

Prevalence of Contraceptive Methods and Factors Influencing the Choice of Temporary Vs Permanent Methods of Contraception - A Multicentre Urban Study

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ABSTRACT

Aim: To explore the contraceptive prevalence in urban population and find out the factors that influence the choice of the permanent and non permanent methods of contraception.

Study design: Cross-sectional multicenter study.

Subjects and methods: The data of a random Sample of 760 women visiting five major hospitals of Lahore was collected through an interviewer- administered questionnaire. The data was analyzed using SPSS. Chi-square was applied to check the significance and p-value <0.05 was considered significant.

Place and duration of study: Deptts. of Paediatric Medicine and Obs. & Gynae, from 1st October 2010 to 30th May 2011 in Lady Wellington, Lady Aitchson & Mayo Hospitals, Fatima Memorial and National Hospital Defense.

Results: Among the 760 women who were studied mean age was 27 with SD 5.72. The total birth control rate was 45%. Four hundred and eighteen women (55%) women did not use any method of contraception. Samples choosing the permanent and non-permanent contraceptive methods have taken up 92.6% and 7.4%. In the sample that used permanent sterilization not even a single case of male sterilization was reported. Chi-square analysis showed that the use of contraceptive method was significantly associated with age (p-value 0.000), parity (p-value 0.001), knowledge (0.000) no. of years after marriage (p-value 0.000) and frequency of intercourse (0.000).

Conclusion: Contraceptive prevalence in the women of Lahore is considerably low; the condition needs to be improved through awareness campaigns. The choice of contraception is largely affected by age, knowledge, parity, marital years and frequency of intercourse.

Key words: Contraceptive use, permanent methods, temporary methods, urban areas.

INTRODUCTION

Contraceptive prevalence rate is defined as proportion of reproductive population using a contraceptive method. It is a tool for a country to analyze its family planning programme. Pakistan ranks seventh in terms of the population and the greatest number of this population is formed by the children¹. If the population will be allowed to grow in this manner, according to UN estimates; Pakistan will become the fourth most populous country by year 2050. Given the large and fast-growing population in Pakistan, devising birth control strategies is extremely important for Pakistanis. Contraceptive prevalence increased from 12% in 1991 to 27% in 1998, a rise of roughly 2% points per annum² followed by a reported Contraceptive Prevalence rate of 34% in 2008³ at present the contraceptive prevalence rate of Pakistan is much lower than the other Muslim and advanced states^{4,5}.

The concept of the birth spacing has been present from the time immemorial. Women use techniques such as herbal medicines, charms and manual and abdominal manipulation to ward off unwanted pregnancy^{6,8}. New and safe methods have now been introduced that are playing a better role in limiting the size of the family. In the United States injectibles and OCP's are employed as the most commonly used method^{9,10}. However, in Pakistan IUCD's have been reported to be more prevalent¹¹. With the passage of time, the permanent methods of contraception are also becoming popular.

Various studies have been conducted to know the current status of contraceptive prevalence, however the influences on the choice of the method has not been thoroughly investigated. Therefore the study is designed to find the relation of different factors influencing the choice of the contraceptive methods. This would help the planners to design effective programs for bringing down this huge population explosion.

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SUBJECT AND METHODS

This multicentre cross-sectional study was conducted in the Department of Paediatric Medicine and Obstetrics & Gynecology, in 5 major hospitals of Lahore from 1st October 2010 to 30th February 2011. in Lady Wellington,, Lady Aitchson and Mayo Hospitals, Fatima Memorial and National Hospital Defense were selected to cover the overall population and minimize the bias based on socioeconomic status. A central training was conducted for the interviewers and they were trained on the interviewing techniques, detailed explanation of each question, and eligibility criterion of the respondents. Female medical students conducted the interview in private settings to avoid underreporting. The questionnaire elicited information regarding their age, education, economic status, parity, number of years after marriage, knowledge of contraceptive and type of contraceptive method. The questionnaire was used to interview 20 women in Mayo Hospital to check its validity and ease of analysis. The students after taking consent then randomly interviewed 150 women married fertile women between ages 16-49 years visiting each center. Total 750 women were interviewed. Unmarried, divorced, widowed, pregnant, infertile and premenopausal and postmenopausal women were excluded. Descriptive analysis was conducted to describe the results in percentages means and standard deviation. Chi-square was applied to determine the relationship of different factors with the type of contraceptive method. P-value <0.05 was considered significant.

RESULTS

The demographics of the total 760 women that were studied showed that the mean age was 27 with standard deviation 5.72 and variance 32.7 (the median age was 26). All of them were married. The education level of the population was prevalently high, 333 women (43.8%) had attended high school, 133 women (17.5%) middle school, and 145 women (19.6%) primary. A total of 145 women (19.1%) had education less than the primary. Five hundred and forty nine women (72.2%) were housewives and 211 women (27.8) were working women. The median parity was 2 children with a minimum of 1 and maximum of 11 children. The gender of the last born child was male in 52% (n=395) and female 45.5% (n=346) of the families.

The information on the use of the contraceptive methods showed that 342(42%) women practiced some form of contraception within the last six months while 418(55%) women did not use any form of contraception. Among the women who used

contraceptive techniques to limit their family size 317(92.6%) used temporary methods and 25(7.30%) used permanent methods. The most popular method employed was the use of condoms (n=102 -32%) and pills (n=110-34%). All 25 women who practiced permanent contraception used the methods of female sterilization, not even a single case of male sterilization was reported.

Methods of temporary contraception

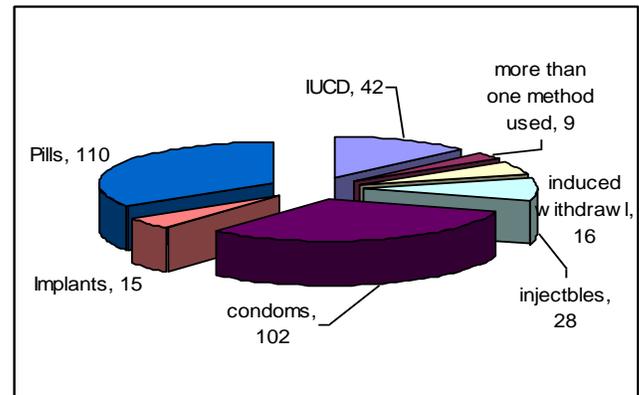


Table 1 describes the relationship of different factors with the choice of the temporary and non-temporary method of contraception. The age is found to have significant association with the choice of the contraceptive method p-value 0.000. Temporary method of contraception was found common among the women of younger ages in their twenties while the permanent method was found popular in women in thirties and above. The use of contraception was significantly higher in women of low parity (p-value 0.001), and those with high frequency of intercourse (p-value 0.000). The gender of the last child born did not have any influence on the choice of the contraceptive method p-value (0.058) nor did the presence of any genital tract infection (p-value 0.289). The pattern of contraception was not also not affected by the education and occupation of the women, p-Value being 0.283 and 0.411 respectively.

Table 2 describes the level of knowledge of the participants and its effect on the choice of contraception. Five questions regarding the knowledge of the participants were asked to check whether the knowledge had some influence on the choice of contraceptive method. It was found that the women using the temporary methods had knowledge about more contraceptive methods than the women using permanent methods. Separate analysis also showed that the level of knowledge was significantly higher in women with higher educational status (p-value 0.000), while no difference was reported in the knowledge of working and non-working (p-value 0.192) and younger and older patients (0.211).

Table 1: Factors affecting the choice of contraceptive methods among the urban women

Characteristic		Temporary	Permanent	No contraception	Chi-square	p-Value
Age in years	18-24	98(12.76%)	0 (0%)	122(23.9%)	98.012	0.000
	25-31	123(16.05%)	0(0%)	142(18.68%)		
	32-38	84 (11.05%)	11 (1.4%)	69(9.07%)		
	39-45 and greater	12 (1.5%)	14(1.8%)	25 (3.28%)		
Education	None to 4 years	57 (7.5%)	9 (1.2%)	79 (10.3%)	10.893	0.283
	Primary	66 (8.6%)	3 (0.4%)	80(10.3%)		
	Middle	53 (6.9%)	6 (0.8%)	74 (9.7%)		
	≥High School	141(18.5%)	7 (0.9%)	185 (24.3%)		
Occupation	Housewife	25 (15.62%)	17 (2.2%)	294 (38.6%)	2.878	0.411
	Working women	79 (10.39%)	8(1.05%)	124(16.3%)		
Parity	0-2	202(26.5%)	10(1.3%)	294(38.9%)	52.625	0.001
	3-4	59(7.7%)	3(0.4%)	68(8.9%)		
	≥5	56(7.4%)	12(1.6%)	48(6.3)		
Genital tract symptoms	Present	55(7.2%)	5(0.65%)	52(6.8%)	3.759	0.289
	Absent	263(34.6%)	20(2.6%)	366(48%)		
Gender of the last child born	Male	156(20.5%)	15(2%)	224(29.4%)	4.690	0.058
	Female	153(20%)	10(1.3%)	183(24%)		
	No child	8(1.1%)	0(0%)	11(1.4%)		
Married for (years)	≤ 5 years	179	3	277	56.325	0.000
	≤10 years	78	5	84		
	≥11 years	60	17	57		
No of inter-course/month	0-2	48(6.3%)	14(1.8%)	73(9.6%)	30.368	0.001
	3-5	144(19%)	4(0.52%)	185(24.3%)		
	≥6	125(16.5%)	7(0.92%)	160(21.1%)		

Table 2: Effect of knowledge on contraception

Level of knowledge on contraception	Methods of Contraception			
	Temporary	Permanent	None	Total
Don't know about contraception	0	0	64	64(8.42%)
knows about contraception	39	3	62	104(13.4%)
knows contraception is necessary	52	2	80	134(17.6%)
knows 1-2 methods of contraception	108	11	101	220(28.97)
knows more than 2 methods of contraception	111	9	118	238(31.3%)
Total	317	25	418	760

P-value 0.000

DISCUSSION

Pakistan is a state where women are highly honored and any conversation about the sexual affairs or contraception to the unmarried and ex-married women is considered highly objectionable, therefore this population was completely excluded from our study group. Also we did not include infertile and pregnant women in our study group because it is generally assumed that they are not active contraceptive users. Only those married women who had been using any contraceptive technique in the last six months were included in the study group.

Birth spacing is a very important method that is employed throughout the world, to regulate the population. Nonetheless the pattern of the contraceptive methods is widely different in different parts of the world and therefore it is of utmost importance to study the pattern and factors that influence the choice of contraceptive methods. In this

study we found that out of the seven hundred and sixty women only 342(45%) women used contraception, this finding is consistent with the MICS report 2007-2008². A study that was conducted in Karachi ¹² showed that the percentage of the contraceptive users was 53%, which is slightly greater than the frequency of the people using contraceptive aid in our urban sample. Another study was conducted in the two rural districts of Sindh that showed that the contraceptive prevalence was 28%¹³. This shows that even within Pakistan the rate of contraception is markedly variable. The low contraceptive prevalence rate is due to many social and religious constraints in Pakistan. The condition needs a lot of improvement as Lahore happens to be the most populous state of the world in terms of population to area ratio. Contraceptive use increased with the increasing age of the mother, parity and number of living children. Tubal ligation (9.5%) and

condoms (9%) were the most popular methods of family planning. Contraceptive prevalence among the south Asian women attending general practices in south western London show that the overall prevalence of the contraceptive use was 63% and ranged from 70% in South Asian teenagers, to only 50% in women over 30 who had completed their family⁵.

Although the total birth control rate is very low as compared to the other parts of the world we have found that among the contraceptive users the temporary methods are much more popular than the other methods. The two most prevalent temporary methods used were condoms and oral contraceptive pills. A large sample study that was conducted in a rural state of China, one of the neighboring countries, showed that their large population used permanent techniques¹⁴. The difference may be due to the fact that the Chinese government has very strict birth control policy and thus citizens in rural areas bear two and those in urban areas bear one child. The condition is not so in Pakistan where the parents have the choice to bring up as many children as they wish to. Also the Chinese study was conducted in the rural area where the people may not have adequate knowledge on contraception. Another fact that was highlighted in this study was that in the case of the users of the permanent methods, not even a single man was reported to have undergone vasectomy as a permanent procedure. This observation is contrary to the studies in the developed world where more men are undergoing permanent procedures because of ease and safety of the procedure. According to a Canadian study the frequency of the male sterilization was 13% in 2002¹⁵. This shows that men in the developing countries like Pakistan are reluctant to lose their fertility status and also believe that the women are the ones who should take the responsibility of family planning. However increase in the use of the condoms is encouraging which shows that the men have started taking up their responsibilities. . Vasectomy is not a very popular method in Asian countries a study in India showed that the rate was 4.87 while most common method used widely was OCP's and female sterilization¹⁶. In Brazil the contraceptive prevalence rate is 61%, the OCP's are used by 48.8%, 18.7% use sterilization, 17.3% use condoms, 7.3% IUD's. In older women with age greater than 50-60 years tubal ligation was found in 80% of population¹⁷.

Our study suggests that the use of the temporary methods was more in younger age groups while the use of the permanent methods was significantly higher in women in the later part of the reproductive ages. Thus we found a bimodal distribution. Other studies carried out in the region

also showed similar results. In many countries, the proportion of the adolescent women using contraception increased substantially over the last two decades, prevalence among adolescent women increased faster than the older women¹⁸.

The education and occupation of the women were not found to have significant relationship with the choice of the contraception. Various studies conclude that education has significant effect on the choice of contraception. Our study shows contrary results. This is because Lahore is a metropolitan state where most of the people have adequate knowledge and access to the contraceptive knowledge and thus literacy does not play a major role in development of choices of contraception. This was also evident from the results of the questions on contraception, where we found that the knowledge on contraception was almost universal and more than 90% people of knew about contraception. Also the trend was alike in both housewives and working women in the city. This is because both of have similar knowledge and access to the contraceptive knowledge and services. The knowledge of the family planning methods is almost universal and most of the tribal women are aware of at least one method of contraception¹⁹.

The parity of the women played a significant role in the choice of the contraception. Temporary methods were most prevalent in the women with number of children less than or equal to two. Among the women who used the permanent methods the number of children was greater or equal to five.

Our study concludes that gender of the last born child is playing no significant role in determining the contraceptive choices in our sample of urban population. This is in contrast to the other studies conducted in the region where the authors found that the trend of contraception in the parents of the baby girls was found to be less frequent^{14,20-21}. Having a greater number of female children was also negatively associated with having used a prior contraceptive method²²⁻²⁴.

It was found in many other studies that the females with any problems or symptoms of the genital tract were reluctant to use any contraceptive techniques, in the fear of aggravating the condition. In our study we found that the choice of contraception was not much dependent on the condition of the reproductive tract.

The trends of the use of temporary methods was greatest in the women who had been married for 5 years or less and permanent methods in women who have been married for 10 years or greater. The results are consistent with the other studies. Also the sexual relationships were seen to be a significant predictor of determining the choice of contraception.

The number of women who used temporary contraception mostly had greater number of intercourse per month. The women with the permanent methods had a fewer number of intercourse. The reason behind the fact is that the women with the younger age groups adopt temporary methods and women with mature age choose permanent methods.

Of the women who were not practicing contraception, when they had an unwanted pregnancy 44% said that they were unaware of the family planning and 22% that they either did not have access to contraceptive services²⁵.

CONCLUSION

The prevalence of the contraception in the women of Lahore is low and should be improved. Moreover the trends of permanent contraception are very trivial as compared to the users of temporary methods. Temporary methods are more prevalent in younger women of low parity, less duration of marriage and greater frequency of sexual relationship. Permanent methods were significant in the elderly women with greater duration of marriage and frequency of intercourse. However education, occupation and gender of the last born child play no significant role. It is the hour of the need to educate the people about importance of the different contraceptive methods²⁶.

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