Assessment of Contraceptive Usage Patterns and Associated Factors among Women in Bangladesh: A Hospital-Based Observational Study

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Abstract

Background: The use of contraceptives is crucial in managing family size, improving maternal health, and enhancing socio-economic development. Despite progress in promoting contraceptive use, challenges persist in countries like Bangladesh, where socio-cultural dynamics can affect the uptake and usage patterns. This study aimed to assess contraceptive usage patterns and associated factors among women attending a hospital in Bangladesh. **Material & Methods:** This prospective observational study was conducted at the Outpatient Department of Obstetrics and Gynecology, Holy Family Red Crescent Medical College Hospital, Dhaka, Bangladesh, from January 2021 to December 2022. The study included 150 women of reproductive age (18-45 years) who visited the hospital for gynecological problems or regular check-ups. Data was collected through structured interviews using validated questionnaires assessing knowledge and usage of contraceptive methods. Descriptive statistics and Chi-square tests were used for data analysis. **Results:** Among the participants, 66.00% reported regular contraceptive use, 10.67% reported irregular usage, and 23.33% stated they were not using contraception. Oral contraceptive pills were the most common method (43.48%). There was a significant association between contraceptive usage patterns and education level, age group, marital status, and number of children. In contrast, residence did not significantly associate with contraceptive practice. **Conclusion:** Despite high awareness levels, there exists a gap between knowledge and consistent contraceptive use. Education level, age, marital status, and number of children significantly influence contraceptive usage patterns. This study highlights the importance of integrating these socio-demographic factors in the planning and implementation of family planning policies to promote effective contraceptive use in Bangladesh. Future research should investigate the reasons behind irregular or non-use of contraceptives among informed women and devise strategies to bridge the knowledge-practice gap.

Keywords:- Contraceptive, Birth-Control, Family Planning, Pregnancy.

INTRODUCTION

Contraception, an integral part of family planning and women's health, refers to the use of methods or devices to prevent pregnancy. Its importance cannot be understated, especially in a developing country like Bangladesh where the population is soaring, and healthcare resources are stretched thin.[1] Contraceptives can be broadly categorized into hormonal

contraceptives, intrauterine devices, barrier methods, emergency contraceptives, and sterilization. Each method varies in effectiveness, usage, side effects, and accessibility, making contraceptive knowledge paramount for appropriate and effective use.[2] Bangladesh has made significant strides in promoting contraceptive use, with the Contraceptive Prevalence Rate (CPR) rising from 8% in 1975 to about 62% in 2019, according to the Bangladesh Demographic and Health Survey (BDHS).[3] This increase has contributed to a decline in the total fertility rate and an improvement in maternal and child health outcomes. Nevertheless, the rate of unplanned pregnancies remains high at approximately 29%, suggesting gaps in contraceptive usage patterns.[3] In this context, understanding the factors influencing contraceptive use in Bangladesh is essential. Previous studies have identified variables such as woman's age, level of education, socioeconomic status, place of residence (urban or rural), number of living children, and exposure to family planning messages in the media as key determinants.[4] Furthermore, cultural and religious beliefs, misinformation, and stigma around contraception often pose considerable barriers to contraceptive uptake.[5] Moreover, contraceptive knowledge and practice significantly differ across various age groups. Younger women, particularly adolescents, are often less informed about contraception and have lower usage rates compared to older women.[4] This is concerning, given the high risks associated with adolescent pregnancy, such as preterm birth, low birth weight, and higher neonatal mortality.[6] The lack of appropriate knowledge about contraception can lead to inconsistent or incorrect use,

increasing the risk of unplanned pregnancies and associated complications. It can also lead to an over-reliance on less effective methods or emergency contraception, which are not recommended as primary means of contraception.[2] This hospital-based observational study aims to delve deeper into the patterns of contraceptive usage among women in Bangladesh. It will assess these patterns across different age groups, exploring the correlation between contraceptive knowledge and actual practice, while identifying factors that may hinder or facilitate the use of contraceptives. The findings will be instrumental in addressing the gaps in contraceptive usage, tailoring interventions for different age groups, and consequently, enhancing women's reproductive health in Bangladesh.

MATERIAL AND METHODS

This This prospective observational study was carried out at the Outpatient Department of Obstetrics and Gynecology, Holy Family Red Crescent Medical College Hospital, Dhaka, Bangladesh, over a period of two years from January 2021 to December 2022. The study included a total of 150 women of reproductive age visiting the OPD of the study hospital for their gynecology related problems. Inclusion criteria were women aged between 18 and 45 years, who had visited the OPD due to some form of gynecological problem or regular check-up, and were willing to participate in the study. The exclusion criteria included the presence of any significant medical conditions and patients who were unwilling or unable to comply with the study protocol. Data were collected through structured interviews and the administration of validated questionnaires to assess the

knowledge regarding contraceptive methods. Informed verbal consent was obtained from each of the participants prior to data collection, and ethical approval of the study was also obtained from the respective department prior to data collection. Data was collected through a face-to-face interview based on a pre-prepared questionnaire, and all collected data were recorded and analyzed using SPSS V.25. Descriptive statistics were used to describe the socio-demographic characteristics of the participants, their knowledge and awareness of contraceptive methods, and their contraceptive use and non-use. Chi-square tests were used to determine the factors associated with contraceptive use and non-use among the participants.

RESULTS

[Table 1] presents the distribution of participants in a study of 150 individuals based on their baseline characteristics. The age groups of 25-34 years had the highest representation at 46.67%, followed by 35-45 years at 33.33% and 18-24 years at 20.00%. In terms of education level, secondary education had the largest share at 33.33%, while primary education and higher education both accounted for 26.67%. Participants with no formal education comprised 13.33% of the sample. The majority of participants were married (86.67%), while unmarried individuals made up 13.33% of the sample. In terms of the number of children, 1-2 children had the highest representation at 46.67%, followed by no children and 3 or more children, each at 33.33%. Most participants resided in rural areas (60.00%), with the remaining 40.00% living in urban areas.

[Table 2] displays the distribution of 150 participants in a study concerning knowledge-related factors regarding contraceptives. Among the participants, 90.00% reported having heard about contraceptives, while 10.00% were unaware. Healthcare providers and media platforms were the primary sources of information, accounting for 33.33% and 36.67% respectively, followed by friends and family at 20.00%. A subset of participants, 10.00%, reported having no source of information. In terms of knowledge about contraceptive types, 66.67% knew more than one type, 23.33% knew only one type, and 10.00% were unaware of any types. Regarding understanding of correct usage, 60.00% had a correct understanding, 30.00% had a partial understanding, and 10.00% lacked understanding.

[Table 3] displays the contraception practices among the 150 participants in the study. The majority, 66.00%, reported regular use of contraception, indicating consistent usage. 10.67% reported irregular usage, while 23.33% stated that they were not using contraception.

[Table 4] displays the methods of contraception used by the 115 participants who reported using contraception. The oral contraceptive pill (OCP) was the most common method, with 43.48% of participants using it. Barrier methods were utilized by 28.70% of participants, while the injection method was chosen by 21.74%. A small percentage of participants used the progestogen-only pill (POP), implant, intrauterine contraceptive device (IUD), or underwent a no-scalpel vasectomy, each accounting for less than 5% of users.

[Table 5] demonstrates the association between various features and contraceptive practice among the 150 participants in the study. Education level was significantly associated with contraceptive practice, with participants having no formal education showing the highest proportion of not using contraception (71%). Age group and marital status were also significantly associated, with participants aged 25-34 having the highest frequency of regular use (50%) and married participants having a significantly higher frequency of regular use (80%) compared to unmarried individuals (20%). The number of children was found to be significantly associated, with participants having 1-2 children exhibiting a higher frequency of regular use (50%). Residence (rural vs. urban) did not show a significant association with contraceptive practice.

Table 1: Distribution of participants by baseline characteristics (N=150).

Variables	Frequency	Percentage (%)
Age Group		
18-24 years	30	20.00%
25-34 years	70	46.67%
35-45 years	50	33.33%
Education Level		
No formal education	20	13.33%
Primary education	40	26.67%
Secondary education	50	33.33%
Higher education	40	26.67%
Marital Status		
Married	130	86.67%
Unmarried	20	13.33%
Number of Children		
No children	50	33.33%
1-2 children	70	46.67%
3 or more children	30	20.00%
Residence		
Rural	90	60.00%
Urban	60	40.00%

Table 2: Distribution of participants by knowledge related factors regarding contraceptives (N=150).

Variables	Frequency	Percentage (%)
Heard About Contraceptives		
Yes	135	90.00%
No	15	10.00%
Source of Information		
Healthcare Provider	50	33.33%
Media (TV, Radio, Internet)	55	36.67%

Friends/Family	30	20.00%
No Source (Unaware)	15	10.00%
Knowledge of Contraceptive Types		
Knows more than one type	100	66.67%
Knows only one type	35	23.33%
Does not know any type	15	10.00%
Understanding of Correct Usage		
Has correct understanding	90	60.00%
Has partial understanding	45	30.00%
Does not have understanding	15	10.00%

Table 3: Practice of Contraception Among Participants (N=150)

Practice of Contraception	Frequency	Percentage (%)
Regular	99	66.00%
Irregular	16	10.67%
Not Using	35	23.33%

Table 4: Method of Contraception Among Participants Using Contraception (N=115)

Method of Contraception	Frequency	Percentage (%)
Barrier	33	28.70%
Oral Contraceptive Pill (OCP)	50	43.48%
Progestogen-Only Pill (POP)	1	0.87%
Injection	25	21.74%
Implant	1	0.87%
Intrauterine Contraceptive Device (IUD)	4	3.48%
No Scalpel Vasectomy	1	0.87%

Table 5: Association of Features with Contraceptive Practice (N=150)

	Regular Use (N=99)	Irregular Use (N=16)	Not Using (N=35)	Significance (p-value)
Education Level				
No formal education	30 (30%)	6 (38%)	25 (71%)	≤0.05
Primary education	50 (50%)	5 (31%)	7 (20%)	>0.05
Secondary education	10 (10%)	3 (19%)	3 (9%)	≤0.05
Higher education	9 (9%)	2 (12%)	0 (0%)	≤0.05
Age Group				
18-24 years	25 (25%)	4 (25%)	11 (31%)	>0.05
25-34 years	50 (50%)	7 (44%)	4 (11%)	≤0.05
35-45 years	24 (24%)	5 (31%)	20 (57%)	≤0.05

Marital Status				
Unmarried	20 (20%)	4 (25%)	17 (48%)	≤0.05
Married	79 (80%)	12 (75%)	18 (51%)	≤0.05
Number of Children				
No children	25 (25%)	4 (25%)	17 (48%)	>0.05
1-2 children	50 (50%)	7 (44%)	10 (29%)	≤0.05
3 or more children	24 (24%)	5 (31%)	8 (23%)	≤0.05
Residence				
Rural	60 (60%)	9 (56%)	21 (60%)	>0.05
Urban	39 (39%)	7 (44%)	14 (40%)	≤0.05

DISCUSSION

One critical observation from this study is the age group with the highest representation, which are women aged between 25-34 years, accounting for nearly half of the participants (46.67%). This demographic trend aligns with findings in the literature indicating that contraceptive use tends to be highest among women in this age range.[7] Notably, the representation of participants with secondary and higher education, accounting for 60% of the sample, underscores the impact of education on reproductive health decisions. Previous studies have also indicated that women with higher levels of education are more likely to use contraceptives due to increased awareness and access.[8] Interestingly, despite the majority of participants (86.67%) being married, which often correlates with higher contraceptive use, a significant proportion of women reported not using contraception (23.33%). This finding suggests that marriage does not necessarily equate to contraceptive use, a result that corroborates earlier studies that suggest cultural, religious, and societal influences can overshadow marital status in contraceptive decisions.[9] The results concerning knowledge-related factors regarding contraceptives reveal that the majority of participants (90.00%) have heard about contraceptives. This suggests a significant level of awareness among the population, mainly attributed to healthcare providers and media platforms. The effectiveness of these platforms aligns with the evidence that mass media campaigns can significantly improve contraceptive awareness.[10] However, the challenge lies in translating this awareness into practice, as evident from the 23.33% of participants who were not using contraception. Another salient finding was the most common method of contraception: oral contraceptive pills (OCP), accounting for 43.48% of users. Barrier methods and injection were the other notable methods used. These findings correspond to international trends that show OCP and barrier methods to be among the most commonly used methods of contraception.[11] Crucially, the study found a significant association between education level, age, marital status, number of children, and contraceptive practice. Participants with no formal education showed the highest proportion of not using contraception, reaffirming the essential role of education in contraceptive use, as supported by existing literature.[12] In conclusion, the findings of this study highlight the complexities in contraceptive use among women in

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Bangladesh. While knowledge of contraceptives is high, this does not always translate into regular usage. Factors such as education level, age, marital status, and number of children significantly influence contraceptive practice. Future initiatives should target these factors to promote effective contraceptive use, especially focusing on education to bridge the gap between contraceptive knowledge and usage.

Limitations of The Study

The study was conducted in a single hospital with a small sample size. So, the results may not represent the whole community.

CONCLUSIONS

This hospital-based study in Bangladesh adds to the growing evidence on contraceptive usage patterns among women. Factors like age, education, marital status, and number of children significantly influence contraceptive usage. Despite high awareness, many participants reported not using contraceptives. Ongoing education and outreach efforts are needed, particularly for those with no formal education. Addressing societal and cultural barriers is crucial. Larger community-based studies are needed to confirm these findings and understand regional variations. Further research should explore reasons for irregular or non-use of contraception among aware women. Overall, a comprehensive approach to reproductive health is necessary, integrating socio-demographic factors into policy planning for effective family planning and improved outcomes for Bangladeshi women.

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