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A CASE STUDY OF MORTALITY IN RURAL POPULATION OF GORAKHPUR, U.P. INDIA

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ABSTRACT

In this paper, an attempt has been made to evaluate the mortality rates among rural population through CDR, IDR, ASDR and distribution of deaths by cause of death from the data obtained on survey of 300 sample households of particularly Gorakhpur district, situated in north-eastern part of Uttar Pradesh.

KEYWORDS: Population Infant Mortality, Sample Households, Childhood Diarrhoea

Mortality is one of the important factor of population with Fertility and migration. The factor of mortality has played an important role in evaluating the growth of population. Christians and Muslims have lower mortality than Hindus. Upper cast Hindus have lower mortality than the lower caste Hindus. mortality differentials in India based on different factors have pointed out by Vidhanathan. The survey is oriented about one of the important city of north eastern part of Uttar Pradesh district Gorakhpur of India. Gorakhpur is a city along the banks of the Rapti river in the north-eastern part or the Purvanchal region of the Indian state of Uttar Pradesh .It is situated 273 kilometres north-east of the state capital Lucknow. It is the administrative headquarters of Gorakhpur District Northen Eastern Railway Zone and Gorakhpur Division. Gorakhpur is also known as heart of the Purvanchal. According to census 2011, In 2011, Gorakhpur had population of 4,440,895 of which male and female were 2,277,777 and 2,163,118 respectively. In 2001 census, Gorakhpur had a population of 3,769,456 of which males were 1,923,197 and remaining 1,846,259 were females (Table 1). Gorakhpur District population constituted 2.22 percent of total Maharashtra population. In 2001 census, this figure for Gorakhpur District was at 2.27 percent of Maharashtra population. Today in tecno -medicinal era India not only but all over the world facing with high growth rate of population which has been a big problem for all of us. In many developing countries Sudan, Eithopia, Kenya and south Asia and Africa is facing with high growth rate of population (Conzo *el al.*, 2017) (Anker and Knowles, 1977) (Farah and Preston, 1982) and child mortality is a big problem in-front them. India is also suffering with this problems. Due to low income and old infrastructure mortality rate is also very high. This is not so good for our country it is very fatal. Mortality is one of the important factor in population change. The factor of mortality plays an important role to evaluate the growth of population. The one important contribution of demography is sharp declines in mortality rates, rather than rise in the fertility rates is responsible in high growth of population. The study of mortality and infant mortality gains importance because mortality during the first year of life is invariable high for all countries irrespective of whether the overall levels of mortality are high and low (Jain and Jain, 2017). The decline trend in infant mortality rates is an indicator of social and economic development but it has been observed that several countries where infant mortality rates are similar to those of developed countries is useful for current demographic condition. For statistic on death in the population is distributed by age, sex and the cause of death. The United Nations and the World Health Organisation defined death is the permanent disappearance of all evidence of life at any time after birth has taken place (United Nations, 1953). Mortality has been studied by various demographers. In current paper an attempt has been done to evaluate the mortality rate of a commodity of rural population of Gorakhpur district of Uttar-Pradesh, India.

Table 1: Gorakhpur District Population

Description	2011	2001
Population	44.41 Lakhs	37.69 Lakhs
Actual Population	4,440,895	3,769,456
Male	2,277,777	1,923,197
Female	2,163,118	1,846,259
Population Growth	17.81%	22.94%

Gorakhpur District: Census 2011-2020 data

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METHODOLOGY

To achieve our aim, the data on the number of deaths in each household, were collected from 300 sample households selected from Gorakhpur district with the help of an interview during 2019.

OBSERVATIONS AND RESULTS

Different measures are employed in the analysis of mortality. It is enough to describe the three measures for a general way of the sequence of mortality in rural populations. These evaluations have been discussed in the basis of survey of 300 sample households with population 2130 of Gorakhpur district during the year 2019-20.

CBR, CDR AND IDR

Total live birth is 91 and deaths 37 were enumerated. The crude birth rate (CBR) and crude death rate(CDR) were found respectively 43 and 17 per thousand giving the natural increase 2.5%, higher than these measures respectively 25.4 and 8.7 per thousand for India in 2001 (Census of India 2001).

In the survey total number of deaths below age one year during 2019 was 7. Consequently Infant Death Rate (IDR) was found 76.9. The corresponding rate for India in 1997 was 71.0 (United Nations, 1993).

AGE SPECIFIC DEATH RATE (ASDR)

ASDR is defined as the number of deaths of persons of a given age per thousand during a given year. The following table 2 and figure 1 represent ASDR for different age groups.

Table 2: For Deaths During 2018

Age group	Total population	Death rate per thousand
0-1	91	76.9
1-5	273	21.9
6-10	293	13.7
11-15	275	10.9
16-20	257	11.6
21-25	242	8.3
26-30	231	4.3
31-40	217	9.2
41-50	163	18.4
51-60	112	26.8
61 above	67	44.7

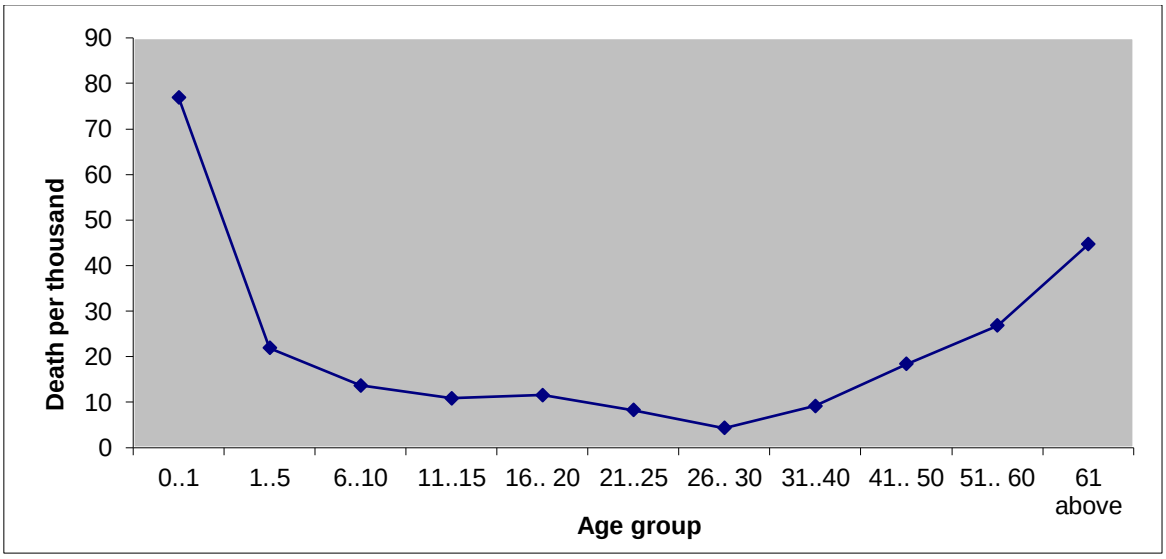

Figure 1: ASDR Curve

From table 1, it is observed that ASDR is higher at age 0 to 1 than other age group. The death rate drops for age group 1-5 and decreases till age group 16-20. The lowest value of ASDR is observed for the age group 16-20. At the age 20 the values of ASDR slightly increases upto the age 50 or 60 and then rise at higher ages. It may also be observed from the above figure by ASDR curve is U shaped.

DISTRIBUTION OF DEATH BY CAUSE OF DEATH

Table 3: Percentage Distribution of deaths by cause of Death

Cause of Death	Death %
Old age	15.7
Fever	21.9
Accidental	8.4
Respiratory Disease	5.3
Delivary	5.4
Diarrhoea	18.7
Small pox	2.3
Cancer	22.3
Other	-

Table 3 represents the proportion of deaths due to different causes of death

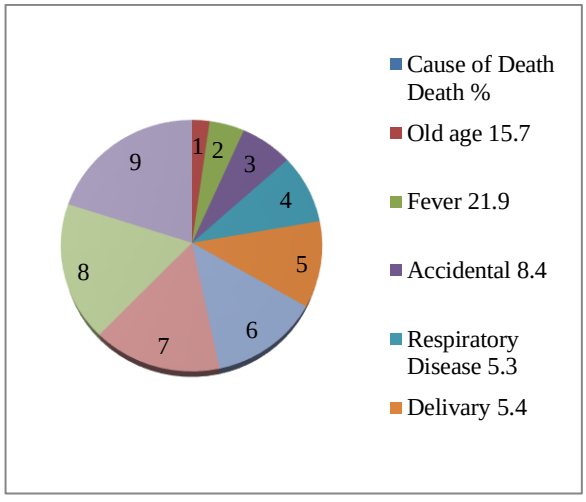

Figure 2: Distribution of Death by cause of death

CONCLUSION AND SUGGESTION

Both CDR and IDR for rural population of Gorakhpur district are found very high, this may be perhaps due to lack of proper medical facility and due to economically and educationally backwardness. ASDR curve is U –shaped indicates high mortality at both extremes of the life span from child to old age. The distribution of deaths by causes of death indicates that maximum proportion of deaths are found due to cancer and fever and Diarrhoea diseases.

According to above results it may be suggested to avail medical and educational facilities in the rural part of this city.

REFERENCES

Anker R. and Knowles J., 1977. "An Empirical Analysis of Mortality Differentials in Kenya at the Macro and Micro Levels." Population and Employment. Working Paper No. 60. Geneva: International Labour Organization.

Census of India 2001.

Conzo P., Fuochi G. and Mencarini, 2017. Demography, fertility and life satisfaction in rural Ethiopia, Demography, **54**(4): 1313-1351.

Farah A.M. and Preston S., 1982. "Child Mortality Differential in Sudan." Population and Development Review, 8(2): 365-383.

Jain P. and Jain P., 2017. Analysis of infant mortality rate in Indian states: A policy paradigm for attaining overall health improvement, Journal of health management, **19**(2): 334-339.

United Nations, 1953. Principles for a vital statiscs system, statistical papers series New York 19 -6.

United Nations, 1993. Demographic year book, New York, 375-379.

Vaidyanathan K.E., Some indiees of differential mortality in India study in mortality in india, op.cit,152.