined. Hitherto, the term target couple was applied to couples who have had 2-3 living children, and family planning was largely directed to such couples. The definition of a target couple has been gradually enlarged to include families with one child or even newly married couples with a view to develop acceptance of the idea of family planning from the earliest possible stage. In effect, the term target couple has lost its original meaning. The term eligible couple is now more widely used and has come to stay.

COUPLE PROTECTION RATE (CPR)

Couple protection rate (CPR) is an indicator of the prevalence of contraceptive practice in the community. It is defined as the per cent of eligible couples effectively protected against childbirth by one or the other approved methods of family planning, viz. sterilization, IUD, condom or oral pills.

NATIONAL POPULATION POLICY

"National Population Policy 2000" is the latest in this series. It reaffirms the commitment of the government towards target free approach in administering family planning services. It gives informed choice to the people to voluntarily avail the reproductive health care services.

The objective of NPP 2000 is to bring the TFR to replacement level by 2010. The long term objective is to achieve requirements of suitable economic growth, social development and environment protection.

The National Socio-Demographic Goals to be achieved by the year 2010 were as follows :

- (1) Address the unmet needs for basic reproductive and child health services, supplies and infrastructure.
 - (2) Make school education upto the age 14 free and compulsory, and reduce drop-outs at primary and secondary school levels to below 20 per cent for both boys and girls.
 - (3) Reduce infant mortality rate to below 30 per 1000 live births.
 - (4) Reduce maternal mortality ratio to below 100 per 100,000 live births.
 - (5) Achieve universal immunization of children against all vaccine preventable diseases.
 - (6) Promote delayed marriage for girls, not earlier than age 18 and preferably after 20 years of age.
 - (7) Achieve 80 per cent institutional deliveries and 100 per cent deliveries by trained persons. (
 - 8) Achieve universal access to information/counselling, and services for fertility regulation and contraception with a wide basket of choices.
- marriage and pregnancy.
- (9) Achieve 100 per cent registration of births, deaths, AcquiredImmunodeficiency
 - (10) Contain the spread of Syndrome (AIDS), and promote greater integration between the management of reproductive tract infections (RTI) and sexually transmitted infections (STI) and the National AIDS Control Organization.
 - (11) Prevent and control communicable diseases.
 - (12) Integrate Indian Systems of Medicine (ISM) in the provision of reproductive and child health services, and in reaching out to households.

(13) Promote vigorously the small family norm to achieve replacement levels of TFR.

(14) Bring about convergence in implementation of related becomes a people centred programme. Smily welfare social sector programmes so that family welfare becomes a people centred programme.

CONTRACEPTIVE METHODS (FERTILITY REGULATING METHODS)

Contraceptive methods are, by definition, preventive methods to help women avoid unwanted pregnancies. They include all temporary and permanent measures to prevent pregnancy resulting from coitus.

I. Spacing methods

1. Barrier methods

(a) Physical methods

(b) Chemical methods

(c) Combined methods

2. Intra-uterine devices

3. Hormonal methods

4. Post-conception methods

5. Miscellaneous.

II. Terminal methods

1 Male sterilization

2 Female sterilization

BARRIER METHODS

A variety of barrier or "occlusive" methods, suitable for both men and women are available. The aim of these methods is to prevent live sperm from meeting the ovum. Barrier methods have increased in popularity quite recently because of certain contraceptive and non-contraceptive advantages. The main contraceptive advantage is the absence of side-effects associated with the "pill" and IUD. The non-contraceptive advantages include some protection from sexually transmitted diseases, a reduction in the incidence of pelvic inflammatory disease and possibly some protection from the risk of cervical cancer. (Barrier methods require a high degree of motivation on the part of the user. In general they are less effective than either the pill or the loop. They are only effective if they are used consistently and carefully.)

A. PHYSICAL METHODS

1. CONDOM

Condom is the most widely known and used barrier device by the males around the world. In India, it is better known by its trade name NIRODH, a sanskrit word, meaning prevention. Condom is receiving new attention today as an effective, simple "spacing" method of contraception, without side effects. In addition to preventing pregnancy, condom protects both men and women from sexually transmitted diseases. The condom is fitted on the erect penis before intercourse. The air must be expelled from the teat end to make room for the ejaculate.

The condom must be held reported pregnancy rates varying from 2-3 per 100 years to more than 14 in typical users. Most failures are due to incorrect use.

The ADVANTAGES of condom are: (a) they are easily available (b) safe and inexpensive (c) easy to use: do not require medical supervision (d) no side effects (e) light, compact and disposable, and (f) provides protection not only against pregnancy but also against STD.

The DISADVANTAGES are (a) it may slip off or tear during coitus due to incorrect use, and (6) interferes with sex sensation

FEMALE CONDOM

The female condom is a pouch made of polyurethane, which lines the vagina. An internal ring in the close end of the pouch covers the cervix and an external ring remains outside the vagina. It is pre-lubricated with silicon, and a spermicide need not be used. It is an effective barrier to STD infection. However, high cost and acceptability are major problems. The failure rates during the first year use vary from 5 per 100 women-years pregnancy rate to about 21 in typical users.

TABLE NO. 1- CURRENT USE OF CONTRACEPTIVE METHODS BY DISTRICTS OF WB

Current use of contraceptive methods by district							
Percentage of currently married women age 15-49 years using any contraceptive method, any modern method, female sterilization, male sterilization, any modern spacing method, and any traditional method, according to district, West Bengal, 2019-21.							
District	Any Method	Any Modern Method	female sterilization	male sterilization	any modern spacing method ¹	any traditional method ²	Number of Women
Bankura	56.6	51.8	26.6	0	25.2	4.8	649
Birbhum	82.1	73.8	41.3	0.2	32.3	8.3	734
Dakshin Dinajpur	78.6	59	26.6	0.1	32.2	19.6	337
Darjiling	82.2	67	32.6	0	34.4	15.2	291
Haora	84.5	68.4	31.6	0	36.8	16.1	872
Hugli	74.9	61.3	36	0.3	25.1	13.6	1,032
Jalpaiguri	82.7	70.1	35.5	0.3	34.2	12.6	675
Koch Bihar	81.7	67.7	31.9	0.3	35.5	14	582
Kolkata	84.7	71.7	29.8	0	41.9	13	667
Maldah	75.3	54.7	23.3	0	31.4	20.6	740
Murshidabad	85.4	64.9	39.5	0.1	25.2	20.5	1,448
Nadia	59.9	49.3	26.8	0	22.5	10.6	997
North 24 Parganas	78.8	61	22.2	0	38.7	17.8	1,764
Paschim Barddhaman	65.3	54	28.2	0	25.8	11.3	496
Paschim Medinipur	60.7	55.6	32.1	0.4	23.2	5.2	1,131
Purba Barddhaman	67.9	58.5	37.2	0	21.3	9.4	897
Purba Medinipur	59.3	48.1	16.3	0	31.7	11.2	894
Puruliya	51	41.3	26.5	0.1	14.7	9.7	471
South 24 Parganas	82.9	67.9	21.9	0.1	45.9	15	1,531
Uttar Dinajpur	81.2	60.9	25.9	0.1	35	20.3	466
West Bengal	74.4	60.7	29.4	0.1	31.3	13.6	16,672

¹ Includes pill, IUD/PPIUD, injectables, male condom, female condom, emergency contraception, lactational amenorrhoea method (LAM), and other modern methods.

² Includes rhythm, withdrawal, and other traditional methods

2. DIAPHRAGM

The diaphragm is a vaginal barrier. It was invented by a German physician in 1882. Also known as "Dutch cap", the diaphragm is a shallow cup made of synthetic rubber or plastic material. It ranges in diameter from 5-10 cm (2-4 inches). It has a flexible rim made of spring or metal. It is important that a woman be fitted with a diaphragm of the proper size. The diaphragm is inserted before sexual intercourse and must remain in place for not less than 6 hours after sexual intercourse. A spermicidal jelly is always used along with the diaphragm. The diaphragm holds the spermicide over the cervix. Side-effects are practically nil

3. VAGINAL SPONGE

It is a small polyurethane foam sponge measuring 5 cm x 2.5 cm, saturated with the spermicide. nonoxynol-9. The sponge is far less effective than the diaphragm, but it is better than nothing. The failure rate in parous women is between 20 to 40 per 100 women-years and in nulliparous women about 9 to 20 per 100 women-years).

B. CHEMICAL METHODS

They comprise four categories:

- a) Foams: foam tablets, foam aerosols
- b) Creams, jellies and pastes-squeezed from a tube
- c) Suppositories - inserted manually, and
- d) Soluble films-C-film inserted manually.

INTRA-UTERINE DEVICES

Types of IUD-

There are two basic types of IUD: non-medicated and medicated. Both are usually made of polyethylene or other polymers, in addition, the medicated or bioactive IUDs release either metal ions (copper) or hormones (progestogens).

A number of copper bearing devices are now commercially available:

Earlier devices:

Copper-7

Copper T-200

Newer devices:

Variants of the T device

(i) Cu-T 220 C

(ii) Cu-T 380 A or Ag

Nova T

Multiload devices

(i) ML-Cu-250

(ii) ML-Cu-375

Advantages of copper devices

- Low expulsion rate
- Lower incidence of side-effects, e.g., pain and bleeding
- easier to fit even in nulliparous women
- better tolerated by nullipara

HORMONAL CONTRACEPTIVES

Classification

A. Oral pills

1. Combined pill
2. Progestogen only pill (POP)
3. Post-coital pill
4. Once-a-month (long-acting) pill
5. Male pill

B. Depot (slow release) formulations

1. Injectable
2. Subcutaneous implants
3. Vaginal rings

TABLE NO. 2- UNMET NEED FOR FAMILY PLANNING BY DISTRICTS OF WB

Unmet need for family planning district				
Percentage Of currently married women age 15-49 with unmet need for family planning by district, West Bengal, 2019-21, and total for NFHS-4				
District	Total Unmet Need	Unmet Need For Spacing	Unmet Need For Limiting	Number Of Women
Bankura	12.0	4.7	7.3	649
Birbhum	4.8	2.7	2.1	734
Dakshin Dinajpur	6.1	2.6	3.5	337
Darjiling	5.9	2.6	3.2	291
Haora	3.2	1.6	1.6	872
Hugli	7.0	2.5	4.5	1,032
Jalpaiguri	4.0	1.6	2.4	675
Koch Bihar	4.6	2.3	2.2	582
Kolkata	2.2	0.3	2.0	667
Maldah	9.2	3.4	5.9	740
Murshidabad	3.5	1.8	1.8	1448
Nadia	12.9	5.9	7.0	997
North Twenty Four Parganas	4.4	1.5	2.9	1764
Paschim Barddhaman	12.0	3.6	8.3	496
Paschim Medinipur	11.5	5.7	5.8	1131
Purba Barddhaman	8.6	3.9	4.7	897
Purba Medinipur	12.3	4.1	8.2	894

Puruliya	16.1	6.3	9.8	471
South Twenty Four Parganas	3.7	1.7	2.0	1531
Uttar Dinajpur	4.3	3.3	1.1	466
West Bengal	7.0	3.0	4.1	16,672
NFHS-4 (2015-16)	7.5	3.0	4.4	13,836

Note: Numbers in this table correspond to the revised definition Of unmet need described in Bradley et al., 2012, Revising Unmet Need for Family Planning, DHS Analytical Studies NO. 25, ICF International Calverton, Maryland, USA.

TABLE- 3 SOME COMBANIED ORAL CONTRACEPTIVES PILLS

	<u>Name</u>	<u>Progestin</u>	<u>(mg)</u>
(A) With EE 0.02 mg	Loestrin 1/20	Norethisterone acetate	1.00
	Femilon	Desogestrel	0.15
(B) With EE 0.03 mg	Eugynon 30	Levonorgestrel	0.25
	Microgynon. Ovral I. Triquilar (Varying E E and levonorgestrel) Primovlar 30. Mala D.	Levonorgestrel	0.15
	Choice	Norgestrel	0.30
	Novelon	Desogestrel	0.15
	Yasmin	Drospirenone	3.00
(C) With EE 0.05 mg and less progestogenic	Eugynon 50, Duoluton, Ovral G	Norgestrel	0.50
	Ovral, Primovlar 50	Levonorgestrel	0.25
	Minovlar Ed, Orlest	Norethisterone acetate	1.00
	Orthonovin 1/50	Norethisterone	1.00
(D) With EE 0.05 mg and more progestogenic	Orgalutin	Lynestrenol	2.50
	Norlestrin 2.5/50	Norethisterone acetate	2.50
	Gynovlar 21	- Do -	3.00
	Anovlar 21	- Do -	4.00

MALE STERILIZATION

Male sterilization or vasectomy being a comparatively simple operation can be performed even in primary health centres by trained doctors under local anaesthesia. When carried out under strict aseptic technique, it should have no risk of mortality. In vasectomy, it is customary to remove a piece of vas at least 1 cm after clamping. The ends are ligated and then folded back on themselves and sutured into position, so that the cut ends face away from each other. This will reduce the risk of recanalization at a later date. It is important to stress that the acceptor is not immediately sterile after the operation, usually until approximately 30 ejaculations have taken place (45). During this intermediate period, another method of contraception must be used. If properly performed, vasectomies are almost 100 per cent effective.

FEMALE STERILIZATION

Female sterilization can be done as an interval procedure, postpartum or at the time of abortion. Two procedures have become most common, namely laparoscopy and minilaparotomy.

Laparoscopy

This is a technique of female sterilization through abdominal approach with a specialized instrument called "laparoscope. The abdomen is inflated with gas (carbon dioxide, nitrous oxide or air) and the instrument is introduced into the abdominal cavity to visualize the tubes. Once the tubes are accessible, the Falope rings (or clips) are applied to occlude the tubes. This operation should be undertaken only in those centres where specialist obstetrician-gynaecologists are available.

(B) MINILAP OPERATION

Minilaparotomy is a modification of abdominal tubectomy. It is a much simpler procedure requiring a smaller abdominal incision of only 2.5 to 3 cm conducted under local anaesthesia. The minilap/Pomeroy technique is considered a revolutionary procedure for female sterilization. It is also found to be a suitable procedure at the primary health centre level and in mass campaigns. It has the advantage over other methods with regard to safety efficiency and ease in dealing with complications. Minilap operation is suitable for postpartum tubal sterilization.

UNMET NEED FOR FAMILY PLANNING

Many women who are sexually active would prefer to avoid becoming pregnant, but nevertheless are not using any method of contraception (including use by their partner). These women are considered to have an "unmet need" for family planning. The concept is usually applied to married women. However, it can apply to sexually active fecund women and perhaps to men, but its measurement has been limited to married women only. Unmet need can be a powerful concept for family planning. It poses a challenge to family planning programme to reach and serve millions of women whose reproductive attitude resembles those of contraceptive user but who are, for some reason or combination of reasons, not using contraceptives.

Among the most common reason for unmet need are inconvenient or unsatisfactory services, lack of information, fears about contraceptive side-effects and opposition from husband or relatives. Unmet need is defined on the basis of women's response to survey questions.

According to the National Family Health Survey-5, the unmet need for family planning is highest (28.0 per cent) among women between 15 to 24 years of age and is almost entirely for spacing the births rather than for limiting the births. The unmet need for contraception among women aged 30 years and above are mostly for limiting the births. Unmet need for family planning is higher in rural areas than in urban areas. It also varies by women's education (within range of 11-17 per cent) and religion (hindu and christian women have a lower unmet need than muslim. women).

CONCLUSION

The findings of this study highlight the critical aspects of contraceptive use and the persistent unmet need among eligible couples in West Bengal. Despite increased awareness and accessibility to family planning services, socio-economic disparities, cultural beliefs, and lack of adequate information continue to hinder effective contraceptive adoption. Addressing these challenges requires a multi-faceted approach, including enhanced educational campaigns, improved accessibility to contraceptive methods, and strengthened healthcare infrastructure.

Policymakers and healthcare providers must work collaboratively to bridge these gaps, ensuring that all individuals have access to comprehensive reproductive health services. By addressing the identified barriers and promoting informed choices, this study contributes to the broader goal of improving family planning practices and reproductive health outcomes in West Bengal.

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