

## Original article

# Health and socio demographic survey of Khera village (Ghaziabad) -- A comparison of health indicator with National data

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## Abstract

**Background:** The Indian Government conducts a nation wide Census every 10 years. District Ghaziabad, one of the 21 identified MCDs of Uttar Pradesh (U.P.). The district falls under the category of 'B-1' district (i.e. Districts having socio-economic parameters below national average . 83.3 Crore (68.84%) population of India live in villages

**Material and Methods:** The present study was carried out in rural areas in Ghaziabad from 1st September to 31<sup>st</sup> December 2014 under House hold survey done by medical college. All the population of village was included in this study.

**Results:** The sex ratio of survey sample of Khera village (993.81 females / 1000males). The socioeconomic classification shows that the majority of the study population belonged to class IV (40%) and V (17.3%), implying lower socio-economic class and about 18%population are belonging from OBC,SC,ST category

**Conclusion:** The changes occurring in the villages of our country in the fields of socio demographic events are towards the apparent better health.

**Keywords:** Khera (Ghaziabad) , Comparative analysis , Health status , Socio-demographic profile

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## Introduction

The Indian Government conducts a nation wide Census every 10 years. District Ghaziabad, one of the 21 identified MCDs of Uttar Pradesh (U.P.). The district falls under the category of 'B-1' district (i.e. Districts having socio-economic parameters below national average. 83.3 Crore (68.84%) population of India live in villages<sup>1</sup>. India, no doubt, has achieved significant growth and development since independence. It has also succeeded in reducing poverty and improving crucial human development indicators. Evidences, however, explicitly shows that the benefits of growth and development have not been equally percolated down to all sections of people and regions of the country. Inter-regional gaps

widened phenomenally as the development processes unfolded rapidly in recent years. In such an inequitable growth and development, marginalized communities lag far behind. The more is marginalized condition of a community, the greater is its exclusion from the developmental processes. This is an alarming situation as it defeats constitutional goals of Equality, Fraternity and Social Justice and generates serious social tensions in the country.<sup>2</sup> This study was performed after the censuses 2011 to look at the changes in village Khera (Ghaziabad) in terms of socio-demographics and health status.

**Objectives:**

1. To study the socio-demographic profile of the community of the Khera village.
2. To find out the distribution pattern of diseases in the community of the Khera village in district (Ghaziabad) Uttar Pradesh, India.
3. Compare it with that of Uttar Pradesh and all India data.

**Material and Methods:**

The present study was carried out in rural areas in Ghaziabad from 1st September to 31st December 2014 under House hold survey done by medical college. Khera village is one of the adopted village of Rama Medical College. This Medical College has one PHC and Training center for under graduate students in this village . Total 445 houses were surveyed. All the population of village was included in this study. The people were interviewed at their home and information was collected from either the head of the family or senior person available at home. The attendants were interviewed in a friendly atmosphere after taking their consent. Personal details of the family members like name, age, sex,

religion and address were noted. History of present illness was recorded followed by complete physical examination. After making a provisional diagnosis, treatment was given. Complicated or undiagnosed cases were referred to medical college for further investigations. The data, obtained were tabulated and analyzed. Socioeconomic status was analyzed on the basis of modified Prasad's per capita income classification (April-June 2014).

Once BMI is determined, the age and gender were used to select the appropriate growth chart. Using the gender-corrected growth chart (separated for boys and girls) titled *BMI for age*; the student's age was taken on the horizontal axis and the BMI on the vertical axis. The point of intersection was the student's BMI for age in percentile.<sup>6</sup>

The study included a survey of the village using a self designed questionnaire 2256 people were a part of the study. The questionnaire included questions regarding the social demographic, and health status of people .The data was collected and was analyzed on Microsoft excel.

**Table 1-**

<b>Age wise distribution of participants in Khera Village (Ghaziabad)</b>			
<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
<b>0 - 5 Years</b>	35(3.09 %)	45(4.00 %)	80(3.55%)
<b>5.1 - 10 Years</b>	79(6.98%)	70(0.62%)	149(6.6%)
<b>10.1-15 Years</b>	137(12.11%)	121(10.77%)	258(11.44%)
<b>15.1- 20 Years</b>	143(12.64%)	126(11.21%)	269(11.92%)
<b>20.1-25 Years</b>	135(11.94%)	156(13.87%)	291(12.9%)
<b>25.1 - 30 Years</b>	116(10.26%)	146(12.98%)	262(11.62%)
<b>30.1- 35 Years</b>	120(10.31%)	132(11.74%)	252(11.18%)
<b>35.1 - 40 Years</b>	101(8.93%)	84(7.47%)	185(8.2%)
<b>40.1 - 45 Years</b>	64(5.66%)	64(5.69%)	128(5.68%)
<b>45.1- 50 Years</b>	65(5.66%)	56(4.98%)	121(5.37%)

<b>50.1 - 55 Years</b>	34(3.01%)	38(3.38%)	72(3.2%)
<b>55.1 - 60 Years</b>	37(3.27%)	33(2.94%)	70(3.1%)
<b>60.1 - 65 years</b>	35(3.09%)	15(1.33%)	50(2.22%)
<b>65.1- 70 years</b>	16(1.41%)	16(1.42%)	32(1.42%)
<b>70.1 - 75 Years</b>	9(0.79%)	7(0.62%)	16(0.71%)
<b>75.1 - 80 years</b>	2(0.18%)	10(0.89%)	12(0.53%)
<b>80.1 - 85 Years</b>	3(0.27%)	4(0.36%)	7(0.31%)
<b>85.1 - 90 years</b>	0(0)	1(0.09%)	1(0.04%)
<b>Total</b>	<b>1131(100%)</b>	<b>1124(100%)</b>	<b>2255(100%)</b>

Table -2

<b>Demographic, social and health indicators of Khera village (Ghaziabad)</b>		
<b>Variables</b>	<b>No. (n=2255)</b>	<b>Percentage (%)</b>
<b>Sex Distribution Of Study Population According To Age And Sex</b>		
<b>Male</b>	1131	50.16%
<b>Female</b>	1124	49.84%
<b>Distribution Of Study Population According To Religion</b>		
<b>Hindu</b>	2220	98.4
<b>Muslim</b>	35	1.6
<b>Socio economic class distribution of families according BG Prasad classification: n=445 families</b>		
<b>Upper</b>	63	14.16
<b>Upper middle</b>	54	12.13
<b>Middle</b>	73	16.40
<b>Lower middle</b>	178	40
<b>BPL</b>	77	17.30
<b>Education distribution of study population (&gt;5yrs = 80) according to the education obtained (n=2175)</b>		
<b>Illiterate</b>	315	14.48
<b>Primary(1<sup>st</sup> - 7<sup>th</sup> class)</b>	214	9.84
<b>Secondary (8 – 10<sup>th</sup> Class)</b>	616	28.32
<b>Higher Secondary (11-12 standard)</b>	535	24.6

<b>Graduate</b>	351	16.14
<b>Post graduate</b>	144	6.62
<b>Occupation Distribution of study population (&gt;15- 60 yrs) according to the occupation (n= 1650)</b>		
<b>Unemployed</b>	854	51.76
<b>Labourer</b>	314	19.03
<b>Self- emploid</b>	59	3.58
<b>Farming</b>	326	19.76
<b>Buisness</b>	25	1.52
<b>Job</b>	62	3.76
<b>Professional</b>	10	0.61
<b>Vaccination status Distribution Of Study Population (12-23 months) According To The Vaccination Status:</b>		
<b>Fully immunized</b>	43	87.76
<b>Partially Immunized</b>	6	12.24
<b>Not Immunized</b>	0	0

**Table-3**

<b>Distribution of population according to disease prevalent in Khera village (Ghaziabad)</b>		
<b>Disease diagnosed in participants</b>	<b>Number of participant</b>	<b>Percentage</b>
Allergy	4	3.31
ANC	1	0.83
Angioplasty	1	0.83
Appendisectomy	1	0.83
Arthritis	1	0.83
Asthma	7	5.79
Chest pain	1	0.83
ENT/Chronic s otitis media	1	0.83
Diabetes	20	16.53
Dryness of cornea	1	0.83
Gaut	1	0.83
Gastroenteritis	1	0.83
Hepatitis B	1	0.83

High BP and Sugar	4	3.31
Hyper tension	55	45.45
Neurological disorder	2	1.65
Skin problem	1	0.83
Stone	6	4.96
Swelling in leg	1	0.83
Tuberculosis	8	6.61
Thyroid	3	2.48
<b>Total</b>	<b>121</b>	<b>100</b>

**Table - 4**

S.No	Item	Year	Unit	Rural	All -India	Khera
	<b>DEMOGRAPHIC INDICATORS</b>					
1.	<b>Sex Ratio</b>	2011	Females/1000 Males	947	940	993.81
2.	<b>Crude Birth Rate</b>	2010	Per 1000 Population	24.1	22.5	18.63
3.	<b>Crude Death Rate</b>	2010	Per 1000 Population	7.7	7.2	8.8
4.	<b>Total Fertility Rate</b>	2005-06 (NFHS-3) <sup>7</sup>	Average No. of Children per Woman	3.0	2.7	2.1
5.	<b>Literacy Rate (Excluding 0-7 age group)</b>	2011				
6.	<b>Female</b>		%	58.75	65.46	80.65
7.	<b>Overall</b>		%	68.91	74.04	85.52
8.	<b>Total unemployment Rate</b>	2013	%.	3.4	3.8	3.47
9.	<b>Unemployment Rate amongst Females</b>		%	20	41	19.81
10	<b>Unemployment Rate amongst Males</b>		%.	20	24	17.54
11	<b>Teen-age birth rate</b>		/1000 population	52.3	36.3	18.63

### Discussion:

The household size of India and Uttar Pradesh are 5.3 and 6.4 respectively while that of the village of Khera is 4.94 which is closer to the National level but lesser than state data<sup>3</sup>. The sex ratio of India and Uttar Pradesh, rural Uttar Pradesh is 940 females/1000 males and 908 females/1000 males, 914/1000 males' respectively<sup>1</sup>. The sex ratio of survey sample of Khera village (993.81 females/1000males) is higher than that of India, Uttar Pradesh and rural Uttar Pradesh<sup>3</sup>.

At the census 2011, 80.5% have returned themselves as followers of Hindu religion, 13.4% as Muslims or the followers of Islam, 2.3% as Christians, 1.9% as Sikh, 0.80% as Buddhists and 0.4% are Jain<sup>1</sup>. In the study, The Hindu religion still predominates (98.4%) but the other major religion being significant is the Muslim religion (1.6%).<sup>4</sup> The socioeconomic classification shows that the majority of the study population belonged to class IV(40%) and V(17.3%), implying lower socio-economic class and about 18%population are belonging from OBC,SC,ST category.<sup>4</sup> 18.34% and 10.07% of children and teen agers are over weight and obese respectively while 22.73% and 9.33% adults are over weight and obese almost equally distributed in male and female in all age group.<sup>4</sup>

Total 84 (3.73 %) participant have some diseases of which majority (45.45%) have hypertension, 20(16.53%) diabetes. Asthma 7(5.79%), Tuberculosis 8(6.61%) are also prevalent in Khera Village.

Out of the total population (2255),13 live birth noted in the village giving crude birth rate 5.76 while of India and Uttar Pradesh it is 23.1 and 29.2 per one thousand population respectively and the crude birth rate Khera village 18.63 per one thousand .<sup>3</sup> Among these teen age birth rate of Khera village is

18.63/1000 population is also lower than state and National Data (52.3,36.3).<sup>3</sup>

Crude death of Khera was found to be 8.8 rural which is above the crude death of rural Uttar Pradesh 25 and 7.2 of India.<sup>3</sup> Total fertility rate of Khera village was 2.1 while 3.0 and 2.7 is of Uttar Pradesh and all over India respectively.<sup>3</sup> The female literacy rate in Khera (80.65) is higher than the literacy of female in Uttar Pradesh as 58.75 and all over India it was 65.46 . Over all literacy in Khera was also high (85.52) as compare to Uttar Pradesh (68.91) and all over India (74.04).<sup>5</sup>

The unemployment rate is estimated to be 3.8 per cent at All India level under the UPS (usual principal status) approach and in rural areas it is 3.4 per cent. On the other hand in Khera it is 3.47.<sup>5</sup>

Despite relatively low LFPR (Labour Force Participation Rate), the unemployment rate is significantly higher among females as compared to males. At all India level and Uttar Pradesh, the female unemployment rate is estimated to be 41 and 20 per cent whereas for Khera , the unemployment rate is 19.81.<sup>5</sup>

### Conclusion:

The nearby presence of a fast growing city Delhi may be responsible for the apparently better socio demographic profile of the village. The sex ratios, is better than the State and National levels, which suggest that the three factors i.e. a high literacy rate especially female, a better sex ratio and lesser unemployment are inter related. And this may be responsible to all better awareness amongst people especially the women. This suggests the changes occurring in the villages of our country in the fields of socio demographic events are towards the apparent better health.

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