



Treatment seeking behaviour of infertility in Uttar Pradesh: A comparison of rural and urban females

Brijesh P. Singh^{1,*} and Upasana Shukla²

¹Faculty of Commerce & DST-CIMS, Banaras Hindu University, Varanasi, Uttar Pradesh, India.

²JRF, Department of Statistics & DST-CIMS, Banaras Hindu University, Varanasi, Uttar Pradesh, India.

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ABSTRACT

Infertility is considered as critical health problem among all societies all over the world. Infertility has many consequences for men and especially for women. Couples experience stigma, sense of loss, and diminished self-esteem in the setting of their infertility. Childless couples are stigmatized and discriminated against society. The blame for infertility is unquestioningly placed on the women. In this study an attempt has been made to estimate infertility. In this study an attempt has been made to estimate infertility from the direct questions regarding infertility and health seeking behaviour in Uttar Pradesh using the DLHS-III survey data collected in 2007-08. Here the study has been done for rural and urban regions separately. Chi-square techniques have been used to dependency of infertility on the various socio-demographic characteristics. Prevalence of lifetime infertility as well as lifetime primary infertility is higher in rural than urban areas. Treatment seeking is slightly higher among urban than rural women but there is not very big difference. Infertility is perceived as a problem across virtually all cultures and societies. The number of couples seeking treatment for infertility is increasing now-a-days due to more awareness of available services and latest and more successful techniques.

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Introduction

Infertility is a bio-psycho-social phenomenon and the most horrible life experiences for a couple. As a bio-psycho-social phenomenon, infertility can influence all aspects of life. The rate of infertility varies from place to place and approximately 10-15 percent of the world's population suffer from infertility. Human beings have two basic desires - to get and to beget. To have own family is a universal dream for an Indian couple. The dream can become a nightmare for the infertile couple. The female has a deep desire to reproduce the children. This is not a social issue but it is a natural biological urge. A female bears pains of labour, but she forgets it in the joy of creation. According to Hinduism, reproduction is not to a biological phenomenon but it needs to be seen in socio-ethical context. There are social customs, values and norms related to various aspects of child bearing. In our society the birth of the first child seems to be really the very culmination of marriage. Indeed it may be true that the arrival of the first child in our society symbolizes final and complete maturity of the parents as adults (1). Childless couples feel a kind of vacuum; even they enjoy all the comforts and luxuries in the life. Child birth lends stability and security to the bride's relationship with other household members but inferior status is provided to barren women.

If conception does not take place in one or two year after marriage, other household member along with couple start making queries and then go to the doctors, astrologers, saints. Also go for pilgrimage and for mahatmas to be blessed with the child. Motherhood is of great social significance and infertility is perceived as a threat to men's procreativity and the continuity of the lineage (2-6). Childless men and women are stigmatized and are likely to be discriminated against (7-8). One partner may seek to blame the other as being defective or unwilling. Often

the ill effects of childlessness are far more severe for women than for men. The "blame" for infertility is unquestioningly placed on the woman (9). Relationships between couples can become very strained when they do not bear children and sometimes it leads to violence and even marital disruption (8, 10). Sometimes the childless females are compelled for secret extramarital relationships so that she can conceive and couple can put away themselves of the social discrimination but it is rare in the traditional society.

According to World Health Organisation data more than 180 million couples are dealing with the consequences of childlessness and it is increasing day by day. In developing countries the most important cause of childlessness is severe male infertility due to sexually transmitted diseases and female infertility due to blockage of tubes (11). Both the problems can be treated by expensive assisted reproductive technologies (ART) which is not easily available everywhere and if available mostly in private sectors and costly (12). Infertility has multiple causes and consequences depending on the gender, sexual history, life style, society, and cultural background of the people it affects. Some major reasons for infertility are cancer or tumour, obesity, drinking too much alcohol, smoking, older age, diabetes, excessive exercising, pelvic infection, reproductive tract infections/sexually transmitted diseases, retrograde ejaculation and impotence etc.

Infertility treatment can be either traditional or biomedical. Some important biomedical techniques are fertility drugs, artificial insemination (also known as Intrauterine Insemination or IUI), donor sperm, In Vitro Fertilization (IVF), Intracytoplasmic Sperm Injection (ICSI), donor eggs, surrogacy, donor embryos, reproductive surgery and Zygote Intrafallopian Transfer (ZIFT). The infertility clinics/centres are situated

mostly in the urban areas. Therefore, persons residing in rural areas have to travel large distances for treatment which ultimately increases the expenditure on the treatment than the urban persons.

Infertility has been relatively neglected as both a health problem and a subject for social science research in South Asia, as in the developing world more generally (9). The general thrust of both programmes and research has been on the correlates of high fertility and its regulation rather than on understanding the context of infertility, its causes and consequences. Infertility also has severe consequences for men and especially for women's wellbeing. In spite of this, very less research work has been done on the consequences of infertility than on its determinants. Therefore, in this study an attempt has been made to estimate infertility from the information collected after asking some direct questions on infertility and the health seeking behaviour among married females aged 15-49 years who belongs to various socio-demographic characteristics in urban as well as rural females of Uttar Pradesh.

Data and Methodology:

District Level Household Survey (DLHS) is a nationwide survey which provides data on various aspects of health care utilization Reproductive & Child Health (RCH) services at district level. This study is based on the data extracted from (DLHS-III) conducted during 2007-2008 for Uttar Pradesh for currently married females aged 20-49 years whose exposure period to the risk of conception is at least two years.

Childlessness is defined as the proportion of couples who have not had a live birth by the time of interview, despite at least five years of cohabitation and exposure to pregnancy, and in the absence of contraception, breastfeeding or postpartum amenorrhea. Infertility refers to an inability to conceive after having regular unprotected sex. According to the World Health Organization infertility defines as failure to conceive despite two years of cohabitation and exposure to pregnancy. There are two types of infertility i.e. primary and secondary. Primary infertility as the lack of conception despite cohabitation and exposure to pregnancy and secondary infertility is defined as the failure to conceive following a previous pregnancy despite cohabitation and exposure to pregnancy in the absence of contraception, breastfeeding or postpartum amenorrhea (WHO, 1991). Lifetime Infertility is defined that the woman ever had a problem in getting pregnant. Lifetime Primary Infertility is that woman ever had/have problem in conceiving for the first time.

Results & Conclusions:

This study has been done to see the differentials of infertility in urban and rural region of Uttar Pradesh. Table 1 presents the prevalence of lifetime infertility (primary and secondary) and lifetime primary infertility separately and corresponding chi square values are also shown. It has been seen that prevalence of infertility is higher among rural women. In rural area there are about eleven percent females who suffer from infertility problem in her life while 8.7 percent females faced primary infertility. The corresponding figures for urban areas are 10.4 percent and 8.1 percent respectively. Thus primary infertility accounts three fourth of the infertility problem. Prevalence of infertility is slightly higher among Hindus than Muslims in urban as well as rural area and this difference is significant in urban areas. Also infertility prevalence is higher among those whose effective age at marriage is less than 18 years. The maximum lifetime infertility is found more among females belonging to higher economy class in rural areas. While in urban areas females of middle class dealt with maximum lifetime infertility. Uttar Pradesh is a big state and there is much

variability among districts. There is much variation in level of infertility in different zones of Uttar Pradesh. Minimum infertility is found in Bundelkhand zone followed by eastern and then western zones. About twelve percent females of central zone suffered from lifetime infertility.

Table 2 represents the treatment seeking behaviour of infertility suffering couples separately for rural and urban. Urban couples are more prone to get treatment as compared to rural couple. Education of couple is positively associated with treatment seeking in rural as well as urban region. In urban treatment seeking is maximum in 20-24 age group while it is 25-29 for rural. Muslims are more forward than Hindus in treatment seeking in both regions. Also caste wise treatment seeking is highest among others category followed by OBC and lowest among SC/ST in both rural as well as urban regions. Percent of couples seeking treatment in government sector is higher in rural than urban. Effective age at marriage has no significant impact on treatment seeking. As per as zones are concerned we have seen that maximum infertility is found in central region and treatment/advice maximum percentage is also for central region. Ninety one percent couples seek treatment in central region. Also treatment seeking is maximum among those couples of marital duration 10-15 years because after marriage couples wait sometime and even if conception does not occur they look for some kind of advice followed by treatment because each and every couple has desire to feel parenthood, if fails they seek for some treatment and/or advice. Treatment seeking has positive association with wealth index in both rural as well as urban area. As wealth index increases treatment seeking also rises. Couples of richer and richest wealth index seek maximum treatment.

There are various types of treatment techniques available as ayurvedic, allopathic, unani, ayush, herbal/ traditional healer, quacks etc. But a higher proportion of couples rely on allopathic treatment and specially private sector. It is interesting that the percentage of women going for treatment in private sector are more than twice those going for treatment in government sector. We see that treatment seeking to government sector is higher in rural than urban this is observed because of non availability of much facility centres at rural as well as the cost associated with the treatment, whereas urban treatment seeking is higher in private sector it is because of better treatment and patient attending behaviour. Percentage of treatment seeking increases as wealth index increases. Also urban couples seek more treatment because health facilities are easily available as well as awareness of new treatment techniques as compared to rural. Treatment seeking percentage has positive association with the education of the woman and her husband. Illiterate and primary educated couple prefer treatment in government sector while high school and above educated prefer private sector for treatment. Table 3 presents the logistic regression results showing the risk of treatment seeking behaviour among 20-49 years females. Table reveals that older females are significantly less likely to seek treatment than their younger counterparts in both the areas i.e. in rural and urban. Muslim females have 25 more significant chance to go for treatment than Hindu females in rural as well as urban areas. Educated couples from both the areas are significantly less likely to go for the treatment. Also it is evident that even though treatment seeking is maximum among higher economic class they are fifty six percent less likely to seek some treatment than poorest couples for infertility problems. In urban area of western and eastern region the chance of couple go for the treatment is more but insignificant however, central region couples are significantly less likely to use this facility than bundelkh and couples.

Table 1: Percent distribution of infertility and childlessness according to some background characteristics among currently married females aged 20-49 years of Uttar Pradesh.

Background Characteristics	Rural		Urban	
	Lifetime Infertility	Lifetime Primary Infertility	Lifetime Infertility	Lifetime Primary Infertility
Current Age	$\chi^2_{0.05,5}=2.027$	$\chi^2_{0.05,5}=5.120$	$\chi^2_{0.05,5}=8.795$	$\chi^2_{0.05,5}=16.372$
20-24	10.7	8.9	11.9	9.4
25-29	10.8	8.5	10.4	7.5
30-34	10.8	8.4	9.6	7.2
35-39	11.0	8.7	10.2	7.7
40-44	11.3	9.2	9.9	8.0
45-49	10.8	8.7	11.7	10.1
Religion	$\chi^2_{0.05,1}=2.976$	$\chi^2_{0.05,1}=2.891$	$\chi^2_{0.05,1}=13.228^*$	$\chi^2_{0.05,1}=18.499^*$
Hindu & others	11.0	8.8	11.1	8.8
Muslim	10.3	8.2	9.1	6.6
Caste	$\chi^2_{0.05,2}=24.363^*$	$\chi^2_{0.05,2}=21.273^*$	$\chi^2_{0.05,2}=2.941$	$\chi^2_{0.05,2}=1.831$
SC/ST	9.8	7.8	11.1	8.6
OBC	11.1	8.8	10.7	8.2
Others	11.6	9.2	9.9	7.7
Women Education	$\chi^2_{0.05,3}=28.251^*$	$\chi^2_{0.05,3}=28.294^*$	$\chi^2_{0.05,3}=20.158^*$	$\chi^2_{0.05,3}=17.755^*$
No schooling	10.9	8.7	11.2	8.7
Primary	12.1	9.6	12.2	9.7
High school	11.8	9.4	10.6	8.3
Above	8.9	6.8	8.6	6.5
Husband Education	$\chi^2_{0.05,3}=14.151^*$	$\chi^2_{0.05,3}=16.226^*$	$\chi^2_{0.05,3}=1.232$	$\chi^2_{0.05,3}=1.472$
No schooling	10.2	8.0	10.6	7.9
Primary	11.5	9.1	9.7	7.3
High school	11.3	9.1	10.8	8.5
Above	11.0	8.8	10.2	7.9
Effective age at marriage	$\chi^2_{0.05,1}=8.405^*$	$\chi^2_{0.05,1}=6.962^*$	$\chi^2_{0.05,1}=15.149^*$	$\chi^2_{0.05,1}=19.057^*$
Below age 18	11.2	8.9	11.6	9.2
18 and above age	10.4	8.3	9.5	7.2
Wealth Index Quintiles	$\chi^2_{0.05,4}=9.562$	$\chi^2_{0.05,4}=11.426^*$	$\chi^2_{0.05,4}=10.526^*$	$\chi^2_{0.05,4}=10.713^*$
Poorest	10.4	8.1	9.7	8.4
Second	10.9	8.8	9.4	7.3
Middle	10.6	8.5	12.2	9.3
Fourth	11.4	9.2	11.3	9.1
Richest	11.4	8.9	10.0	7.5
Zones	$\chi^2_{0.05,3}=144.4^*$	$\chi^2_{0.05,4}=136.7^*$	$\chi^2_{0.05,4}=42.270^*$	$\chi^2_{0.05,3}=30.557^*$
Bundelkhand	7.6	6.1	6.9	5.5
Central	12.7	10.4	12.0	9.3
Western	11.5	9.1	10.4	7.8
Eastern	10.0	7.8	8.7	6.7
Marital duration	$\chi^2_{0.05,3}=2.762$	$\chi^2_{0.05,3}=1.669$	$\chi^2_{0.05,3}=5.821$	$\chi^2_{0.05,3}=6.880$
02-05	10.3	8.8	10.5	8.3
05-10	11.2	8.9	11.5	8.2
10-15	10.9	8.4	9.4	6.8
15+	10.9	8.7	10.4	8.4
Uttar Pradesh	10.9	8.7	10.4	8.1

* significant at 5% level of significance

Table 2: Lifetime Infertility Treatment seeking behaviour of currently married females aged 20-49 years of Uttar Pradesh according to some background characteristics.

Background Characteristics	Rural				Urban			
	Any type of advice or treatment	Allopathic treatment*		Other treatment	Any type of advice or treatment	Allopathic treatment		Other treatment
		Gov	Private			Gov	Private	
Current Age								
20-24	79.8	25.1	66.9	2.4	84.4	23.6	73.9	2.5
25-29	86.7	24.5	69.6	2.6	91.5	19.2	71.6	3.0
30-34	86.5	23.5	64.8	3.2	91.2	26.5	69.5	2.9
35-39	82.7	26.5	62.6	3.0	91.3	22.5	71.2	2.8
40-44	83.5	25.6	59.4	3.8	83.8	23.3	68.8	2.9
45-49	79.5	27.3	56.7	3.4	86.9	21.4	65.6	3.6
Religion								
Hindu & others	83.3	25.1	63.9	3.0	87.6	22.4	70.2	2.9
Muslim	86.1	25.4	68.1	2.8	91.5	23.4	70.4	3.0
Caste								
SC/ST	76.7	27.5	58.8	2.7	84.3	26.7	62.0	3.6
OBC	84.6	24.1	63.9	3.1	88.9	23.1	67.7	3.3
Others	87.5	25.9	70.3	2.7	90.1	20.8	77.1	2.3
Women Education								
No schooling	82.6	25.7	62.5	3.1	87.5	23.9	65.2	3.6
Primary	83.3	20.8	61.2	4.2	90.5	17.5	56.1	5.0
High school	87.8	23.2	71.0	2.7	89.0	24.1	73.3	2.3
Above	88.0	25.8	75.5	1.4	91.4	19.9	83.6	1.7
Husband Education								
No schooling	78.7	25.2	60.1	3.1	85.8	21.7	64.1	3.4
Primary	83.9	24.4	56.8	3.5	81.6	27.5	65.0	2.6
High school	84.4	24.0	65.0	3.1	89.4	22.3	66.2	3.6
Above	87.0	26.4	68.4	2.6	90.6	23.2	76.8	2.3
Effective age at marriage								
Below age 18	83.3	25.7	62.5	3.2	88.1	24.0	66.9	3.4
18 and above age	84.1	24.0	67.8	2.5	89.3	21.5	73.4	2.6
Wealth Index Quintiles								
Poorest	79.2	26.5	61.1	3.1	85.1	22.5	52.5	3.1
Second	81.2	25.0	62.5	2.9	88.3	29.4	64.7	3.0
Middle	84.0	24.3	61.4	3.2	87.1	18.7	62.6	4.3
Fourth	87.2	25.6	67.0	3.0	86.7	23.3	61.5	3.8
Richest	89.6	23.8	73.8	2.4	90.2	22.7	77.3	2.3
Zones								
Bundelkhand	78.8	34.1	34.1	4.0	86.5	37.7	46.8	3.1
Central	90.6	16.7	66.4	4.1	91.8	20.6	69.8	3.6
Western	79.4	27.8	62.1	3.0	85.2	19.9	75.5	2.5
Eastern	80.9	30.3	68.6	2.0	84.5	28.4	73.6	1.8
Marital Duration								
02-05	77.7	24.6	65.8	2.1	86.0	16.3	76.4	2.0
05-10	84.6	23.6	70.6	2.5	87.9	23.4	77.7	2.9
10-15	86.4	24.2	66.4	3.0	93.1	24.9	64.1	3.0
15+	83.1	26.1	61.3	3.2	88.2	22.9	68.2	3.1
Uttar Pradesh	83.6	25.1	64.4	3.0	88.7	22.7	70.3	2.9

* Multiple responses possible for type of treatment seeking.

Table 3: The risk of treatment seeking behaviour of currently married females aged 20-49 years of Uttar Pradesh according to some background characteristics.

Background characteristics	Rural				Urban			
	Exp(B)	Sig	95% CI		Exp(B)	Sig	95% CI	
			LL	UL			LL	UL
Current age								
20-24 ®								
25-29	0.607	0.000	0.494	0.745	0.500	0.018	0.281	0.889
30-34	0.616	0.000	0.499	0.760	0.522	0.027	0.293	0.929
35-39	0.829	0.074	0.675	1.018	0.519	0.027	0.290	0.929
40-49	0.874	0.163	0.723	1.056	0.938	0.796	0.577	1.525
Religion								
Hindu & others®								
Muslim	1.245	0.043	1.007	1.540	1.536	0.035	1.030	2.288
Caste								
SC/ST®								
OBC	0.602	0.000	0.517	0.702	0.667	0.087	0.419	1.060
Others	0.473	0.000	0.387	0.566	0.591	0.041	0.357	0.978
Women Education								
Illiterate®								
High school	0.663	0.000	0.532	0.826	0.876	0.587	0.543	1.413
Above	0.647	0.004	0.479	0.873	0.672	0.079	0.431	1.048
Husband Education								
Illiterate ®								
High school	0.713	0.000	0.613	0.829	0.684	0.078	0.449	1.043
Above	0.575	0.000	0.488	0.677	0.602	0.011	0.407	0.891
Effective age at marriage								
Below age 18	0.946	0.420	0.826	1.083	0.892	0.500	0.640	1.243
18 and above age®								
Wealth Index Quintiles								
Poorest®								
Second	0.877	0.145	0.735	1.046	0.756	0.606	0.261	2.188
Middle	0.725	0.001	0.602	0.874	0.848	0.724	0.340	2.116
Fourth	0.556	0.000	0.455	0.680	0.873	0.758	0.368	2.070
Richest	0.443	0.000	0.344	0.570	0.618	0.261	0.267	1.429
Zones								
Bundelkhand®								
Central	0.388	0.000	0.294	0.512	0.572	0.099	0.295	1.110
Western	0.964	0.786	0.738	1.259	1.112	0.760	0.563	2.197
Eastern	0.876	0.315	0.677	1.134	1.173	0.658	0.580	2.372
® Reference category								

Discussion:

Though Uttar Pradesh is a high fertility state but infertility prevalence is also high in the state. There is a need of medical facility especially in rural areas for infertility because the rural area still facing lack of good medical facility. With the treatment facilities available so far seventy five percent in rural and seventy three percent couple suffering with infertility, who took any treatment. There is need to increase this percentage so that no women remain childless due to reproductive troubles and each woman can enjoy the feeling of motherhood. The present study indicates that elder, educated, richer and upper caste couples are not using infertility treatment in comparison of others perhaps due to some social taboos and fear of discrimination in the society. Thus there is urgent need of in-depth study that what are the reason for not going for infertility treatment, also government should plan an awareness program that infertility is a disease not an inability and for knowledge about new treatment technologies available like ART, donor egg and surrogacy etc. especially in rural areas because treatment seeking by religious or traditional healers and quacks is more among rural areas. Infertility calculation is very tedious job and difficult to collect data for this. Also very limited number of questions was asked in the survey. Whether it is primary infertility or secondary infertility only this much was asked. The

specific cause of infertility like less sperm count, problem in fallopian tubes, RTI/STI or unsafe abortion or delivery etc was not asked. As per WHO's report in Asia max percentage of infertility is on account of sexually transmitted disease or unsafe management of abortion or delivery.

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