

PREVALENCE OF LONG ACTING AND PERMANENT CONTRACEPTIVE METHODS AMONG MARRIED POPULATION IN A SELECTED RURAL COMMUNITY

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Abstract

Introduction: Contraception is an essential method for reducing fertility rate. The long-acting and permanent contraceptive methods can adversely affect the health of the mother and the child.

Objectives: The study was conducted to assess the prevalence of long acting and permanent contraceptive methods among married population in a selected rural community of Gazipur District.

Methods: This was a descriptive type of cross sectional study conducted to explore the prevalence of long acting and permanent contraceptive methods among the adult married population in the rural community of Mulaid village under Telihati union of Sreepur Upazilla under Gazipur District. Sample size was 372 and purposive sampling technique was followed for data collection which was done by face to face interview using semi structured questionnaire. The data was analyzed by SPSS 16 software.

Results: Majority (64.5%) of the respondents were female. Highest number of male respondents (44.7%) were in 20 to 30 years age group and highest number of the female respondents (45.0%) were in 15 to 25 years age group. Maximum male respondents (18.9%) were educated up to secondary level and maximum female respondents (29.6%) were educated up to secondary level. Out of total 372 respondents, 92% (344) were aware about contraceptive methods and 74.2% (277) of them used different kinds of contraceptive methods.

Among them 75% (209) used short acting contraceptives, while 17% (48) used long acting contraceptives and 8% (21) used permanent methods. Out of 48 long acting contraceptive method users, maximum (64.6%) used Injection, 29.2% (14) used Implants and 6.2% (3) used I.U.C.D. Among permanent contraceptive methods users, 81.0% (17) used tubectomy and 19% (4) used vasectomy. Out of all Long Acting and Permanent Contraceptive Methods (LAPM) users, percentage of injection was 45% (27), I.U.C.D 5% (3), implant 20% (12) tubectomy 23.33% (14) and vasectomy 6.6% (4). Among the long acting method users(n=48), percentage of injection and implant usage were highest (injection: 60%--18, implant: 26.6%--8) among the respondents having more than two children and percentage of I.U.C.D. usage was highest i.e. 7.6%(3) among the respondents with two or less than two living children. Regarding side effects, among 66.6%(32) of long acting contraceptive method users, maximum i.e. 37.5%(12) mentioned amenorrhea and rest of the respondent(20) mentioned different side effects such as excessive menstruation, irregular menstruation, weight gain etc.

Conclusion: Use of long term and permanent contraceptive methods among people is increasing day by day and this use increases with higher level of education, awareness and social and economic status. Still there is a need to intensify information; education, communication activities and this motivate the people to adopt long term and permanent contraceptive methods.

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Key-words: Long acting and permanent contraceptive method, Married population.

Introduction

Bangladesh is a poverty ridden & one of the most densely populated country in the world with a growth rate of 1.48% per year¹. The adverse effects of population increase consist of lowering of socio-economic status, high maternal & infant mortality rate, scarcity of food, deterioration of physical & mental health of children². Contraception is an essential method for reducing fertility rate. An increase in contraceptive prevalence results in reduction of population growth, which in turn contributes significantly to the improvement of population condition⁴. Bangladesh is now on 8th position in terms of population which has become the burning question to control the overgrowth of population³. Various types of contraceptive methods are now available in the community to fulfill the aim of family planning⁴. In Bangladesh, population planning was seen as an integral part of the total development process, and was incorporated into successive 5 years plans⁵. For this reason, modern contraceptive methods are available free of charge⁶. The contraceptive methods that are now included in family planning programme provide a cafeteria choice. These methods can again be classified into temporary (e.g. hormonal contraceptives, condoms, IUDs and implants) and permanent methods (i.e. tubectomy of female and vasectomy of male)⁷. Usually the eligible couple using permanent method ages around 25 years in average all over the world⁸. In spite of availability of a wide range of contraceptives and mass media campaigns and information, education and communication programs, the population control remains a distant dream to achieve⁹. Although birth control methods for both men and women remain, women's contraceptive prevalence rates are higher than the men's in a developing society like Bangladesh. The causes are related to socio-economic status, family authority, socialization and social policy¹⁰. The basic demographic predictors like "age of the woman and one living son" are the most significant predictors of sterilization acceptors¹¹. Contraceptive method choice is a fundamental indicator of quality of care in a family planning program¹².

The permanent method users are found less in number in comparison to people using temporary and long acting methods. A lack of knowledge of contraceptive methods or a source of supply and poor accessibility are the barriers that exist in developing countries. Side effects perceived or real are major factors for abandoning modern methods¹³.

Material and Methods

This descriptive type of cross sectional study was carried out to find out the prevalence of long acting and permanent contraceptive methods among the married couple in a selected rural community of Sreepur Upazilla. With an area of 465.24 sq km. Total population of Mulaid village was 2815. Among them 372 married couple were randomly selected for face to face interview. This study was carried out from January to June, 2013. Data was collected data by purposive sampling technique. A set of questionnaires were pretested in Model Family Planning clinic in Dhaka Medical College for the correction of any discrepancy and also for quality assurance. The data were analyzed using SPSS 16 software.

Results

Age distribution of male respondents shows that, minimum and maximum age were 20 and 50 years respectively. Highest number of respondents (44.7%) was in 20 to 30 years age group where the lowest number of respondents (19.7%) was in 41 to 50 years age group and (35.6%) were in 31 to 40 years age group. Highest number of the female respondents (45.0%) was in 15 to 25 years age group whereas the lowest number of respondents (16.2%) was in 36 to 45 years age group.

Table-I shows that, maximum male respondents (18.9%) were educated up to secondary level while minimum (9.1%) were illiterate.

Table-I: Educational level of male respondents (n=132).

Education level	Frequency	Percent
Illiterate	12	9.1
Only can write name	15	11.4
Primary level	19	14.4
Secondary level	25	18.9
S.S.C / Equivalent	21	15.9
H.S.C/Equivalent	20	15.2
Graduation or higher graduation /Equivalent	20	15.2
Total	132	100.0

Table-II shows that, maximum female respondents (29.6%) were educated up to secondary level whereas minimum (3.8%) were graduate or higher graduate/equivalent and 13.8% female respondents were illiterates. Among the total 372 respondents, 92% (344) had the knowledge about contraceptive methods, whereas 8% (28) didn't.

Table-II: Educational level of female respondents (n=240).

Education level	Frequency	Percentage
Illiterate	33	13.8
Only can write name	32	13.3
Primary level	43	17.9
Secondary level	71	29.6
S.S.C/ Equivalent	42	17.5
H.S.C/Equivalent	10	4.2
Graduation or Higher Graduation /Equivalent	9	3.8
Total	240	100.0

Table-III shows that, among the LAPM users, percentage of injection usage was highest i.e. 45% (27) and second highest (23.3%) method was tubectomy among the literate person. Among the illiterate respondents, use of LAPM (injection, implant, tubectomy) were more or less same as those of literate respondents.

Table-III: Distribution of respondents by female education level and use of LAPM (n=69).

Education level	Long acting method			Permanent method		Total
	Injection	I.U.C.D	Implant	Tubectomy	Vasectomy	
Illiterate	4 44.4%	0 0.0%	2 22.2%	3 33.3%	0 0.0%	9 13.0%
Literate	27 45%	3 5%	12 20%	14 23.3%	4 6.6%	60 86.9%
Total	31 44.9%	3 4.3%	14 20.2%	17 24.6%	4 5.7%	69 100.0%

Fig-1 shows that, out of 344 respondents, 31.1% (107) respondents received their information and knowledge regarding contraceptive methods from family planning workers, 24.1% (83) from doctors & nurse, 21.2% (73) from relative or neighbours, 19.5% (67) from mass media and only 4.1% (17) from husband or wife.

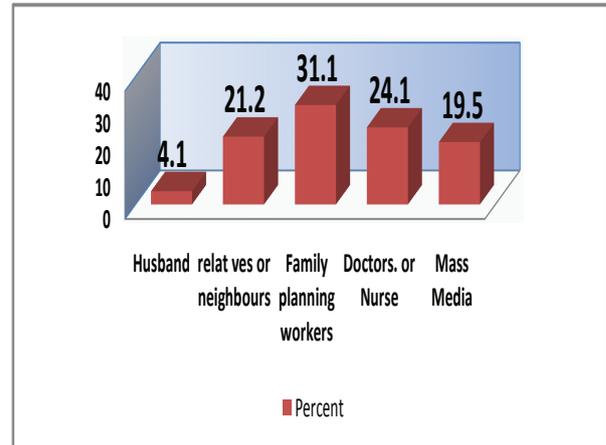


Fig-1: Distribution of respondents according to sources of information and knowledge regarding contraception (n=344).

Fig-2 shows that, 75% (209) used short acting contraceptive methods, while 17% (48) used long acting methods and only 8% (21) used permanent methods.

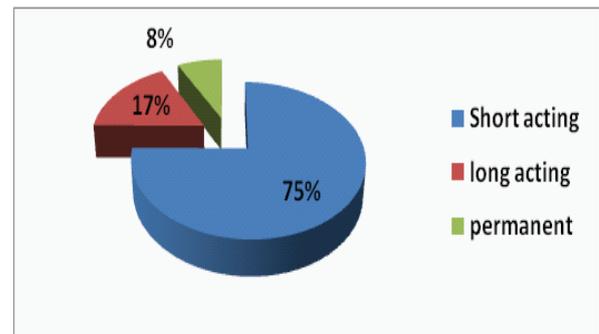


Fig-2: Distribution of respondents according to use of contraceptive method (n=277).

Table-IV shows that, among long acting contraceptive method users, maximum 64.6% used Injection, while 29.2% used Implant and only 6.2% used I.U.C.D.

Table-IV: Distribution of respondents using different long acting methods (n=48).

Long acting methods	Frequency	Percentage
Injection	31	64.6
I.U.C.D	3	6.2
Implant	14	29.2
Total	48	100.0

Table-V shows that, among the respondents having two or less children (39), usage of tubectomy was highest 41.0% (16). Among the respondents having more than two children usage of injection is highest 60% (18).

Table-V: Distribution of respondents by numbers of living children and LAPM usage (n=69).

Number of living children	Long Acting Method			Permanent Method		Total
	Injection	I.U.C.D	Implant	Tubectomy	Vasectomy	
Two or less	13 33.3%	3 7.6%	6 15.3%	16 41.0%	1 2.5%	39 56.5%
More than two	18 60%	0 0.0%	8 26.6%	1 3.3%	3 10%	30 43.4%
Total	31 44.9%	3 4.34%	14 20.2%	17 24.6%	4 5.7%	69 100%

Fig-3 shows that, maximum (35.9%) short acting contraceptive methods users didn't use LAPM for fear of side effects, while 19.1% desire to more children, 16.3% for disagreement with spouse, 14.9% for no concept regarding LAPM, 9.1% for desire for more child, 3.3% for the fear of operation and minimum 1.4% short acting user didn't use LAPM for religious barrier.

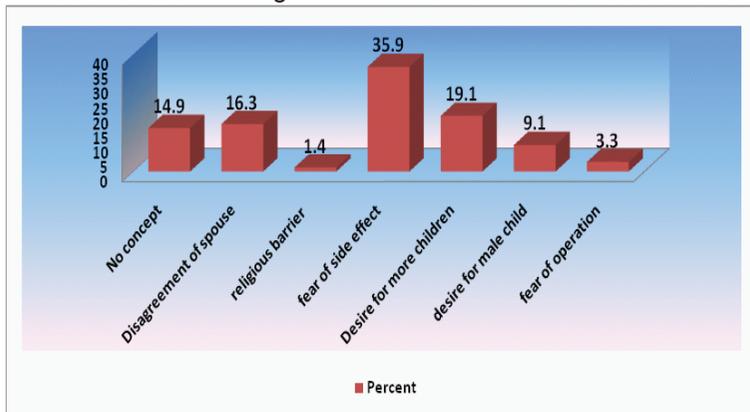


Fig-3: Distribution of Short acting contraceptive methods users according to non compliance toward LAPM (n=209).

Table-VI shows that, maximum 37.5% long acting contraceptive method users complained of amenorrhea, while 34.4% complained of irregular menstruation, 21.9% complained of excessive menstruation, 3.1% of weight gain and 3.1% complained of pain in lower abdomen.

Table-VI: Distribution of long acting contraceptive method users according to side effects (n=32)

Side effects	Frequency	Percentage
Weight gain	1	3.1
Irregular menstruation	11	34.4
Excessive menstruation	7	21.9
Amenorrhea	12	37.5
Pain at lower abdomen	1	3.1
Total	32	100.0

66.6% long acting method users mentioned having different side effects while remaining 33.4% didn't. Maximum (37.5%) long acting contraceptive method users complained of amenorrhea, while 34.4% complained irregular menstruation, 21.9% had excessive menstruation, 3.1% had of weight gain and 3.1% complained of pain in lower abdomen. Among permanent contraceptive methods users, 81.0% had tubal ligation and 19% had vasectomy. 65.2% users were using contraceptive methods for small family while 24.6% for birth spacing and remaining 10.2% for their financial problem.

Table-VII shows that, there is relationship between number of living child and use of LAPM ($\chi^2 = 14.98$, $p < 0.5$).

Table-VII: Relation between number of living children and LAPM usage (n=69).

Number of living children	Method of LA (Long acting)	Method of PM (Permanent method)	Total	χ^2	P
Two or less	22 52%	20 48%	42 60.86%	14.98	0.001
More than two	26 96.29%	1 3.61%	27 39.14%		
Total	48 69.56%	21 30.44%	69 100%		

Discussion

In the study it was found that most (73.8%) women aged between 15 to 45 years use long acting method 73.8%(48) rather than the permanent method used by 26.1%(17) of the women. In a study, Stephenson R, Beke A and Tshibangu D (2008) found that in South Africa women aged between 40 to 49 years were more likely to be using a more permanent method instead of the injection that is used by those aged between 15 to 34 years¹².

In this study it was found that percentage of use of injection was 45%(27), IUCDs was 5%(3) and vasectomy was 6.6%(4) and use of those was high in literate respondents (n=60) and percentage of use of implant i.e. 22.2%(2) and tubectomy 33.3%(3) were high in illiterate respondents.

Sultana S, Jahan M S and Islam M M (2007) in their study carried out in Rajshahi City Corporation, Bangladesh observed that the percentage of use of IUCDs and injectables was relatively high among literate respondents whereas use of Norplant and ligation was higher among illiterate respondents¹⁴. This study result is quite relevant with our study result in regard to education level and use of LAPM. Another study done by Stephenson R, Beke A and Tshibangu D (2008) revealed that in South Africa the females with only primary education were less likely to use the pill instead of injection¹².

In this study out of the total 372 respondents, 92% (344) had knowledge about contraceptive methods, whereas 8% (28) did not. It was also found that out of 344 respondents, maximum 31.1% (107) contraceptive users got their information regarding contraception method from family planning workers. Other sources of information were doctors or nurse 24.1 % (83), relatives or neighbors 21.2% (73), mass media 19.5%(67) respectively and only in 4.1%(17) husbands were their source of information.

Study of Baig Z, Dr. Hatcher J and Dr. Saleem S (Sep-Oct. 2012) in Pakistan revealed that sources of knowledge about contraceptives were from health service providers (39.5%) and family and friends (35.7%),surprisingly, media was reported as being a source by only a negligible number of women (6%) (28). Study by Mansur M.S.A.A., Chowdhury S, Rezaul M. K. And Mahmudul M. H. in September, 2012, in slums in Dhaka revealed 89.7% of the respondents got information about family planning services by field level workers and family planning workers.

In another study carried out by Tuladhar H and Marahatta R (2008) in Nepal, it was observed that the main source of information was "Mass media" as reported by 55.5% of the respondents, 33.3% of the respondents came to know about these methods through friends and relatives and the least common source of information was health personnel (22.5%)¹³. The results are almost same with that of previous study.

Out of 372, 74% (277) respondents were user of different contraceptive methods. 26% (35) didn't use any kind of contraceptive method. Out of 277 contraceptive users, 75% (209) used short acting contraceptive methods, while 17% (48) used long acting methods and only 8% (21) used permanent methods. Among LA method user's maximum 64.6% (31) long acting method users used Injection, while 29.2% (14) used Implants and only 6.2% (3) used IUCDs. Among permanent contraceptive methods users 81% (17) had tubectomy and 19% (4) had vasectomy. In a study carried out by Sultana S, Jahan M S and Islam M M (2007)in Rajshahi City Corporation in Bangladesh it was observed that among the long acting and permanent method users the rate of use were 35.14% for injectable, 14.9% for IUCD, 12.16% for norplant, 9.46% for tubectomy and Vasectomy for 4.0%¹⁴.

According to this study, regarding non-users of LAPM (n=209), 35.9% use short acting contraceptive methods because of fear of side effects, while 19.1% for more child, another16.3% for disagreement with spouse, 14.9% had no idea regarding LAPM, 9.1% for desire for male child, 3.3% for the fear of operation and minimum (1.4%) short acting user didn't uses LAPM for religious barrier. Study by Ferdousi SK and Et al (2010) in Dhamraithana revealed that principal barrier to the use of contraceptive was fear of side effects (46.1%)⁴. A study carried out by Hanifi S M A and Bhuiya A (2001)in rural Bangladesh revealed that more than one-third of the non-users were not practicing because they wanted more children¹⁵. Another study carried out by Murarkar S K, Soundale S G and Lakade R N (2011) in Chanai village, Ambajogai, Maharashtra, India observed that out of 512 married women, commonest reason for not accepting contraceptives was the desire for children in 25.85% of women⁹. According to Arbab A.A, Bener A and Abdulmalik M (2011), some women did not want to use contraceptive methods because of their husband's objection (7%)¹⁶. Another study by Takele A, Degu G and Yitayal M (2012)in South East Ethiopia showed that more than half(60.2%) of the respondents were housewives by occupation who did not have access to information and services of reproductive health¹⁷.

In a study carried out by Sultana S, Jahan M S and Islam M M (2007) in Rajshahi City Corporation in Bangladesh it was observed that preference of male child was one of the major causes for not adopting contraceptive methods in 15.8% couples¹⁴. About 43.1% female and 55.6% male did not accept permanent method due to fear of operation¹⁴ and 11.81 percent women were not using contraceptives due to religious prohibition⁴. According to Arbab A.A, Bener A and Abdulmalik M (2011) study, few Qatari women did not use any contraceptives considering it to be against religious belief (3%)¹⁶. Our study results are almost similar with that of other studies performed before.

Regarding side effects our study reveals, maximum (33.4%) long acting contraceptive method users faced no side effects while amongst the remaining 66.6%(32) users, 37.5%(12) complained of amenorrhea, 34.4%(11) complained of irregular menstruation, 21.1%(7) complained of excessive menstruation, 3.1%(1) complained of weight gain and another 3.1 %(1) complained of pain in lower abdomen. Sultana S, Jahan M S and Islam M M (2007) found that among the users 72% female complained of physical problems, 14.9% experienced amenorrhea, 7.45% spouse's objection, 4.35% irregular bleeding and 1.24% excessive bleeding during the use¹⁴. Another study carried out by Tuladhar H and Marahatta R (2008) in Nepal revealed that only 37% of women had no knowledge about their adverse effects. Majority (26%) told about irregular bleeding (16%), amenorrhea and other side effects due to Depo-Provera¹³. These variations may be due to small sample size as well as failure of the respondents to give accurate history.

Conclusion

Though long term and permanent contraceptive methods prevalence among people is increasing day by day, the rate has yet not reached up to the mark. Among the respondents; most of them are familiar with LAPM by means of FP workers, doctors, nurses, relatives and mass media. Fear of side effects is the main drawback for not adopting LAPM. In spite of the side effects and fear of adopting these methods, a good number of respondents are using LAPM.

This percentage is encouraging. Use of long acting and permanent methods increases with higher level of education, awareness and social and economic status. Still there is a need to intensify information, education, communication activities and thus motivate the people to adopt long term and permanent contraceptive methods.

References

1. Mansur AMSA, Chowdhury S, Rezaul KM, Mahmudul HM, Unmet needs of family planning and practice of family planning in a selected urban to rural migrated population of Dhaka city; *Journal of family and reproductive health*: September, 2012, Vol.6(3):115-22.
2. Banerjee B, Socioeconomic and cultural determinants on acceptance of permanent methods of contraception, *Journal of family welfare*, June 2004, Vol.50 (1):54-7.
3. Economic and Social Commission for Asia and Pacific. *Population of Bangladesh*. New York: United Nations, 1981.
4. Ferdousi SK, Jabbar MA, Et.al, Unmet need of family planning among rural women in Bangladesh, *J Dhaka Med Coll*. 2010; 19(1): 11-5.
5. Mitra SN, Al-Sabbir A, DHS working papers no.21, October, 1996 :1-26.
6. Crede S, Hoke T, Constant D, Green MS, Moodley J, Harries j, Factors impacting knowledge and use of long-acting and permanent contraceptive methods by postpartum HIV positive and negative women in Cape town, South Africa: a cross-sectional study, *BMC Public Health* 2012, Vol.12:197.
7. Qazi HA, Hashmi A, Raza SA, Soomro JA, Ghauri A, Contraceptive methods and factors associated with modern contraceptive in use, *Journal of family and reproductive health*, Vol.4 (1) March 2010:41-5.
8. Park K, K. Park's *Textbook of Preventive and Social Medicine*, 20th edition; February 2009: 424.

9. Murarkar SK, Soundale SG, Lakade RN, Study of contraceptive practices and reasons for not accepting contraceptives in rural India: Chanai village as a case study; *Indian Journal of science and technology*, August, 2011, VOL.4(8): 915-6.
10. Uddin ME, Ferdous Z, Gender of birth control method practice in sexual behavior in Bangladesh, *Antrocom* 2009, Vol.5(2): 87-91.
11. Kamal N, Mohsena M, Twenty years of field visits by FP workers in Bangladesh: are they still needed?, *The Journal of Family Welfare*, June, 2011, Vol.57(1): 10-7.
12. Stephenson R, Beke A, Tshibangu D, Community and health facility influences on contraceptive method choice in the Eastern Cape, South Africa, *International family planning perspectives*, June, 2008, Vol.34 (2):62-70.
13. Tuladhar H, Marahatta R, Awareness and practice of family planning methods in women attending Gyne OPD at Nepal Medical College Teaching Hospital, *Nepal Medical College Journal*, 2008, Vol.10(3):184-91.
14. Sultana S, Jahan MS, Islam MM, Contraceptive acceptance among eligible couples residing in Rajshahi City Corporation, *Journal of teachers Association*, June, 2007, Vol.20(1):11-6.
15. Hanifi SMM, Bhuiya A, Family-planning services in a low performing rural area of Bangladesh; insights from field observations; *Journal of health population and nutrition*, September, 2001, Vol.19(3):209-14.
16. Arbab AA, Bener A, Malik MA, Prevalence, awareness and determinants of contraceptive use in Qatari women, *Eastern Mediterranean Health Journal*, 2011, Vol.7(1):11-7.
17. Takele A, Degu G, Yitayal M, Demand for long acting and permanent methods of contraceptives and factors for non-use among married women of Goba Town, Bale Zone, South East Ethiopia, *Reproductive health journal*, Vol.9:1-11.