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A Study on Knowledge and Practices of Various Contraceptive Methods and its Associated Factors among Married Women in a Rural Block of Balangir District, Odisha

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Abstract- Background- Expanding access to contraception and ensuring that demand for family planning is satisfied using effective contraceptive methods are essential for achieving universal access to reproductive health-care services, as called for in the 2030 Agenda for Sustainable Development**.** Objectives To find out the prevalence of various contraceptive methods usage and the factors associated with the utilisation among the married women of a rural block of the district Balangir. **Methodology-** A cross-sectional study conducted for a period of 5 months among eligible couple of reproductive age groups (15-49 Years) in the selected villages with a sample size of 138. **Results**- Out of the 138 married women of the reproductive age group , majority 126(91.3%) of them had knowledge on contraception. Contraceptive usage was seen in 126(91.3%)of the women but the current users were 93(73.8%). Various factors like younger age group married women, preference to have son child and those who were married between the age group of 18-30 years were maximum contraceptive users. **Conclusion-** Our study reveals majority of women had good knowledge, positive attitude towards contraception. Even with the rural setup the contraceptive prevalence rate is high. But due to lack of proper guidance and awareness they are discontinuing in the mid which could be increasing the umet need among them. Thus, there is a need for timely advocacy about female reproductive health with dissemination of information about family planning methods among reproductive female by health care providers. Emphasis on vasectomy must be given by counselling to male partners.

Key words- Contraceptives, Eligible Couple, Knowledge, Prevalence, Utilisation.

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Introduction-

Population explosion has been the major problem of India since Independence. Population stabilization has been identified as an essential prerequisite for the economic development of the nation resulting in improved quality of life.

As per the projections by United Nations, India will become the most populous country by the year 2045. One of the important components of family planning program management is to assess the potential demand for contraceptive services so as to mitigate the adverse impact of population growth.(1)

Family planning enables couples to obtain their desired number of children and determine the spacing of pregnancies, which is achieved mainly through contraceptive methods. (2)

Increased contraceptive use and reduced unmet need for contraception are central to improving maternal health, reducing child mortality and combating HIV/AID.(3)

Contraceptive prevalence rate serves as a proxy measure of access to reproductive health services and is an indicator of health, population development, and women's empowerment that are essential for meeting many of the Sustainable Development Goals (SDG), especially the child mortality and maternal health related goals.[4]

Even though contraceptive methods are made accessible near to household level through health extension program in a cafeteria approach still many empirical studies have shown the acceptance of contraceptive methods is influenced by various factors operating at the individual, family, and community level with their roots in the socioeconomic and cultural milieu of Indian society. The factors like women's perception that they were not at risk of pregnancy, lack of sufficient knowledge, religious or cultural reasons, culturally based gender inequalities, women's previous experience of child death. Women and/or couples gender preferences, inadequate counselling about family planning methods by health workers and personal income or wealth were considered as one of the component of non utilisation of contraception.(3)

Identifying the prevalence of contraceptive usage and the local determinants could help to plan strategy and make necessary recommendations that would help improve utilization of family planning services. Hence, this study carried out with the objectives to find out the prevalence

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of various contraceptive methods usage and the factors associated with the utilisation among the married women of a rural block of the district Balangir.

Materials and Methodology-

It was a cross-sectional observational study conducted for a period of 5 months starting from 1st April 2024 to 31st August 2024 among eligible couple of reproductive age groups (15-49 Years) in the selected villages were included as study population.

Inclusion criteria: Women in reproductive age group (15-49 years).

Exclusion criteria: • Those not willing to participate, • Those who were very sick at the time of interview

Sample size- Taking the prevalence(p) of contraception usage of any methods from NFHS-5 Data sheet of Odisha as 73.6% [(5)]; Relative allowable error as 10%, and confidence interval as 95%,Sample size was calculated using the formula:4 **p q/L²;** where p=73.6%, q=(100-73.6%)=26.4%, L=10% of P= (10% of 73.6)

The sample size came out to be **138.**

Mode of sample selection**:**

Selection of blocks & villages: Multistage random sampling method was used. Out of 14 blocks in Balangir, Losingha block was selected randomly using lottery method. Losingha block consists of 156 villages. 5% of the total villages i.e 8 villages were selected by simple random sampling method using random number table.

Using **probability proportion to size sampling method (PPS),** the required number of eligible women in reproductive age group (15-49 years) was taken from each village for the study purpose which was obtained from the eligible couples register maintained by ASHA. Then cumulative population of eligible couples was calculated. From each village number of eligible women were included for the study was obtained by dividing the total no of eligible women population of that village to the total cumulative population of women of all the village multiplied by sample size.

IEC approval was taken from Institutional ethical committee with the letter no-46/IEC/BBMCH/15-02-2024. Data entry and analysis was done in the Department of

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Community Medicine, of BBMCH, Balangir. Data was coded and entered into Microsoft excel & analysis was done using IBM SPSS ver.21.0. Proportions was calculated for categorical variables and compared using chi square test. The group difference was found to be significant if P value is less than 0.05.

Results:

Out of 138 married women of reproductive age group, majority i.e 61(44.2%) belonged to age group of 15-24 years followed by 32.6 % in age group of 25-34 years , 16.7% in age group of 35-44 years and 6.5% women in age group ≥45 years. The Mean ± S.D of age of the participants was 19.6 ± 3.6 years.

Table 1: Distribution of study population according to Contraceptive usage (n=138)		
	Number	**Percentage**
Contraceptive use		
Users**	126	91.3
Never Used	12	8.7
Total	**138**	**100%**
Types of Contraceptive Used by Users: (n=126)		
Temporary Method	115	91.3
Permanent method	11	8.7
Total	**126**	**100%**

Out of total 138 study participants , contraceptive usage was seen in 91.3% of the women & 12(8.7%) of the women had never ever used any contraceptive. Out of 126 contraceptive users, majority 115(91.3%) of them used temporary method & only 11(8.7%) adopted permanent method. **(Table 1)**

Table 2: Distribution of study participants according to use of different contraceptive methods (n=126)		
	Number	**Percentage**
Types of Temporary method used: (n=115)		
Barriers	38	33

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IUCD	16	13.9
Oral Hormonal Pills	41	35.7
Injectable hormonal pills	11	9.6
Chayya	4	3.5
Natural method practiced:		
Abstinence Coitus Interruptus Rhythm method	2 2 1	1.7 1.7 0.9
Total	**115**	**100%**
Types of Permanent Methods used: (n=11)		
Tubectomy	11	100
Vasectomy	0	0
Total	**11**	**100%**

Temporary method of contraception was practiced by 115 respondents; among them nearly equal number of women used 41(35.7%) oral pills and 33% of them use barrier methods (condom) as contraceptives for spacing of pregnancy. Intra uterine copper device was the preferred choice by 13.9% followed by injectable DMPA by 9.6% of women. 3.5% women were using chayya as one of the temporary methods. Only five women (4.3%) practised natural methods of contraception. only 11(9.6%) respondents out of 126, adopted tubectomy as the permanent method of sterilisation. None of the spouse opted for vasectomy. This clearly portrays that even though permanent sterilization method in male (i.e., vasectomy) is an easier procedure and has lesser postoperative symptoms the responsibility for birth control still traditionally rests with the women since she has to undergo the physical and psychological burden of unplanned pregnancy**. (Table 2)**

Table 3: Reasons influencing the choice of contraception among the users (n=126) **		
	Number	**Percentage**

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Effectiveness in preventing pregnancy	111	88.1
Spacing for child	61	48.4
Ease of use	80	63.5
Fewer side effects	7	5.6
Offered free	3	2.4
Partner preference	11	8.7
Religious and cultural beliefs	0	0
Health consideration	3	2.4
Socio-economic reasons	3	2.4
Recommendation from health care providers	71	56.3

(** **Multiple responses were given by respondents)**

Out of 126 married women of reproductive age group who were contraceptive user the reason which influenced their choice for acceptance were reported in the form of multiple responses by the respondents. According to them, majority of them i.e 111(88.1%) thought this was one of the most effective method to prevent pregnancy followed by 63.5% who opined that it was easy to use , the recommendation by health care provider was found in 71(56.3%) & 48.4% preferred its use for spacing of their child. Only 2.4% chose to use as it was offered free. **(Table 3)**

Table 4: Distribution of study respondents according to the status of contraceptive user (n=126)		
Users :	**Number**	**Percentage**
Current Users	93	73.8
Non Current Users	33	26.2
Total	**126**	**100%**
Reason of discontinuation among Non current users (n=33)		

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Pain	5	15.2
Irregular Menstrual cycle	21	63.6
Dizziness	3	9.1
Husband out of station	4	12.1
Total	**126**	**100%**

In the present study 126 of the respondents were user ; but among them 93(73.8%) were current user and 26.2% were non current user. Out of the 33(26.2%) non current contraceptive users the main reason of discontinuation among them was irregular menstrual cycle in 21(63.6%), followed by pain which was complained by 15.2% respondents. However 12.1% discontinued using contraceptives as their husband were out of station. **(Table 4)**

Knowledge on contraceptives - Out of the 138 married women of the reproductive age group , majority 126(91.3%) of them had knowledge on contraception. Formal Counselling on contraceptive option was given to 60.9% of the women by the health care providers. Frequent conversation about contraception was done by 41(29.7%) participants whereas 27 (19.6%) had never had any conversation. Satisfaction with the information and support by health care provider regarding contraception were reported by 84(60.9%) respondents and 54(39.1%) of the women were not satisfied with the counselling.

Source of Information among study respondents- There was multiple responses regarding the various source of information about contraceptives. More than 50% of the respondents reported that their friends and neighbour were the primary source of provider of information. Health care provider were the second source of their information. 8% of each received knowledge from the social media and television respectively. Only 2 (1.4%) reported banner to be the source of information.

Table 5 : Association of Various Factors with the Utilization pattern of Contraceptives:

Variables	**Utilization Patterns**		**Total**	**Chi-square P-Value**
	User	**Non users**		
Age group (in years) :				

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15-24	60(98.3)	1(1.6)	61(100)	X^2= 60.8462 P= 0.0001 *(Significant)
25-34	44(97.8)	1(2.2)	45(100)	
35-44	20(87)	3(13)	23(100)	
≥45	2(22.2)	7(77.8)	9(100)	
Total	126 (91.3)	12(8.7)	138(100)	
Parity :				
0	38(97.4)	1(2.6)	39(100)	X^2= 30.7919 P=0.0001 *(Significant)
1-2	69(98.6)	1(1.4)	70(100)	
>3	19(65.5)	10(34.5)	29(100)	
Total	126(91.3)	12(8.7)	138(100)	
Age at marriage :				
<18	4(66.7)	2(33.3)	6(100)	X^2= 10.6597 P=0.004 *(Significant)
18-30	114(94.2)	7(5.8)	121(100)	
>30	8(72.7)	3(27.3)	11(100)	
Total	126(91.3)	12(8.7)	138(100)	
Gender Preference				
Only son	79(97.5)	2(2.5)	81(100)	X^2= 10.1331 P=0.006 *(Significant)
Only daughter	8(88.9)	1(11.1)	9(100)	
Both Son & Daughter	39(81.2)	9(18.8)	48(100)	
Total No	126(91.3)	12(8.7)	138(100)	

***(Significant)- indicates P<0.05**

Majority 98.3% of women in 15-49 years age group were contraceptive users followed by (97.8%) the age group of 25-34 years .Maximum non users (77.8%) belonged to the age group

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of more than equal to 45 years. The association between the utilization pattern of contraceptives and the age group of the respondents were found to be significant.

Respondents having one-two children (98.6%) used contraceptives more frequently followed by those who had no children (97.4%) whereas those who had more than three children were mostly non users and the association between parity and utilization pattern of contraceptive was found to be statistically significant with a P Value<0.001.

Those who were married between the age group of 18-30 years and those who wanted only son as their preference child were maximum contraceptive users. The factors like parity(P<0.0001), age at marriage (P=0.004) and gender preference (P=0.006) with the utilization pattern of contraceptives among the married women were found to be statistically significant. **(Table 5)**

Discussion-

In our present study we had found out that the prevalence rate of contraceptive usage was 91.3% where as 8.7% never used any form of contraception. Majority of them i.e 115 (91.3%) adopted temporary methods and 8.7% adopted permanent method. None of them accepted vasectomy & all the 11 of the women had undergone tubectomy. Among those who used temporary methods, majority of them used oral pills (35.7%) as the choice of contraception was followed by male condoms(33%). Only 3.5% used chayya as one of the contraceptive methods. Five women adopted natural methods of contraception.

In a study conducted by Kiran et al in Urban slum of Berhmapur had reported that most of the women i.e 93% were aware about various types of contraceptive methods. Regarding the availability of services it was known by 79.7% of the female. The prevalence of contraceptive usage rate was 78.7%. **(5)**

Another study conducted by Osborn et al in rural south India had observed that the contraceptive prevalence rate among the women was 75%. In this study majority preferred tubectomy (81.6%) followed by condoms (11.4%), IUCD(6.3%) and OC Pills (0.7%). **(1)**

A study conducted among couples of urban slum of Punjab reported that the knowledge regarding contraceptive methods was high among both the partner which was 97.3% and 89.3%

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respectively. Condom was the most known method of contraception opted by the couples. The main source of information was mass media in term of television. 58.8% women have selected contraceptive methods to avoid unwanted pregnancies. 2.1% of them were advised by health care provider to use contraceptive to prevent sexual transmitted disease (STD). [6]

A study conducted by Pal PC et al in the coastal block of Ganjam district Odisha has found that 90.7% of the women were aware of the ongoing contraceptive practices. But only 37.4% of the women accepted some or other contraceptive methods so that the prevalence rate was 37.4%. Most of the contraceptive user (62.6%) preferred temporary methods of contraception whereas none of them accepted vasectomy as the method of contraception. 28.2% Women took oral contraceptive pills, IUCD was being used by 15.2% women and condoms were being used by the partners of 19.1% women as a means of contraception. [7]

In our study we have found out that the respondents having one-two children (98.6%) used contraceptives more frequently followed by those who had no children (97.4%) whereas those who had more than three children were mostly non users and the association between parity and utilization pattern of contraceptive was found to be statistically significant with a P Value<0.001.

Use of modern method of contraception was about twice higher among women who want no more children than women who want more children – 74% vs. 38% respectively in Punjab and 15% vs. 7% in Manipur was found in study conducted by Sharma A et al. [8]

Another study by Mogan et al reported that Couples having two or more children and two or more male children were found to have significantly higher odds of consistent use of contraceptives compared to those having no child and having no male child, respectively.[9]

The association between the utilization pattern of contraceptives and the age group (P=0.001), was found to be statistically significant in our present study. The younger age respondents were not desirous of pregnancy and also wanted spacing. So their proportion of contraception

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usage was more whereas those more than 45 years had almost completed their family and did not further prefer any form of contraception in the present study.

The use of contraception is high in age group of 25–35 years than those below 25 years and above 35 years. The reason behind low frequency usage of contraceptive methods among women aged <25 years could associate with the fact that most of these young women lack accession to family planning message and services. Other reason could be due to social stigma where newly married couple are expected to reproduce and proliferate their family. Among the older women, the reduced frequency of contraceptive methods could be due to the fact that there is less coital frequency which occurs as women age or may be they depend on traditional methods which they don't like to mention during the interview which was observed in a study conducted by Shullai WK et al. [(10)]

In our study we have observed that those who were married between the age group of 18-30 years and those who wanted only son as their preference child were maximum contraceptive users. The factors like age at marriage (P=0.004) with the utilization pattern of contraceptives among the married women were found to be statistically significant. The respondents who were married or gave birth before the age of 18 years used less contraception when compared with those who were married or gave birth to child after the age of 18 years. This may be because the former individuals are less aware of the various contraceptive methods and their maturity levels are not favourable. Hence delaying the age of marriage of women as well as delaying the age of first child birth more than 18 years could have had a positive impact on the contraceptive acceptance. But a study by Valekar SS, *et al* did not show significant association between contraception usage and age at marriage or age at first child birth**.** [(11)]

The present study reported that those respondents who wanted only son as their preference child were maximum contraceptive users as this group difference was found to be significant (P=0.006). whereas a study conducted by Lumor et al in Ghana found that the women who wanted male children were 25% less likely to currently use any form of contraceptives (AOR = 0.25; $p < 0.0001$) when compared to women who had no such desire. [(12)]

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Conclusion- The Contraceptive Prevalence rate in the present study was found out to be 126 (91.3%). Those who were users (current user+ non Current user) reported they chose contraception as it is the effective mean of preventing pregnancy. Where as those women who never used any form of contraceptive method reported that the fear of side effects was the main reason for their non utilization. None of the spouse opted for vasectomy. The factors which were associated with the utilization pattern of contraception were the age of the study respondents, parity, age at marriage ,parity and gender preference by couples.

Recommendation- Targeted health awareness must be given to those who are not using contraception ever or those who are discontinuing after the usage through mass media, group discussion, interpersonal communication and community campaign by health care workers. Since the IUCD is a long acting reversible contraceptive that works for 10 long years providing better compliance and minimum follow up, its usage and acceptance should be emphasized. Empasis like awareness, incentives must be given to motive male partner for vasectomy by Government and NGO as it is easy , safe and one of the best methods of family planning.

Conflict of interest- None

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