Background

The contraceptive practising has been the significant inhibitor of the fertility growth in any Nation. Nearly 80 to 85 percent of the fertility decline in any nation at national and sub-national level can be attributed to contraceptive prevalence only. Even among the framework of proximate determinants of fertility contraceptive use has a proportionately more significant contribution in declining level of fertility than other variables. As the choices of contraceptive use is broadly classified into the willingness to the adoption of any method, availability of the method and accessibility of the same in many circumstances. When a woman for the first time adopts a method and becomes the first-time user, her approach towards the number episode to be continued depends on the level of satisfaction she experiences. The entire mechanism of the method adopted, sustained and corresponding failure or switching contributes significantly to the contraceptive prevalence in any country. The problem any nation faces once the contraceptive use is well established is related to the quality of the deliverance of the services. The recently released National Family Health Survey indicates that nearly two-fifths of the women who were practising contraceptive methods have reported discontinuing the services within a year of duration (IIPS and MoHFW, 2017). The discontinuation due to method failure or shifting of the contraception bears sufficient resistance to the usage of reversal methods and traditional method for a more extended time but ending up with the terminal methods. The motive of this study is to categorically understand the differential of contraceptive use dynamics in urban Uttar Pradesh, corresponding discontinuation and switching pattern in the light of several demographic and socioeconomic determinants.

Data & Method

The data for this study was collected by Measurement Learning and Evaluation (MLE) project for the evaluation of Urban Health Initiative, implemented by FHI360 with the funding of Bill & Melinda Gates Foundation. For the present work endline women's data of this project is used. Out of 17,643 eligible women surveyed in the baseline, 14,043 were successfully interviewed in the endline project. The calendar part of the women's endline questionnaire is used for the analysis. This Calendar retrospectively store the detailed, i.e. month by month description of contraceptive and reproductive histories of all women for five-year period from January 2009 to the time of the endline survey conducted (July 2014). for the analysis, the calendar period is restricted to 3-66 months, and we get 7,496 episodes of all reversible methods which included in the final study. The segments of contraceptive use for which discontinuation had not occurred at the end of the calendar, i.e. three months prior to the survey date are also included in the analysis, and it is called right-censored observations.

The duration from the start of a method to a discontinuation occurred is the outcome of interest and as mentioned in the data section that these observations contain right censored episodes of use; an appropriate methodology is "Life Table" analysis. This technique is used to construct a duration specific table which gives probability of transition from start of using a family planning

method to discontinue it. For calculating the overall discontinuation rate "Single Decrement Life Table" (SDLT) is used. Now further the analysis of disruption rate by reason of disruption is basically an extension of the overall discontinuation rates, these overall discontinuation is now broken for each reasons for computing the reason specific discontinuation rates. "Multiple Decrement Life Table" (MLTD) which is an extension of single decrement life table is used in this situation. Similarly from the previous one it also gives the transition probabilities from start of use to the end of use due to a specific cause.

Results

The result indicates that the discontinuation rates vary by methods. Male condom constitutes maximum episodes of use with highest discontinuation rate followed by withdrawal. IUD requires some user interventions which increase the continuation of this method as compared to other methods. Women's social and demographic covariates also affect these method specific disruption rates. Approximately forty three percent of episodes got from migratory women; intra state migration is more frequently occurred than interstate migration and they have higher discontinuation rates of all reversible method as compared to permanent residents. Cities from where the respondents most frequently came to all six surveyed cities are less developed, the discontinuation pattern of these users reflect that lived in the same survival conditions they are more prone to drop the method. Source of family planning methods plays a significant role on the discontinuation rates. Contraceptors getting methods from a government affiliated sources had highest discontinuation rates of all reversible methods, while private and commercial sectors offered lower rates. It is worthwhile to mention that substantial proportion of users stop using a method to fulfilling their fertility desire which place them in the no need of category. Incidences of accidental pregnancies also higher among these methods users add up the percentages in no need category. Most of the hormonal method users' abandon the method use after discontinuation; this group of users is exposed to the risk of pregnancy. These results are very useful for making policies, such as for reducing the unwanted pregnancies makers need to promote the more effective methods like pill and IUD in the population. But policies aimed to reducing pill discontinuation need to focus on reducing the discontinuation due to health related reasons. For tackling the discontinuation issues we need a new approach for each method.

Table -One, two, and three-year contraceptive discontinuation rates for all methods and specific methods, Uttar Pradesh, 2009–14

Methods	12 Months	24 Months	36 Months	Episodes
All Reversible Method	27.9	45.5	58.9	7496
Modern Reversible Method	29.5	47.1	60.6	5134
Traditional Method	24.5	42.3	55.2	2362
Pill	27.3	48.9	61.9	662
IUD/PPIUD	19.1	31.7	50.3	638
Condom	30.3	47.9	60.9	3542
Rhythm	22.8	42.1	54.3	1825
Withdrawal	28.1	44.8	57.1	495

Table -12-month discontinuation rate by reason of discontinuation for Condom, Uttar Pradesh 2009-14

	Reason				
Characteristics	Failure	To get Pregnant	Health Issues	Method related Reasons	Other Reasons
Residence					
Non-Slum	2.3	8.2	1.3	4.8	13.4
Slum	2.8	10.8	1.1	5.1	11.0
Region of Residence					
Agra	1.6	11.3	1.8	4.2	6.1
Aligarh	3.4	8.7	1.3	4.5	17.2
Allahabad	0.8	6.6	0.8	3.3	13.5
Gorakhpur	3.5	9.7	0.9	8.3	11.0
Moradabad	4.3	16.2	2.6	2.2	2.1
Varanasi	1.4	10.1	0.0	5.5	11.9
Wealth Index					
Poorest	3.0	12.7	2.6	8.2	6.8
Poorer	3.8	10.4	0.4	4.8	12.9
Middle	3.5	8.5	1.1	4.6	17.8
Richer	1.6	9.2	1.2	3.8	9.8
Richest	1.6	8.5	1.1	4.7	11.9
Caste					
SC/ST	2.8	14.3	1.8	7.1	7.2
OBC	2.8	9.1	0.8	4.9	12.4
General	2.1	8.0	1.4	3.9	14.2
Education					
No education	3.3	11.0	2.5	4.1	11.2
Primary	3.3	12.0	1.2	6.2	18.8
Secondary	2.6	9.8	0.8	4.8	11.4
Higher than secondary	1.8	7.2	0.8	5.2	11.7
Source of Supply					
Public Medical Sector	7.7	7.9	2.1	10.1	2.9
Private Medical Sector	1.9	8.7	0.9	4.9	12.5
Husband/Relatives/Friends	2.7	10.3	1.3	4.5	12.7
Age at the end of the episode					
<25	6.8	27.3	1.0	9.1	7.8
25-34	2.1	8.7	0.8	4.8	11.3
35-55	0.9	0.6	1.9	2.7	15.9
Migration					
Same city/different house	2.5	9.5	1.4	5.1	9.6
Intra state (City)	3.2	7.5	1.0	3.8	18.5
Intra state (Village)	2.4	11.6	1.1	7.0	9.7
Inter State(City/ Village)	2.0	14.3	0.0	2.5	23.4
Religion					
Non Muslim	2.1	9.5	1.2	5.6	11.4
Muslim	3.5	9.5	1.2	3.6	13.6

No of living Children					
0-1	3.7	24.1	0.8	3.1	5.9
2-3	2.1	1.8	1.0	6.1	14.3
4&4+	1.5	0.8	2.5	5.3	19.8
Desire Level					
Greater than desire	2.0	0.9	2.5	5.5	18.0
Equal to desire	1.9	1.5	0.9	6.3	14.5
Lower than desire	3.6	23.8	0.7	3.0	5.9