HOW MUCH CAN IMPROVEMENT IN CONTRACEPTIVE CONTINUATION RATES RAISE PREVALENCE IN PAKISTAN?

Significance/Background

Despite no notable increase in the Contraceptive prevalence, 'ever use' of family planning methods has increased during the past decade, resulting in an increased gap between the proportion of current and ever users (Sathar, 2007). This increasing gap is further explained by a high contraceptive discontinuation rate of 45 percent at 12-months of use and low switching rates at only 12 percent (Naz and Mahmood, 2012).

There have been many studies in Pakistan focusing on the obstacles to contraceptive uptake, but the topic of drop outs had been understudied, mainly due to the non availability of data. The baseline and endline data obtained from the evaluation of FALAH[1] project where contraceptive calendar data was collected in both the rounds, made it possible to analyze the contraceptive continuation rates and dropouts. Comparison of the baseline and the endline surveys shows that the CPR in the project districts has improved by 8.5 percentage points, whereas the contraceptive continuation rates have increased by 11 percentage points at 12-months of use.

Research Questions

- To what can we attribute improved contraceptive continuation rates in FALAH/project districts?
- To what degree have these improved continuation rates contributed to the overall increase in contraceptive prevalence in primarily rural districts?

Data and Methods

The data for this analysis consists of information from married women of reproductive age. These data are drawn from the baseline (collected in 2008-09) and endline surveys (collected in 2011-12) of FALAH project. Both rounds were based on a systematic stratified random sample of urban and rural households in 14 districts across three of four provinces of Pakistan. The sample is not nationally representative but consists of a sample from all the major ethnic groups of the country. These survey yielded information on 10,604 women in the baseline survey and 9,995 women in the endline survey. The main analysis is based on the retrospective histories concerning women's contraceptive use and

[1] The Population Council implemented a five year USAID funded project named FALAH (Family Advancement for Life and Health) to diversify family planning activities in selected districts of Pakistan.

monthly reproductive behaviors that were collected for 48 months preceding the date of interview. Months of starting and stopping specific methods were recorded, together with the main reason for stopping and the occurrence of pregnancies, births and terminations.

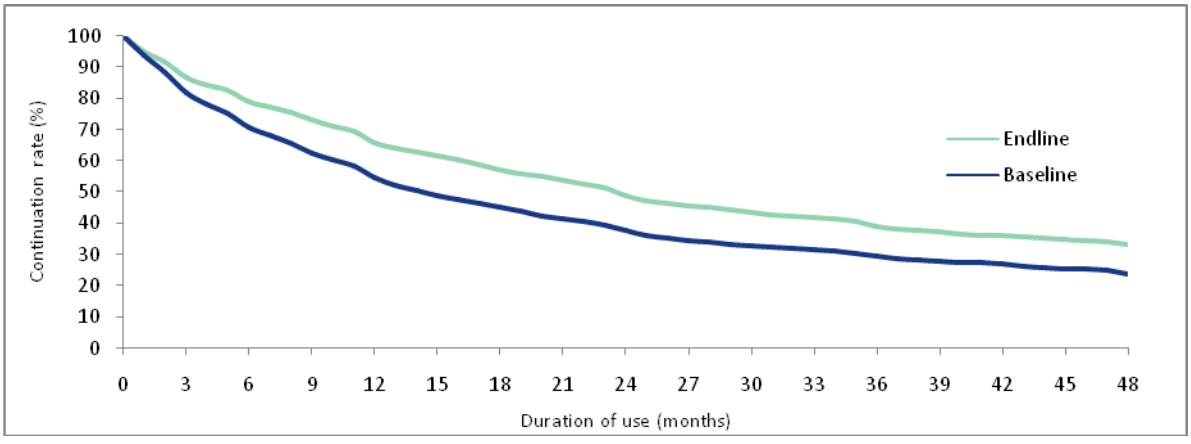
In this paper first we compare the continuation rates of different contraceptive methods between the baseline and the endline survey then we explore the underlying factors determining the increase in these rates. For this purpose, we used Life Table analysis and Cox proportional hazard regression. The dependent variable in the analysis is contraceptive discontinuation whereas the independent variables include: background characteristics of the women, quality of care[2], source of contraceptive methods and intent of contraceptive use.

Next we will examine how improvements in contraceptive continuation rates contribute to the increase in the contraceptive prevalence rate. Using the decomposition techniques, we will apply the baseline continuation rates on the contraceptive episodes from the endline survey to determine the magnitude of this increase.

Preliminary Findings

The comparison shown in Figure 1 depicts that contraceptive continuation rates have increased remarkably. At 6-months of use, the continuation rate increased by more than 8 percentage points, whereas at 12-months it increased by 11 percentage points. Further analysis shows that the median duration of use of contraceptives has increased by 8 months. These results imply that increase in median duration might have a contribution in raising the CPR in FALAH districts.

Figure 1: 48-month life table contraceptive continuation rates for all methods combined



[2] Components of information provided at the time of method adoption.

Reasons of discontinuation

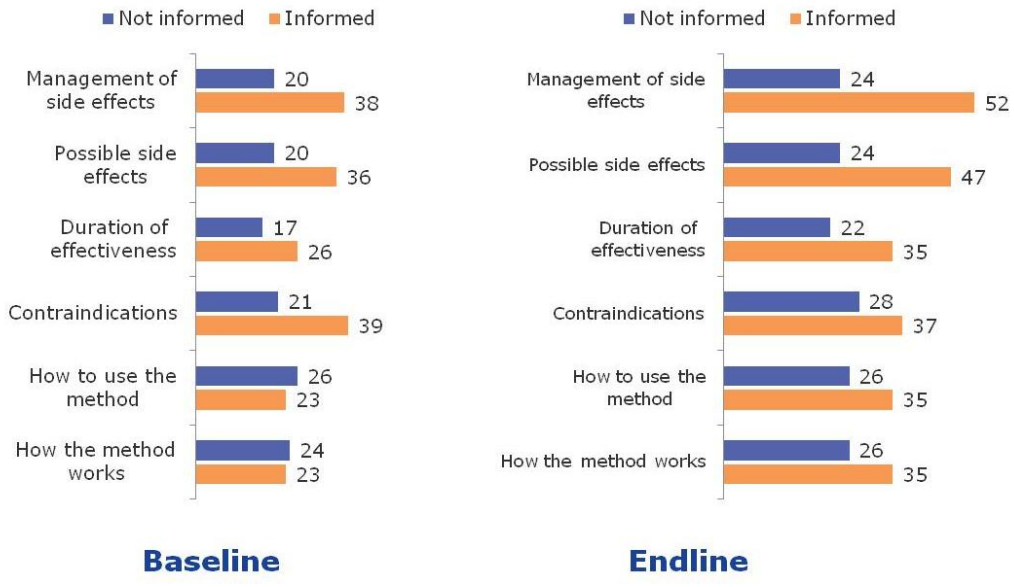
Comparison of the reasons of discontinuations between the two surveys show that there has been a significant drop (from 40 percent to 30 percent) in the discontinuations that were caused by the side effects (which is one of the main reasons of discontinuations reported by the users in both surveys). This suggests that effect of the source of contraceptive methods and the quality of care on the continuation rates needs to be examined.

Quality of care

We also examine if the quality of care provided at the time of method adoption has any effect on the duration of subsequent contraceptive use. For this purpose we compare the difference in continuation rates by each component of the information provided to the women at the time of method adoption.

Figure 2 (for endline) shows that the median duration of use of these modern contraceptive methods vary by the type of counseling provided at the time of method adoption. The highest median duration of use was observed among the users who were told about the possible side effects of the methods and about their management at the time of adoption of the method.

Figure 2: Median duration of use (months) by information provided at the time of method adoption



Comparison of the baseline and the endline show that although there was not a significant increase in the proportion of users who were provided comprehensible information at the time of method

acceptance (data not shown), the quality of this information has improved significantly. This is evident from the effect of this information on the median duration of use of contraceptive methods (Figure 2). The difference in median duration of use among those who were given information on the "management of side effects" has increased from 18 months in the baseline to 28 months in the endline. Similar improvements for the "possible side effects" were observed from 16 months in the baseline to 24 months in the endline.

Multivariate Analysis

From the multivariate analysis motivation to use contraception appears as the strongest predictor of sustained contraceptive use. Contraceptive continuation was significantly lower if the information about the management of side effects was provided at the time of method adoption for all methods except injactables. Among IUD and injectable users the discontinuation was significantly lower for the public sector outlets. However, for pill and condom, discontinuation was lowest if they were obtained from the LHW, but this was not significant.

Table 1: Hazard ratio estimates of contraceptive discontinuation

Variable		**Hazard ratio#**				
		Model-1 Overall	**Model-2** Including IUD	**Model-3** only Injectable	**Model-4** only Pill	**Model-5** only Condom
Intent	Using for limiting	1.00	1.00	1.00	1.00	1.00
	Using for spacing	2.73***	3.56***	3.06***	2.15***	1.96***
Components of information provided at method adoption	How the method works	1.16	0.92	0.96	1.31	1.37
	How to use method	1.03	1.12	0.83	1.21	1.01
	Contraindications	0.91	0.86	1.06	0.78	0.93
	Duration of effectiveness	0.97	0.77*	0.86	1.00	0.76
	Possible side effects	0.93	0.95	1.12	1.10	0.84
	Management of side effects	0.76**	0.75*	0.86	0.60**	0.84**
Source	Public sector outlets	1.00	1.00	1.00	1.00	1.00
	LHW	1.16	--	1.24	0.68	0.83
	Private clinic	1.27**	1.25*	1.34*	1.50	3.19
	Other private	1.77***	--	1.41*	1.14	2.29

***p<0.001;**p<0.01;*p<0.05, # Controlling for the background characteristics.
Model 2 Excluding LHW and Other Private (both do not provide IUD).

References:

National Institute of Population Studies (NIPS) [Pakistan] and Macro International Inc. 2008. Pakistan Demographic and Health Survey 2006–07. Islamabad. *NIPS and Macro International Inc*.

Sathar, Z. A. 2007. Stagnation in fertility levels in Pakistan. *Asia-Pacific Population Journal 22(2).*

Naz S.S., Mahmood A. 2012. Contraceptive use dynamics in Pakistan. *Population Council, Islamabad*.