Quality of Services, Retention and Causes of Discontinuation of IUD Contraception in Rural India

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Abstract

Acceptance of IUD is one of the important contraceptive methods for spacing between children and declining in fertility. This paper has been designed in a manner to explore the quality of services, retention and causes of discontinuation among IUD acceptors in rural India (year 2006-2010) using the primary data collected from rural India. Results of multivariate analysis reveal that the retention of IUD among acceptors in rural India are largely associate with acceptor's satisfaction for quality of services and facility received during the insertion, visit and counseling of female health care worker, and other socio-demographic factors. Less than half of the acceptors able to retain their IUD in rural India. The main reasons of discontinuation stated are the couple's desire for more children, shifting of methods, irregular bleeding, backache, pain after insertion, feeling discomfort after IUD insertion, infection or increase of vaginal discharge etc.

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Introduction

The National Family Welfare Programme of India was launched in 1952. Since its inception, the programme has experienced significant growth in terms of financial investment, type and quality of services, and the range of contraceptive methods offered. In the beginning of the programme, a majority of the couples adopted terminal methods such as vasectomy and tubectomy to limit their family size. Only in 1966, temporary methods like the intrauterine contraceptive devices (IUD) and condoms were introduced in the family planning programme. IUD insertions picked up only from the year 1970-71 after the introduction of the copper T device. The IUD's many advantages also make it a very good alternative for reducing unmet need for long-term contraception around the world. Between 5 and 17 percent of all married women of reproductive age in 53 less-developed countries do not want to have more children but are not using a contraceptive method (Ashford, 2003). Because the IUD can be provided in primary health settings and posts at low cost, it can complement female sterilization and vasectomy to help women achieve their fertility goals, especially in rural areas. Despite these advantages, the IUD is underused. Only 5 percent of married women in developing countries other than China (1 percent in Africa, 4 percent in Asia outside China, and 8 percent in Latin America and the Caribbean) use the method (Salem, 2006) and at the same time in India only 1.7 percent use IUD method (IIPS and Macro International, 2007).

Currently, the IUD is the most reliable temporary method in the government programme (Dawn, 1992). A prospective acceptor usually analyses the pros and cons of a method in terms of its effectiveness, safety and incidence of side effects. In the case of IUD, which is the most popular non-terminal method, acceptance largely depends on the magnitude of its side effects which in turn, influences the continuation rate (FPAIPP Bulletin, 1996). However, there are only a few in-depth studies on IUD retention and/or discontinuation rates. Since October 1997, the services and interventions under the Family Welfare Programme and the Child Survival and Safe Motherhood Programme have been integrated with the Reproductive and Child Health Programme. In the National Population Policy, 2000, the Government of India set as its immediate objective the task of addressing unmet need for contraception to achieve the medium-range objective of bringing the total fertility rate down to replacement level by 2010 and in the long run goal is to stabilize the population by 2045. One of the socio demographic goals

identified for this purpose is to achieve universal access to information/counseling and services for fertility regulation and contraception with a wide range of choices (Ministry of Health and Family Welfare, 2000).

Family planning and reproductive health programs have contributed greatly to fertility decline in developing countries (Leete and Alam, 1999). Both availability and quality of family planning services including IUD are believed to have contributed to increasing contraceptive use and declining fertility rates in developing countries. There is general agreement that the quality of family planning and reproductive health services positively affects contraceptive use and behaviour of the clients; and that clients deserve to receive safe and high quality services with respect and dignity (Rama Rao, et. al., 2003).

A mounting research studies provide support for the importance of service quality in influencing contraceptive behaviour. Studies using cross-sectional data from Tanzania, Peru, Morocco and Bangladesh have reported significant associations between higher quality of care – measured in a variety of different ways – and higher contraceptive prevalence or likelihood of use (Bertrand, et. al., 1996). Few other studies have explored the linkages between quality of care and contraceptive method continuation. A prospective study of family planning acceptors in Indonesia found a substantial difference in one year method discontinuation rates between women who reported that they had been denied versus had received their desired method of contraception from the clinic (Bairagi and Rahman, 1996). The findings of three other studies-two retrospective study from China highlight a positive link between the provision of more intensive client counseling and/or information about method side effects is associated with lower rates of contraceptive discontinuation, although some contradictory evidence also exists (Bertrand, et. al., 1996). The provision of high quality, client-centered services represent an intrinsic objective of most programmes in and of itself, a premise underlying much of the interest in quality of care is better service quality which will also impact positively upon clients' acceptance and continued use of contraception. In this aspects, follow-up of the IUD acceptors is also important to improve acceptance and to find out the complications if any (Munniappan and Somasundaram, 2000).

As state of Madhya Pradesh in India is one of the states which require special attention in order to check its fertility trend (3.1 in 2005-06 compared to 3.4 in 1998-99 and 4.0 in 1992-93 (IIPS and Macro International, 2007)). Acceptance of IUD is one of the important contraceptive methods for spacing between children which has linkages with the decline in fertility and population growth. Although the studies related to IUD acceptors and qualities of services have already been given more emphasis in some of the developing nations including India, but the rural areas of India are the least advantageous to these types of studies. Taking all the above points into consideration, the paper has been designed to cover the rural areas of India and hence the state of Madhya Pradesh has been chosen specially.

Objectives

The specific objectives of the paper are:

1. To study the quality of IUD contraception services in the rural Madhya Pradesh of India during 2006-2010.
2. To examine the factors associated with the retention of IUD contraception in rural Madhya Pradesh of India
3. To explore the causes of discontinuation in rural Madhya Pradesh of India

Data Methods

The study was conducted by International Institute of Health Management Research, New Delhi, India. The IUD acceptors from last three years (2006 to 2010 (up to April)) are the units of sample for the quantitative study. For the purpose of the study the total sample size has been taken 1441 IUD acceptors from rural areas in the state of Madhya Pradesh in India. This study is mainly based on primary data. For the purpose of the study both quantitative and qualitative data collection has been performed. The quantitative data on quality of IUD services and other related information has been collected from the IUD acceptors in the rural areas of Madhya Pradesh through the acceptor's structured questionnaire. In-depth interviews of the health care providers such as medical officers, Auxiliary Nurse Midwifes (ANMs) and supervisors of different health centers of Madhya Pradesh were also performed to collect the information on quality of services

and allied issues to complement the quantitative data. To fulfill the objectives of the paper univariate, bivariate analysis and logistic regression analysis have been used here.

Main Findings

Educational status is one of the important background variables which affect the contraception use. Figure 1 illustrates that two fifth of respondents of IUD acceptors are illiterate followed by middle class (19 percent), primary class (19 percent), high school (10 percent), senior secondary (8 percent), graduation (4 percent) and, post graduate and above (2 percent) educated respectively.

Figure 1: Percentage distribution of IUD acceptors by educational level in rural Madhya Pradesh, India

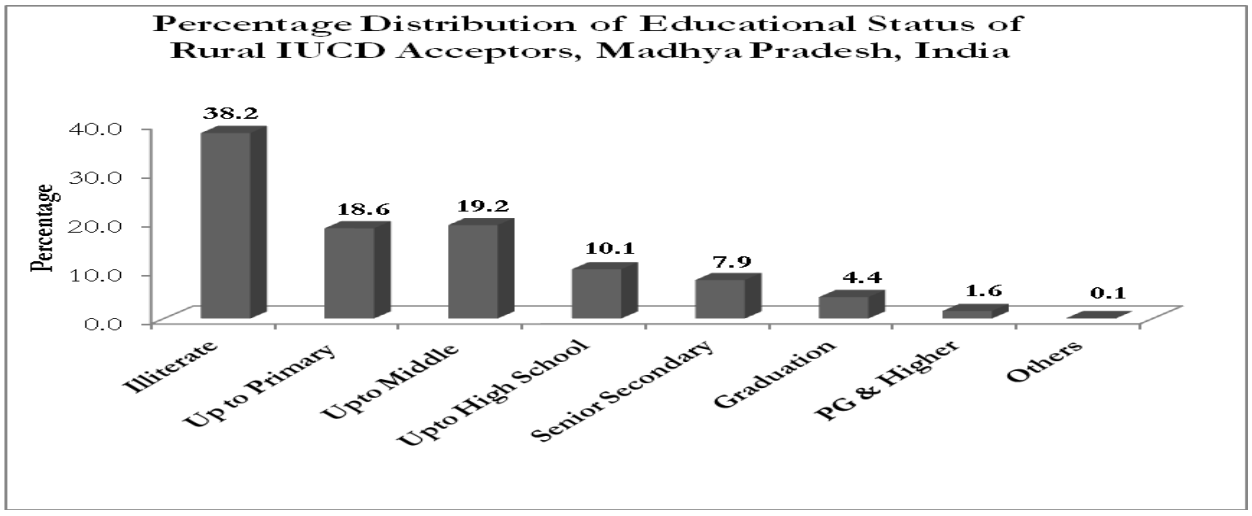


Table 1: Year wise insertion of IUD in rural Madhya Pradesh, India

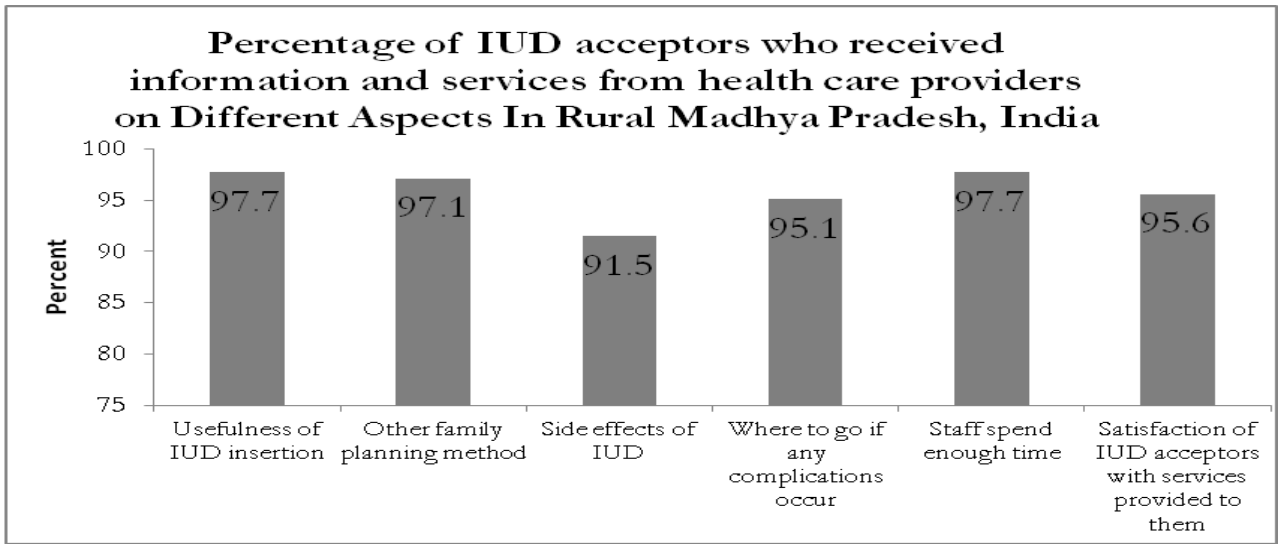
	Years in which IUDs were inserted					
	2006	**2007**	**2008**	**2009**	**2010***	**N**
Total	**8.0**	**21.1**	**24.6**	**33.8**	**12.5**	**1441**

*Note: * indicates up to the survey period*

The information on IUDs has been collected from the acceptors, who have inserted IUDs in the last 4 years from the survey period (i.e. before April, 2010). So quality of services and other information on IUDs have been collected from the acceptors who have inserted the IUD between

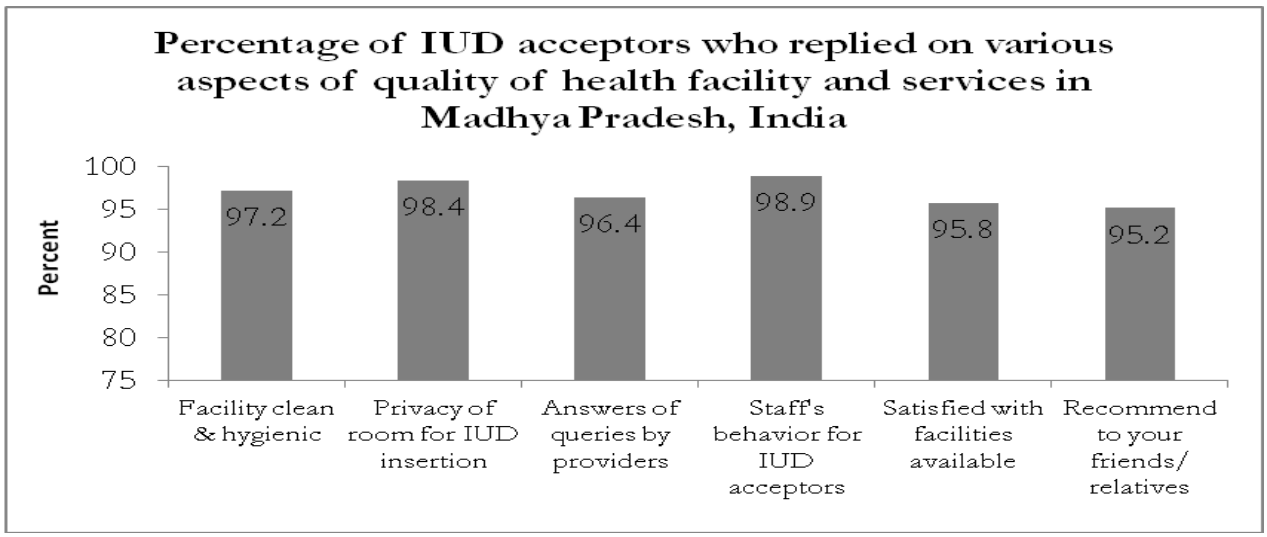
2006 to April 2010. Findings from the Table 1 exhibit that there is an increase in the IUD acceptors numbers over the last four years in the rural Madhya Pradesh in India. Among the total IUD acceptors included in the study, around 8, 21, 25, 34 and 13 percent have inserted IUD correspondingly in the year 2006, 2007, 2008, 2009 and 2010.

Figure 2: Percentage of IUD acceptors who have received the information and services by the health care providers during the IUD insertion at different health facilities in rural Madhya Pradesh, India



Findings from the Figure 2 reveal that most of the acceptors in the rural areas of Madhya Pradesh have expressed their views that they were well informed (more than 92 percent) by the health care providers about the usefulness of IUD insertion, it's side effect, about the other family planning methods and also where/whom to approach if any complications occur in future. Majority of acceptors have agreed that the health care providers/staff of the health facilities have spend enough time (98 percent) with them for pre and post IUD insertion counseling. Ninety six percent of the IUD acceptors are quite satisfied with the services provided to them during the IUD insertion by the health care providers at different government health facilities of Madhya Pradesh.

Figure 3: Percentage of IUD acceptors, replied about the quality of services and health facility in rural Madhya Pradesh, India



Results from the Figure 3 explore that most of the acceptors (97 percent) of rural areas of Madhya Pradesh have replied that the health facility where they went for IUD insertion were clean and hygienic. At the same time around 98 percent of IUD acceptors do agree with the fact that the privacy of the room has been maintained during the IUD insertion at the health facilities. All most all the acceptors (99 percent) from the selected rural Madhya Pradesh are very much pleased with the behavior of staff of the health facilities and with that most of the queries from acceptors were also clarified and well explained by the health care providers (96 percent) of different health facilities during IUD insertion. All most 96 percent of IUD acceptors were satisfied with the facilities available at the health center. Ninety five percent of the acceptors told that they will recommend the facilities and services to their friends and relatives in future, where they have received the services. Over all the IUD acceptors perspective on the quality of services received from the health care provider and facilities available at the health centers are quite satisfactory and good.

Table 2: Percentage of retention of IUD users by background characteristics in rural Madhya Pradesh, India

IUD Retention in rural Madhya Pradesh, India		
Background Characteristics	***Retention (%)***	***N***
Religion		
Hindu	44.30	1387
Others	50.00	54
Caste		
ST/SC	38.30	356
OBC	45.50	712
General	48.60	356
Education		
Illiterate	39.10	550
Literate	47.80	891
Occupation		
Not Working	44.60	790
Working	44.40	651
Age at Insertion		
<=24	44.50	624
25-29	49.40	456
>=30	60.90	163
Parity of Women		
<=1	49.60	381
2	44.60	678
3 and more	39.40	382
Year of Insertion		
2006	22.60	99
2007	33.90	259
2008	44.80	303
2009	63.30	415
2010	86.60	153
Total	**44.50**	**1441**

Table 2 describes the retention percentage of IUD users by different background characteristics in rural Madhya Pradesh of India. Results show that half of the rural non Hindu religion IUD users who have inserted the IUD in the last 4 years are continuing with the IUD compared to 44 percent of Hindu religion users. Nearly half of the IUD acceptors belonged to general castes are still continuing with the IUD insertion in comparison to other backward castes and ST/SC with 46 and 38 percent retention respectively. As expected, retention of IUD insertion is 9 percentages higher than the illiterate acceptors. Further, the retention of IUD insertion is highest (61 percent) among greater than 30 years of age acceptors with reference to 49 and 45 percent of (25-29) years and less than 24 years of age IUD acceptors. Around 50 percent of IUD acceptors having null or one parity are retaining the IUD compared to two and three plus parity with 45 and 39 percent respectively. Acceptors who are currently inserted the IUD are retaining the IUD more compared to those who have inserted earlier years. Sixty three percent of acceptors who have inserted IUD in the year 2009 are retaining their IUD at the survey time compared to 45, 34 and 23 percent for the year 2008, 2007 and 2006 respectively.

The retention of IUD after the insertion among acceptors are largely associated with different factors such as religion, education, age and year of insertion, parity of IUD acceptors, type of health facility and most importantly the satisfaction level of the quality of services and facility received during the insertion in the rural Madhya Pradesh of India.

Table 3: Logistic regression for the factors associated with the IUD retention for those who have inserted IUD in last 4 years in rural Madhya Pradesh, India

IUD Retention		
	S.E.	***Odds Ratio Exp(B)***
Religion		
Hindu ®		
Others	0.39801	2.23**
Caste		
ST/SC		
OBC	0.16247	0.93
Others	0.19139	1.18
Education		
Illiterate ®		
Literate	0.13892	1.31**
Occupation		
Not Working (Housewife) ®		
Working	0.13043	1.21
Age at Insertion of IUD		
<=24 ®		
25-29	0.14369	1.27*
>=30	0.21847	2.50***
Pairity of IUD Acceptors		
<=1 ®		
2	0.16049	0.79*
3 and above	0.19531	0.54***
Year of IUD Insertion		
2006 ®		
2007	0.29859	1.90**
2008	0.29423	3.03***
2009	0.29033	6.06***
2010	0.35837	23.46***
Place of IUD Insertion		
CHC ®		
PHC	0.22848	0.96
Sub Center	0.19183	1.12
Other Public Health Facility	0.24617	0.65*
Satisfied with the Services Provided		
No ®		
Yes	0.40421	2.55**
Satisfied with the Facility Available		
No ®		
Yes	0.40316	1.38
Any Female Health Worker Visited Home during last 4 years		
No ®		
Yes	0.24395	1.20*
Constant	0.52345	0.06

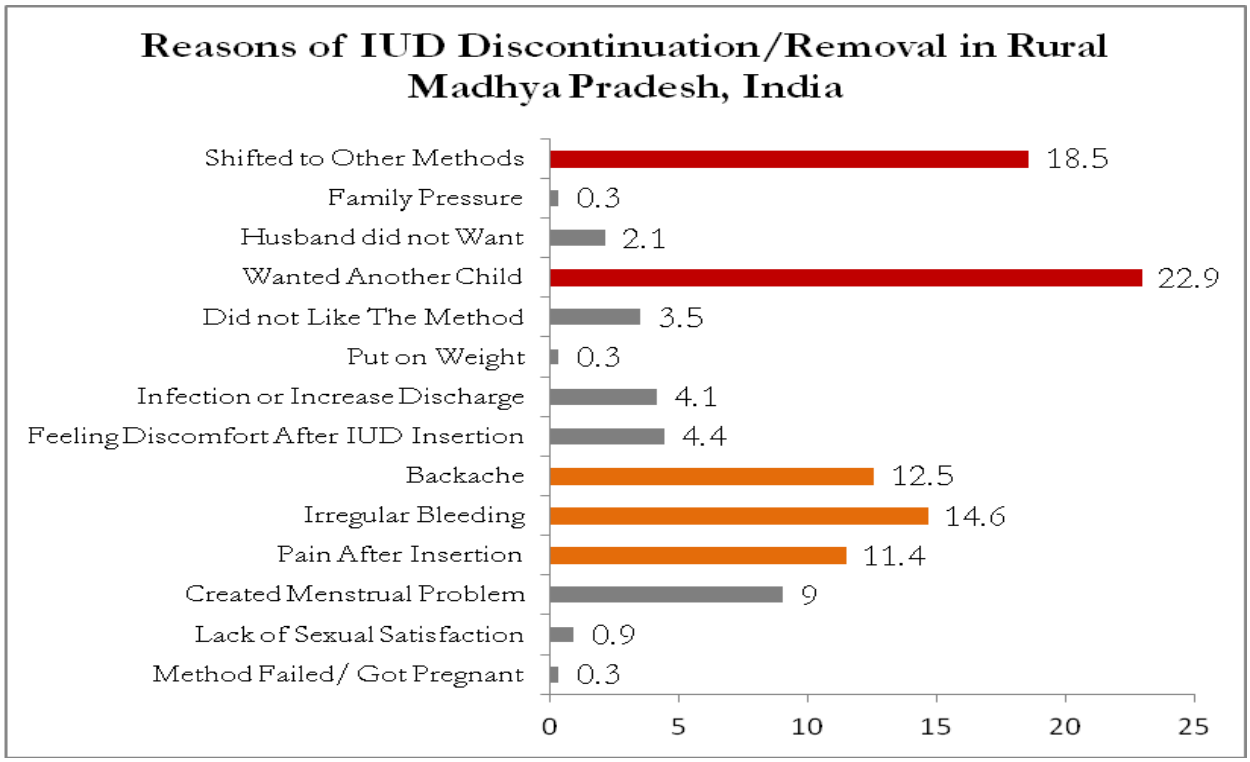
*Note: *; **; *** indicates the significance level at 10%, 5% and 1%*

The results from the logistic regression analysis (Table 3) illustrate that the odds of continuation of IUD use among other religion is 2.2 times significantly higher compared to Hindu religion. The chances of continuation of IUD use among literate acceptors women are 31 percent higher as compared to illiterate counter parts. The probability of retention of IUD is higher among general caste acceptors with reference to schedule caste/schedule tribe women, but it is not statistically significant. Further, it is also found that chances of IUD retention is 2.5 times and 27 percent correspondingly higher among >=30 years and (25-29) years of age acceptors with reference to less than 25 years of age acceptors. Further, the odds of retaining IUD is 23.5 times significantly higher for those who have inserted their IUD recently (year 2010) followed by the year 2009, 2008 and 2007 correspondingly with 6, 3 and 2 times higher with reference to those who have inserted in the year 2006. The place of IUD insertion result is not statistically significant with IUD retention. Results also depict that the odds of IUD continuation decreases with increase in the women's parity. Women's with 3 and more parity and 2 parity have 46 and 21 percent less chances of continuing with IUD after the insertion with reference to women with one and null parity. Acceptors those who are satisfied with the services during the insertion of IUD at the health facilities, the chances of retaining the IUD among them is 2.6 times higher than those who are not satisfied with the services. The effect of satisfaction with facility available during the IUD insertion on IUD continuation is not statistically significant. It was also found that if the female health worker is visiting the acceptors home at regular interval the chances of continuation (20 percent high) of IUD use will enlarge further.

Figure 4 reveal that major reasons of discontinuation/removal of IUD in rural Madhya Pradesh in India are, desire for another child (23 percent), shifted to other methods (19 percent), irregular bleeding (15 percent), backache (13 percent), pain after insertion (11 percent), created menstrual problems (9 percent), feeling discomfort after IUD insertion, infection or increase discharge, did not like the method and other causes (with 4 percent each). When asked about which other methods they have shifted to, among them majority replied that they have shifted to the permanent female sterilization method with few have shifted to condom methods. Other causes

of IUD removal include white discharge, swelling in abdomen/ pain abdomen, menopause and due to expulsion of the IUD device.

Figure 4: Reasons of IUD discontinuation in rural Madhya Pradesh in India



Note: Due to the multiple responses, the total figure may adds up to more than 100 percent

The qualitative findings from the in-depth interviews of health care providers and medical officers in the rural Madhya Pradesh it was also observed that the main reasons of IUD removal were desire for another child, irregular bleeding, infection, to go for permanent sterilization and pain after insertion. Main complications faced by acceptors after the insertion of IUD are backache, irregular bleeding, pain abdomen, white watery discharge, swelling of abdominal, mennorhagia and abnormal menstrual cycle.

Further analysis of qualitative findings reveals that that more than half of the health care providers have never attended any specific training on IUD insertion in the rural Madhya Pradesh in India. It is evident from the study that, officially there was no such provision of pre counseling of the IUD acceptors but everybody agreed that ANMs and supervisors have a bigger

role to play in the counseling process. From the reply of the health care workers it can be summarized that most of the ANMs and supervisors except medical officers have no complete knowledge about the infection prevention practices for IUCD users at different health centers.

Summary and Conclusion

From the findings of the paper it can be drawn out that major bunch of IUD acceptors selected for the study are illiterate and primary educated. Among the total IUD acceptors included in the study more acceptors are from the year 2009, 2008 and 2007. Majority of the IUD acceptors are quite satisfied with the services provided to them during the IUD insertion by the health care providers at different government health facilities of Madhya Pradesh. Over all the IUD acceptors perspective on the quality of services received from the health care provider and facilities available at the health centers are quite satisfactory and good.

The retention of IUD after the insertion among acceptors are largely associated with different factors such as religion, education, age and year of insertion, parity of IUD acceptors, type of health facility and most importantly the satisfaction level of the quality of services and facility received during the insertion in the rural Madhya Pradesh of India. It can also be concluded from the study that the odds of IUD continuation decreases with increase in the women's parity. It was also found that if the female health worker is visiting the acceptors home at regular interval the chances of continuation of IUD use will enlarge further. One of the important finding reveals that in majority of cases the woman who wants to use IUD as a contraceptive method, she herself takes the decision in rural Madhya Pradesh. There is clear indication of female autonomy and independent decision making about the contraception. Personal counseling as well as counseling of acceptor's mother-in-law is also the important way to motivate the users to retain the IUDs.

Again, retention rate of IUD is not good enough in the rural Madhya Pradesh of India and the main reasons cited are the couple's desire for more children, shifted to other methods (mainly sterilization), irregular bleeding, backache, pain after insertion, induced menstrual problems, feeling discomfort after IUD insertion, infection or increase per vaginal discharge etc. Main complications faced by acceptors after the insertion of IUD are backache, irregular bleeding,

pain abdomen, white watery discharge, swelling of abdominal, mennorhagia and abnormal menstrual cycle.

Further, from the study it was found that majority of cases the women generally used IUD after the birth of their second child. However the pattern of IUD insertion among women after the birth of first child has increased over the years (year 2006 to 2010) in rural Madhya Pradesh of India. From the study it was also found that very few women used IUD after the birth of third child because after the birth of third child generally women prefer sterilization method rather than IUD and some cases it was also found that when women want to avoid operation, normally they use IUD.

Further, it can also be concluded from the study that more than half of the health care providers have never attended any specific technical training on IUD insertion in the rural areas of Madhya Pradesh in India. The female health care workers role was very limited due to unavailability of incentives for IUD insertions in rural Madhya Pradesh. Government and policy makers have to think over it for some quick and necessary action. Study reveals that most of the ANMs and supervisors except medical officers have no complete knowledge about the infection prevention practices for IUD users at different health centers. It was found from the study that proper training of health care providers is an urgent need in the state of Madhya Pradesh especially in rural areas. The findings of the study have relevancy for the further strengthening of policies and programs.

Limitations:

- Sample size is too small to generalize the whole state of rural areas of Madhya Pradesh as well as for India.
- Sufficient samples from both the rural and urban areas should have included to make a comparative picture of quality of services for better policy recommendation in India.

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