



Levels and Trends of Wanted and Unwanted Fertility in Uttar Pradesh

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ABSTRACT

The present paper examines levels and trends of fertility decline in Uttar Pradesh, which has occurred over time. The two major factors viz. wanted fertility and unwanted fertility have been the theme of several discussions over decades, among other aspects of population policy. Wanted births are those which are planned by couples and accepted socially, whereas unwanted births are those which do not adhere to certain social norms and may be categorized as illegitimate births, births after achieving a desired family size, births after marriage of own children etc. The study of unwanted pregnancy has been essential to demographers and public health practitioners to understand the levels of fertility and prevent unwanted childbearing. However, still a large number of the Indian women are forced to give unwanted births and this can be observed from the reports of NFHS-1, 2 & 3. Rural women in Uttar Pradesh are still having more children than their urban counterparts and the unwanted fertility rate is also higher. The fertility differentials exist by residence, education, religion, and caste/tribe in Uttar Pradesh. Research on wanted and unwanted components of fertility can lead to frame important policies which in turn may bring considerable decline in fertility and enhance the well-being of mothers and children. This paper measures the unwanted fertility by comparing total wanted fertility rate with the total fertility rate in Uttar Pradesh, which will ultimately help policymakers in designing proper action plan so that replacement level fertility can be achieved.

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1. Introduction

Fertility transition can be attributed to the decline in wanted and/or unwanted births. The comparative involvement of these two sources of fertility decline has been one of the highly debatable subjects from decades, among others, because of its direct consequence on the population policy. In particular, if the decline in unwanted fertility is relatively large, then it becomes helpful in implementing the family planning services more effectively which may lead to reduction in total fertility. Unwanted births often occur due to lack of ability or intention of having a desired family size and timely usage of contraception of any form. Births or pregnancies may be unwanted because they pose a serious threat to health of mothers or children. Moreover, they do not match with certain social norms i.e. illegitimate births, births after marriage of own children, births after achieving a desired family size etc. Unwanted births falling in the last category are often of considerable extent and cause serious concerns in developing countries with high levels of fertility and population growth (Westoff, 1981; Blanc, 1982; Lightbourne, 1985; United Nations, 1987; Bongaarts, 1990 & 1997).

Bongaarts (1997) examined the levels of unwanted fertility using data from various countries from World Fertility Survey (WFS) and Demographic Health Survey (DHS). He found that the proportion of unwanted births was low in countries with very low or very high levels of fertility and highest in countries with intermediate levels of fertility. He further found that the trend in unwanted fertility had an inverted U-shape, means low in pre-transition stage, high in transition stage and again low in post-transition stage. The

same reports reveal that the states which have achieved replacement level fertility and considered as developed (like Kerala, Andhra Pradesh, Tamil Nadu etc.), the unwanted fertility is only around 20 percent of the total marital fertility.

The study of unintended pregnancy has been vital for demographers in understanding the levels of fertility, to public health practitioners in preventing unwanted childbearing and to both group in promoting a women's ability to determine whether and when to have children. However, still a large number of the Indian women are forced to give unwanted births; consequently unwanted fertility rate is very high in India as per the reports of NFHS-1, NFHS-2 & NFHS-3. Studies also suggest that the type of residence, age, number of living children, marital status and socioeconomic factors including highest educational attainment and employment status are some crucial factors affecting unwanted pregnancy/birth (Westoff, 1981; Kulkarni et al., 1998; Dixit et al., 2012; Dutta et al., 2015). Hence, proper impetus needs to be given in this area which is creating a big difference in the overall development of states where unintended pregnancies/births are higher as compared to the developed states.

Out of the five most populous states, Uttar Pradesh stands second in terms of high total fertility rate, Bihar being the first. The rural women are still having more children than their urban counterparts and the unwanted fertility rate is also high. The fertility differentials exist by residence, education, religion, and caste/tribe in Uttar Pradesh. Research on wanted and unwanted components of fertility can lead to frame important policies which in turn may bring considerable

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decline in fertility and enhance the well-being of mothers and children. This paper measures the proportion of unwanted fertility within total fertility rate in Uttar Pradesh, as a good control on it is desirable in order to endorse infrastructural facilities, industries, per capita income and overall well being of the residents.

2. Need of the Study

Research on unwanted fertility is also needed to improve our understanding on the process of fertility transition. Unwanted fertility is likely to be near zero in the two extreme stages of transition, initially when fertility desires are almost unrestricted, and at the end of transition when couples have complete control on their fertility. In intermediate situations, couples may have preferences for specific family sizes but unable to regulate their fertility completely. A rural woman in Uttar Pradesh is still having about 1.18 more children than her urban counterpart; similarly, the unwanted fertility rate is also higher in rural area as compared to urban area and differs by 0.54 children (Source: NFHS-3). Since, the fertility differentials exist by residence, education, religion, and caste/tribe, working status, partner's education and standard of living index, there is a scope of reducing unwanted fertility in Uttar Pradesh to bring further decline in fertility. Apart from making robust policies to control fertility, the study will also help to identify the factors affecting unwanted fertility which are deferring the time period to achieve replacement level fertility in Uttar Pradesh.

3. Objectives of the Study

In view of the above, the present chapter is undertaken to study the wanted fertility, unwanted fertility and fertility

decline in Uttar Pradesh. However, the specific objectives of the study are as follows:

(a) To study levels and trends of wanted fertility, unwanted fertility and total fertility by background characteristics of women in Uttar Pradesh.

(b) To understand the factors associated with wanted and unwanted fertility.

(c) To examine changes in wanted fertility, unwanted fertility and fertility decline by background characteristics in Uttar Pradesh.

4. Data and Methodology

Females of Uttar Pradesh who have given births three years prior to the three National Family Health Surveys have only been considered for the study. The details were available for 11,438 females, 9992 females and 12193 females in NFHS-1, NFHS-2 and NFHS-3 respectively. The total fertility rate (TFR), total wanted fertility rate (TWFR) and total unwanted fertility rate (TUFR) have been calculated from 6041 females from NFHS-1 (1992-93), 3765 females from NFHS-2 (1998-99) and 3532 females from NFHS-3 (2005-06) who have given births in last three years prior to the surveys. The total unwanted fertility rate is calculated by subtracting total wanted fertility rate from total fertility rate. The logistic regression analysis has been done to see the effect of different socio-economic variables/factors on unwanted fertility. In regression analysis, dependent variable and independent variables taken into the study should be highly correlated. This study provides with the influence of background characteristics on unwanted fertility.

4.1. The Logistic Model

General form of a logistic model is:

Table1. Distribution of females of Uttar Pradesh for different background characteristics in NFHS-1, NFHS-2 and NFHS-3 (N= 3532, 3765 & 6041 respectively).

Background Characteristics	NFHS-3 (Percentage)	NFHS-2 (Percentage)	NFHS-1 (Percentage)	% change during 1992-93 to 2005-06
(1) Age-group				
15-19	21.35	35.26	43.39	-50.80
20-29	27.81	27.52	44.67	-37.74
30-39	25.81	27.85	46.34	-44.30
40-49	20.26	23.38	56.36	-64.06
(2) Place of Residence				
Urban	29.21	32.81	37.98	-23.09
Rural	24.62	33.13	42.25	-41.73
(3) Women's Education				
Illiterate	22.00	26.69	51.31	-57.12
Upto Primary	26.38	33.47	40.15	-34.30
Upto Secondary	29.26	34.88	35.86	-18.41
Higher	27.86	31.97	40.17	-30.64
(4) Religion				
Hindus	24.78	28.73	46.49	-46.70
Muslims	34.08	26.39	39.53	-13.80
Others	20.28	22.38	57.34	-64.63
(5) Caste/Tribe				
SC	31.11	28.35	40.54	-23.26
ST	16.67	39.47	43.86	-62.00
General/OBC	25.46	27.95	46.59	-45.35
(6) Working Status				
Not Working	25.68	27.86	46.46	-44.73
Working	30.07	29.86	40.07	-24.97
(7) Partner's Education				
Illiterate	25.09	24.50	50.41	-50.23
Upto Primary	19.75	28.29	51.96	-61.98
Upto Secondary	30.71	26.27	43.02	-28.61
Higher	25.18	43.58	31.24	-19.40
(8) Standard of Living Index*				
Low	48.53	51.47	-	-5.71
Medium	50.80	49.20	-	3.27
High	46.05	53.95	-	-14.65

**SLI was not available for NFHS-1, hence the change calculated from 1998-99 to 2005-06.

$$\ln \{p/(1-p)\} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_m X_m$$

where,

- 1) $0 < p < 1$, coming from dependent variable Y.
- 2) X_i 's ($i = 1, 2, 3, 4, \dots, m$) are indicator variables, coming from independent variables and β_i 's are the regression coefficients.
- 3) Regression coefficient $\beta = [\beta_0, \beta_1, \beta_2, \beta_3, \dots]^T$

We considered the last birth to the respondents under study for defining our dependent variable. Every respondent in the study was assigned dichotomous values 1 or 0 depending on whether her last birth was unwanted or wanted respectively. The independent variables are residence, religion, caste/tribe, women's education, working status, partner's education and standard of living index.

5. Results and Discussion

Shows the distribution of females of Uttar Pradesh, who have given births in last three years prior to the surveys, under different demographic and socio-economic factors. The table reveals that representation of females of age-group 15-19 years has decreased over time and has come down from 43.39% to 21.35%, reducing by approx. 51% from 1992-93 to 2005-06. Similarly, the representation of other age-groups (20-29, 30-39 & 40-49 years) has also decreased by almost 38%, 44% and 64% respectively in the same duration. It is evident from the table that participation of urban females has reduced by more than 23%, whereas that of rural females has reduced by almost 42%. So far as the educational background is concerned, the proportion of uneducated women has changed from 51.31% to 22% from NFHS-1 to NFHS-3, reducing by almost 57%. The participation of primary, secondary and highly educated females has reduced by almost 34%, 18% and 31% respectively. Religion-wise, the participations of Hindus, Muslims and others have reduced by approx. 47%, 14% and 65% respectively. Similarly the representations of all the

castes viz. SC, ST and General/OBC, all have declined by almost 23%, 62% and 45% respectively. The proportion of non-working females has come down from 46.46% to 25.68%, whereas the same for working females has declined from 40.07% in 1992-93 to 30.07% in 2005-06 respectively. In case of partner's education, females of UP had maximum uneducated partners in 1992-93, i.e., 50.41% which has come down to a level of 25.09% in 2005-06 (reducing by almost 50%). Similarly the participation of females with primary educated husbands has reduced almost by 62%, those with secondary educated husbands has reduced by approx. 29% and with highly educated partners has reduced by more than 19%. The table depicts that the proportion females with low standard of living has declined from 51.47% in 1998-99 to 48.53% in 2005-06 and that of medium and high standard of living has increased from 49.20% to 50.80% and decreased from 53.95% to 46.05% respectively in the same duration.

Table-2 shows the level and trend of total wanted fertility rate by background characteristics of females aged between 15-49 years, three years prior to the survey in the state of Uttar Pradesh. Wanted fertility indicates whether the child birth was planned and the level of fertility that theoretically would result if all unwanted births were prevented. This also indicates the successful control on child births and effective usage of contraception. The table shows that total wanted fertility rate has declined from 3.69 in 1992-93 to 2.38 in 2005-06, bringing in a reduction of almost 35% which is a good indication in order to achieve the replacement level fertility. When the figures are analysed for urban and rural areas separately, urban couple show more control on wanted fertility (reducing by 41%) as compared to their rural counterparts (reducing by 35%).

As far as educational background is concerned, the females who are educated upto secondary level, have

Table 2. Levels and trends of Total Wanted Fertility Rate of females of Uttar Pradesh, aged 15-49 years, three years preceding to NFHS-1, NFHS-2 and NFHS-3.

Background Characteristics	NFHS-3 (2005-06)	NFHS-2 (1998-99)	NFHS-1 (1992-93)	% change during 1992-93 to 2005-06
Residence				
Urban	1.85	2.44	3.17	-41.66
Rural	2.49	2.76	3.86	-35.62
Women's Education				
Illiterate	2.79	2.85	3.95	-29.33
Incomplete/complete primary	2.35	2.42	3.13	-24.79
Incomplete/complete secondary	1.88	2.13	2.80	-32.76
Higher	1.67	2.50	2.29	-27.10
Religion				
Hindu	2.29	2.56	3.59	-36.32
Muslim	2.50	3.41	4.26	-41.28
Others	1.50	1.61	2.99	-49.80
Caste/Tribes				
SC	2.56	2.72	3.97	-35.33
ST	2.80	3.20	4.41	-36.37
Gen/OBC	2.25	2.69	3.63	-38.14
Working Status				
Not working	2.45	2.67	3.70	-33.83
Working status	1.99	2.80	3.62	-45.03
Partner's Education				
Illiterate	3.39	3.08	4.17	-18.71
Incomplete/complete primary	2.93	2.87	4.07	-28.01
Incomplete/complete secondary	2.43	2.53	3.29	-26.14
Higher	2.27	2.37	2.89	-21.45
Standard of Living Index				
Low	2.64	2.95	-	-10.28*
Medium	2.38	2.69	-	-11.66*
High	1.91	2.32	-	-17.69*
TOTAL	2.38	2.69	3.69	-35.50

* SLI was not available for NFHS-I, hence the change calculated from 1998-99 to 2005-06.

contributed more in fertility decline (reduced fertility by 33%), as compared to others. Religion-wise results show that wanted fertility rate among Hindus has reduced from 3.59 in 1992-93 to 2.29 in 2005-06, from 4.26 in 1992-93 to 2.50 in 2005-06 among Muslims and from 2.99 in 1992-93 to 1.50 in 2005-06 among others (including Sikhs, Christians, Jains, Parsis etc.). It is evident that fertility decline is taking place rapidly amongst other religions as compared to Hindus and Muslims. The wanted fertility rate has reduced by 35%, 36% and 38% among the SC, ST and General/OBC category females respectively, clearly indicating an increased awareness of desired family size and contraceptive usage of the General/OBC females. It is well known that working status gives freedom to women for thinking about their well being and independence, which is evident from the study also. The working females have been able to reduce wanted fertility by about 45% whereas the non-working females have managed to reduce the same only by almost 34%. If the partner is educated, a woman is more capable of controlling births, but the results show maximum reduction in wanted fertility when the partner is educated till primary level. The TWFR of females with illiterate, primary and secondary and highly educated partners have reduced by approx. 19%, 28%, 26% and 21.50% respectively from NFHS-1 to NFHS-3. The results also reveal that standard of living has a high impact on wanted fertility rate. Females with high standard of living index (SLI) have contributed more in controlling births (reducing by 18% from 1998-99 to 2005-06) as compared to low and middle SLI groups which have reduced wanted fertility by 10% and 12% respectively.

Table-3 shows the level and trend of total unwanted fertility rate by background characteristics of females aged between 15-49 years, three years prior to the survey in the state of Uttar Pradesh. A birth is considered unwanted if the

number of living children at the time of conception was greater than or equal to the ideal number of children reported by the respondent at the time of survey. The total unwanted fertility in Uttar Pradesh has increased from 0.97 children in 1992-93 to 1.44 children in 2005.06 i.e. by approx. 48.50%. This augmentation is the result of growth of unintended births in each segment of females. There has been an increase in unwanted fertility rate among the rural and urban women by about 59% and 48% respectively between 1992-93 and 2005-06 which is quite alarming. This clearly indicates that either couples are not seriously deciding their ideal family size or there is lack of knowledge and motivation in contraceptive usage, which in turn is a threat to the socio-economic development of Uttar Pradesh. The unwanted fertility has phenomenally grown by 75% among the illiterate females from 1992-93, whereas it has grown by 13% among the highly educated females, which also is surprising. On one hand, Hindus and Muslims have added to unintended birth counts (increased by 50% and 76% respectively) and on the other hand, females belonging to other religions have reduced the unwanted fertility by almost 37% between 1992-93 and 2005-06. Taking an account of caste/tribes, the ST category females have added the most into unwanted fertility, to an extent of about 236%, whereas SC and General/OBC category females have added by 63% and 46% respectively. The working status has also not made much difference as working and non-working females have increased the unwanted fertility by 53% and 60% respectively. As far as partner's education is concerned, husbands' with higher education have contributed in 5% increment whereas those who are illiterate have contributed in 110% increment between 1992-93 and 2005-06. Females with high SLI have contributed in increasing 8% of the unwanted births whereas females with low and middle SLI have increased unwanted births by 54% and 58% respectively.

Table3. Levels and trends of Total Unwanted Fertility Rate of females of Uttar Pradesh, aged 15-49 years, three years preceding to NFHS-1, NFHS-2 and NFHS-3.

Background Characteristics	NFHS-3 (2005-06)	NFHS-2 (1998-99)	NFHS-1 (1992-93)	% change during 1992-93 to 2005-06
Residence				
Urban	1.10	0.90	0.75	47.69
Rural	1.64	1.19	1.03	58.63
Education				
Illiterate	1.82	1.23	1.04	75.18
Incomplete/complete primary	1.21	1.13	0.92	31.67
Incomplete/complete secondary	1.02	0.85	0.66	54.40
Higher	0.35	0.56	0.31	13.70
Religion				
Hindu	1.44	1.08	0.96	50.09
Muslim	1.83	1.37	1.04	76.08
Others	0.33	0.72	0.53	-37.64
Caste/Tribes				
SC	1.89	1.33	1.16	63.55
ST	2.54	1.23	0.76	235.89
Gen/OBC	1.37	1.05	0.94	46.23
Working status				
Not working	1.57	1.15	0.98	60.26
Working status	1.41	1.08	0.92	53.26
Partner's Education				
Illiterate	2.04	1.27	1.01	101.65
Incomplete/complete primary	1.86	1.42	1.17	58.89
Incomplete/complete secondary	1.33	1.05	0.85	55.94
Higher	0.79	0.81	0.75	4.93
Standard of Living Index				
Low	2.30	1.49	-	53.97*
Medium	1.63	1.03	-	58.42*
High	0.88	0.81	-	8.54*
TOTAL	1.44	1.14	0.97	48.45

* SLI was not available for NFHS-1, hence the change calculated from 1998-99 to 2005-06.

Table-4 illustrates the levels and trends of total fertility rate (TFR) by various background characteristics of females aged 15-49 yrs. in Uttar Pradesh. The TFR in Uttar Pradesh declined from 4.66 in 1992-93 to 3.82 in 2005-06, approx. by almost 18%. In 1992-93, the TFR in urban area (3.91) was lower than the TFR in rural area (4.90) by 0.99 children which further reduced to 2.95 as compared to 4.13 in the rural area. Thus, TFRs of urban and rural areas have declined by 25% and 16% respectively in a span of one and half decades. The education-wise TFR was highest in case of illiterate females (4.99) in 1992-93 followed by primary educated (4.05), secondary educated (3.46) and highly educated females (2.59). In 2005-06, the figures were 4.61, 3.56, 2.90 and by 2.02 respectively for the illiterate, primary, secondary and highly educated females, thus reducing the TFRs by 7%, 12%, 16% and 22% respectively. The religion-wise TFR reveals that it was highest for Muslim females (5.30) in 1992-93 as compared to Hindus (4.55) and others (3.52). The same trend followed in 2005-06 with TFRs of Muslims at 4.33, Hindus at 3.73 and others at 1.83. The TFR of other religions declined drastically by 48% as compared to Hindus and Muslims (both by 18%). As far as the caste/tribe is concerned, in 1992-93 the highest TFR (5.16) was found among ST category women as compared to SC (5.12) and General/OBC (4.57) category women. On one hand, the TFR of General/OBC and SC category women reduced by 21% and 13% respectively, while the same increased for ST women by more than 3% in year 2005-06. This clearly indicates a lesser contraception prevalence rate among the ST couples. The decline in TFR of working females was more (4.54 in 1992-93 to 3.39 in 2005-06) as compared to non-working females (4.68 in 1992-93 to 4.02 in 2005-06), which elucidates that financial independence leads to fertility decline. Partner's education also plays a major role in controlling fertility and this is evident from the

table. Here, the TFR of females having highly educated partners was 3.64 in 1992-93 which reduced to 3.06 in 2005-06, declining by almost 16%. Similarly, in case of both primary and secondary educated partners, the TFR reduced by approx. 9% from 1992-93 to 2005-06. But, the TFR in case of uneducated partners has changed from 5.18 to 5.43 from 1992-93 to 2005-06, increasing by almost 5%. It is said that higher the standard of living, lesser the number of children which is manifested from the table. Women with higher SLI have lesser TFR (3.13 in 1998-99 and 2.79 in 2005-06) whereas those having middle and low SLI have higher TFRs. In fact women with low and middle SLIs have shown increased TFR (by 11% and 8% respectively) in 2005-06 as compared to 1998-99.

Table-5 demonstrates Logistic Regression Analysis carried out to recognize the influence of background characteristics on unwanted fertility for the year 2005-06. Results show that those women who reside in rural areas were 9 percent less likely to have reported their last birth as unwanted in comparison of the urban women. If we observe the effect of education after controlling the other socio-economic factors on unwanted child, it is found that as the education of the women increases from illiterate to the higher education, the odds of having an unwanted child declined significantly. The odds ratio decreased by 19 percent, 15 percent and 55 percent respectively with primary, secondary and higher education. Going through the variations offered by religious association, the Muslim females are 17 percent more likely to have unwanted childbirth as compared to Hindus ($p < 0.05$) whereas, the chances of having an unwanted childbirth decreased by almost 57 percent in case of other religions.

Table 4. Levels and trends of Total Fertility Rate of females of Uttar Pradesh, aged 15-49 years, three years preceding to NFHS-1, NFHS-2 and NFHS-3.

Background Characteristics	NFHS-3 (2005-06)	NFHS-2 (1998-99)	NFHS-1 (1992-93)	% change during 1992-93 to 2005-06
Residence				
Urban	2.95	3.34	3.91	-24.58
Rural	4.13	3.95	4.90	-15.70
Education				
Illiterate	4.61	4.08	4.99	-7.54
Incomplete/complete primary	3.56	3.55	4.05	-11.96
Incomplete/complete secondary	2.90	2.97	3.46	-16.14
Higher	2.02	3.06	2.59	-22.29
Religion				
Hindu	3.73	3.64	4.55	-18.11
Muslim	4.33	4.78	5.30	-18.30
Others	1.83	2.32	3.52	-47.96
Caste/Tribes				
SC	4.46	4.05	5.12	-12.99
ST	5.34	4.43	5.16	3.49
Gen/OBC	3.62	3.74	4.56	-20.84
Working status				
Not working	4.02	3.82	4.68	-14.15
Working status	3.39	3.88	4.54	-25.33
Partner's Education				
Illiterate	5.43	4.34	5.18	4.83
Incomplete/complete primary	4.79	4.28	5.24	-8.59
Incomplete/complete secondary	3.76	3.58	4.14	-9.18
Higher	3.06	3.18	3.64	-15.93
Standard of Living Index				
Low	4.94	4.44	-	11.31*
Medium	4.01	3.72	-	7.74*
High	2.79	3.13	-	-10.92*
TOTAL	3.82	3.83	4.66	-18.03

* SLI was not available for NFHS-I, hence the change calculated from 1998-99 to 2005-06.

While observing the effect of caste, we find that compared to females belonging to scheduled caste, those belonging to General/OBC category have 18 percent less chances of unwanted child bearing ($p < 0.01$). Furthermore, scheduled tribe females are 33 percent more likely than scheduled caste females to having had their last birth as unwanted. Working status of the females is found to be highly significant factor as it was seen that working females are 23 percent less likely to have unwanted child than non-working females, result being highly statistically significant ($p < 0.01$). Husband's education also plays an important role in determining the unwanted fertility in the family. It is found that those women whose husband has studied up to incomplete/complete primary levels are 3 percent more likely to have unwanted children but this finding was not statistically significant. Whereas, the women whose spouses are educated up to secondary and higher levels are respectively 13 percent and 14 percent less likely to have unwanted childbirth. Standard of Living Index has a significant impact on unwanted child bearing. The table reveals that chances of unwanted child birth decreases respectively by 13 percent and 39 percent ($p < 0.01$), which are highly statistically significant

Table 5. Logistic Regression (Odds Ratio) for unwanted and wanted fertility by selected background characteristics of women in Uttar Pradesh, NFHS-3 (2005-2006).

Background Characteristics	Last birth unwanted
	Exp(B)
Residence	
Urban ^r	
Rural	0.91
Women education	
Illiterate ^r	
Primary	0.81**
Secondary	0.85*
Higher	0.45***
Religion	
Hindu ^r	
Muslim	1.17**
Others	0.43
Caste	
Scheduled Caste ^r	
Scheduled Tribe	1.33
General/OBC	0.82***
Women working status	
Not working ^r	
Working	0.77***
Partner's Education	
Illiterate ^r	
Incomplete/complete primary	1.03
Incomplete/complete secondary	0.87**
Higher	0.86
Standard of Living Index	
Low ^r	
Medium	0.87*
High	0.61***

Level of Significance: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

^r Reference category

6. Summary and Conclusions

This paper has scrutinized the levels and trends of TWFR, TUFRR and TFR for different background characteristics in the state of Uttar Pradesh. The highest TWFR, TUFRR and TFR were observed in rural areas of Uttar Pradesh with the levels of 2.49, 1.64 and 4.13 children per woman respectively, but at

the same time, overall decreasing trend is visible for TFR which has reduced by about 18 percent in rural Uttar Pradesh over a period of almost 13 years. Similarly the least educated women of Uttar Pradesh are having the highest levels of TWFR(2.79), TUFRR(1.82) and TFR(4.61) among the four education groups but, there is a reduction of approximately 7.5 percent in TFR from 1992-93 to 2005-06. The maximum reduction is observed in the females with higher level of education over three NFHS surveys. Among different religions, Muslims have the higher TWFR, TUFRR and TFR levels of 2.50, 1.83 and 4.33 respectively, though the TFR has reduced by about 18 percent from NFHS-1 to NFHS- 3 survey. In different castes, the ST women have the highest levels of wanted, unwanted and total fertility rates, standing at 2.80, 2.34 and 5.34 respectively and for them TFR has increased by approx. 3.50 percent over the same period of time. Females with no employment have the greater contribution in TWFR, TUFRR and TFR levels with 2.45, 1.57 and 4.02 children respectively but there has been a satisfactory reduction in TFR of almost 14 percent. Females with uneducated partners have the higher TFR of 5.43 (TWFR and TUFRR at 3.39 and 2.04 respectively) and for them the TFR has increased by approximately 5 percent over the three NFHS surveys. Lastly, amongst the three standard of living groups, the females belonging to low standard of living have the highest TFR of 4.94, with wanted fertility of 2.64 and unwanted fertility of 2.30 per female, which has increased by more than 11 percent from 1998-99 to 2005-06.

The analysis shows that TFR and TWFR have declined but TUFRR has increased in Uttar Pradesh and it is higher in rural area as compared to urban area. On one hand TWFR and TFR have reduced by almost 37 percent and 18 percent respectively, but on the other, TUFRR has increased by almost 55 percent and it is higher among rural, illiterate, Muslim, ST, non-working and lower income group females over a period of time. From the odds ratio also it can be observed that rural, ST, Muslim and working women are more likely to have unwanted children as compared to other categories. In a nutshell, the state is approaching towards fertility transition and this can be confirmed by a decreased wanted fertility rate, total fertility rate and an increased unwanted fertility by the characteristics such as residence, education, religion/caste, partner's education and standard of living index during the study period.

Uttar Pradesh is a state with high fertility rate (TFR being more than three children per women) and as bring forth by this study that though in this state TWFR has declined over the three NFHS surveys to a considerable level but, TUFRR has risen up. It indicates the failure of Uttar Pradesh women to realize their fertility desires in actual reproductive behavior. Also, this study reveals the underlying differentials in wanted and unwanted fertility, according to various socio demographic classifications. The findings suggests that the family welfare programs should be prioritized by policy planners and instead of adopting uniform family welfare programs for every socio demographic strata, those women who belong to rural, less educated, socially and economically deprived part of the society should be paid special attention to help them avoid the unwanted births.

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