

Vol 4 Issue 8 Feb 2015

ISSN No :2231-5063

International Multidisciplinary
Research Journal

Golden Research
Thoughts

Chief Editor
Dr.Tukaram Narayan Shinde

Publisher
Mrs.Laxmi Ashok Yakkaldevi

Associate Editor
Dr.Rajani Dalvi

Honorary
Mr.Ashok Yakkaldevi

Welcome to GRT

RNI MAHMUL/2011/38595

ISSN No.2231-5063

Golden Research Thoughts Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board. Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

International Advisory Board

Flávio de São Pedro Filho Federal University of Rondonia, Brazil	Mohammad Hailat Dept. of Mathematical Sciences, University of South Carolina Aiken	Hasan Baktir English Language and Literature Department, Kayseri
Kamani Perera Regional Center For Strategic Studies, Sri Lanka	Abdullah Sabbagh Engineering Studies, Sydney	Ghayoor Abbas Chotana Dept of Chemistry, Lahore University of Management Sciences[PK]
Janaki Sinnasamy Librarian, University of Malaya	Ecaterina Patrascu Spiru Haret University, Bucharest	Anna Maria Constantinovici AL. I. Cuza University, Romania
Romona Mihaila Spiru Haret University, Romania	Loredana Bosca Spiru Haret University, Romania	Ilie Pinteau, Spiru Haret University, Romania
Delia Serbescu Spiru Haret University, Bucharest, Romania	Fabricio Moraes de Almeida Federal University of Rondonia, Brazil	Xiaohua Yang PhD, USA
Anurag Misra DBS College, Kanpur	George - Calin SERITAN Faculty of Philosophy and Socio-Political Sciences AL. I. Cuza University, IasiMore
Titus PopPhD, Partium Christian University, Oradea,Romania		

Editorial Board

Pratap Vyamktrao Naikwade ASP College Devrukh,Ratnagiri,MS India	Iresh Swami Ex - VC. Solapur University, Solapur	Rajendra Shendge Director, B.C.U.D. Solapur University, Solapur
R. R. Patil Head Geology Department Solapur University,Solapur	N.S. Dhaygude Ex. Prin. Dayanand College, Solapur	R. R. Yaliker Director Managment Institute, Solapur
Rama Bhosale Prin. and Jt. Director Higher Education, Panvel	Narendra Kadu Jt. Director Higher Education, Pune	Umesh Rajderkar Head Humanities & Social Science YCMOU,Nashik
Salve R. N. Department of Sociology, Shivaji University,Kolhapur	K. M. Bhandarkar Praful Patel College of Education, Gondia	S. R. Pandya Head Education Dept. Mumbai University, Mumbai
Govind P. Shinde Bharati Vidyapeeth School of Distance Education Center, Navi Mumbai	Sonal Singh Vikram University, Ujjain	Alka Darshan Shrivastava Shaskiya Snatkottar Mahavidyalaya, Dhar
Chakane Sanjay Dnyaneshwar Arts, Science & Commerce College, Indapur, Pune	G. P. Patankar S. D. M. Degree College, Honavar, Karnataka	Rahul Shriram Sudke Devi Ahilya Vishwavidyalaya, Indore
Awadhesh Kumar Shirotriya Secretary,Play India Play,Meerut(U.P.)	Maj. S. Bakhtiar Choudhary Director,Hyderabad AP India.	S.KANNAN Annamalai University,TN
	S.Parvathi Devi Ph.D.-University of Allahabad	Satish Kumar Kalhotra Maulana Azad National Urdu University
	Sonal Singh, Vikram University, Ujjain	

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.aygrt.isrj.org



GRT INFANT MORTALITY IN MARTHAWADA REGION A COMPARATIVE STUDY

Tathe S. V.

Head, Ast. Prof and Research Guide , Dept. of Geography , Sant Ramdas Arts, Comm. And Science. college,
Ghansawangi Dist. Jalna.

Abstract:-Health is a major determinant of happiness. Health is wealth (Misra R.P 2007) The scind society is reflected by the sound health conditions of its people. The better health status is depending on geographical condition(mayer I.A.2007). The efficiency of mankind is very much influenced by health and freedom from disease. The link between health and development are very close. Health can be considered as a factor of development.

Keywords:Infant Mortality ,better health status , geographical condition.

INTRODUCTION

The human resource is an important resource in the world. Man has optimum ability to make those resources. The optimal working condition condition of man depends on health. The creativity of human being is very important in this processes. Therefore the study of human wellbeing becomes an important aspect. Human creativity depends on his health condition in this context medical geography as a branch of human geography deals with such aspects.

Medical geography is the analysis of the human environmental relationship of disease. Nutrition an medical care system in order to elucidate its interrelationship in space(Husain M 1994)

Health is a common theme in most cultures in fact all communities have their concepts of health as a part of their culture. Health is often called absence of disease many more dimensions has also been suggested which is spiritual emotional, vocational and political health. Health is not perceived the same way by all members of a community including various professional groups.(e.g. biomedical, scientists, social science specialists health and ministrations ecologists etc) given rise to confusion about the concept of health (park and park 2011)

Study region:- The area under study comprise of eight district of Marathwada region namely Aurangabad, Beed, Osmanabad, Latur, Nanded, Hingoli, Parbhani and Jalna. These eight district having the midyear population (2005) rural population of these eight district is 11651300 which is 79.89% of the total population of Maharashtra. Urban population of these eight district is 431290 which is only 9.51% of the total urban population of Maharashtra and the total population of these eight districts is 15964000 which is 16.68% of the total population of Maharashtra. The study region includes 2 corporations and 51 municipalities.

This study region is heterogeneous in nature in case physiographic climate, soils, vegetation, drainage pattern, rainfall, occupation, social factors , sex ratio, urbanization, industrialization etc. The latitudinal and longitudinal extent of the area is 170-15' North to 200-40' North and 740-40' East to 780-15'East respectively. Marathwada region in located the (south) central part of Maharashtra state and covers 64813 sq km (21.04%) area an d16.68% population of Maharashtra state.

OBJECTIVE OF STUDY:-

- 1)To study the distributional pattern of infant mortality in study region.
- 2)To study the comparative picture of urban and rural I.M.R. in the study region.

Database and Methodology:- The researcher proposers to analysis the available data at various stages are being calculated using various statistical methods.

The collected data has correlated with different physical and socio cultural variables. The distribution pattern of infant mortality to be investigated at district level. The data collected is 35 years period has been analyzed by choropleth methods. Ranking technique is used for understanding the district pattern of infant mortality rates. The data regarding IMR has been collected from vital statistics published by government of Maharashtra class intervals for distributing are decided by percentile method. The various graphical and distributional methods are used for showing distribution.

Study problem:- Infant mortality is the most sensitive index of health measurement and indicate the number of infant deaths per 1000 live birth during the year under reference. There are several factors like climate, pollution, social factors like social customs, social status towards male and females, mothr's educations status biological factors like mothers physical condition, her age nutritional status cultural factors like medical facilities family income etc. affecting infant mortality rate.

The infant mortality rate (I.M.R.) is calculated by following formula.

$$I.M.R. = \frac{D}{B} \times K$$

Where,

- I.M.R. = Infant Mortality Rate
- D. = Number of deaths within one year
- B = Total number of live births within a year
- K = Constant (1000)

Medical Facilities in Maharashtra State

Year	Hospitals	Dispensaries	Primary Health Center
1971	299	1372	388
1981	530	1776	454
1991	768	1896	1672
2001	981	1629	1768
2005	1047	2072	1809

Source - State Family Welfare Bureau , GoM

Mortality and Infant mortality rate in Maharashtra state from 1971.

Year	Mortality Rate			Infant Mortality Rate		
	Rural	Urban	Total	Rural	Urban	Total
1971	13.5	9.7	12.3	111	88	105
1981	10.6	7.4	9.6	90	49	79
1991	9.3	6.2	8.2	69	38	60
2001	8.5	5.9	7.5	55	28	45
2004	6.8	5.4	6.2	42.	27	36
2005	7.4	5.7	6.7	41	27	36

Source - Sample Registration Scheme Bulletin, Registrar General of India, New Delhi

Infant Mortality rate is an important indicator of the development of region. The table 1 shows the total infant mortality rate in the study region during 1971 to 2005. The regional average I.M.R. is 25.60 per thousand live births and the state average is 32.89 per thousand live births. The regional average is below state average. This shows that the study region is underdeveloped but very less polluted as compared to the state. Development of medical care facilities, health awareness, increasing literacy etc are the factors responsible for lower mortality rate in the study region, but in the study region I.M.R. is not even in all the districts. High mortality rate is observed in Parbhani (including Hingoli) and Aurangabad districts. The highest I.M.R. is in Parbhani district i.e. 30.14 per thousand live births.

The moderate mortality rate is observed in the five districts of Jalna, Nanded, Beed, Osmanabad and Latur. These districts observed mortality rate between 14 to 25 per thousand live births. Lack of and poor medical facilities, mother's negligence about childcare cause malnutrition and absence of health awareness, Neo-natal and post Neo-natal care is poor and environmental factors are cause for this high mortality rate. There is no any districts observed very high, low and very low infant mortality rate in the study region. The lowest I.M.R. is observed in the district of Latur i.e. 22.46 per thousand live births in the study region. There are two districts have infant mortality rate above the regional average and five districts are below the regional average.

The decreasing trend is observed in the study region and in the state also. The average I.M.R. is 52.6 per thousand live births in 1971 to 1975, which is decreased up to 7.99 per thousand live births in 2001-2005, in the study region and in the state, the rate has decreased from 63 to 13.18 per thousand live births in the same period. The development of medical facilities, increasing literacy rates, improvement in living standard, increasing per capita income and Governmental practices accounts for decreasing I.M.R. In all the districts in the study region, a similar decreasing trend is observed. The I.M.R is different in rural and urban parts of the study region.

Infant mortality rate(I.M.R.):-

The rural parts generally have less development of medical care facilities standard of living is low, cleanness is not maintained and rural population pays more attention to his economic pursuits than to his sanitary problems. Hence, the health conditions are poor in rural areas compared to urban areas.

The table 2 shows the rural I.M.R. in the study region. The table shows that the regional average mortality rate is 29.23 per thousand live births while the state average is 30.78 per thousand live births. The regional average is below the state average. Population level is low, the cause for the lower I.M.R. in the study region as compared to the state. There are four districts having I.M.R. above the regional average. They are Parbhani (including Hingoli), Aurangabad, Jalna and Nanded districts. Whereas three districts having I.M.R. below the regional average. That is Beed, Osmanabad and Latur districts. Highest infant mortality rate is observed in Parbhani district i.e. 31.80 per thousand live births. This part needs implementation of childcare programs and various medical facilities. High mortality rate is observed in Parbhani(including Hingoli), Aurangabad, Jalna and Nanded district. These districts observed mortality rate between 30 to 40 per thousand live births.

The moderate mortality rate is observed in the three districts of Beed, Osmanabad and Latur. These districts observed mortality rate between 16 to 29 per thousand live births. Lack of and poor medical facilities, mother's negligence about childcare cause malnutrition and absence of health awareness, Neo-natal and post Neo-natal care is poor and environmental factors are cause for this high mortality rate. There is no any districts observed very high, low and very low infant mortality rate in the study region.

Table No. 1
Marathwada region showing ranking of infant mortality rates/ 1000 live births(total)

Sr.No.	District Name	1971 to 1975	1976 to 1980	1981 to 1985	1986 to 1990	1991 to 1995	1996 to 2000	2001 to 2005
1	Aurangabad	58.00	47.00	33.00	24.20	15.00	6.00	8.00
2	Beed	47.00	42.00	28.00	22.00	11.80	11.40	8.80
3	Jalna	58.00	47.00	25.00	23.80	10.00	7.00	5.80
4	Nanded	46.00	43.00	32.00	21.00	13.00	11.00	9.30
5	Osmanabad	48.00	40.00	27.00	27.00	14.60	8.00	7.00
6	Latur	48.00	40.00	20.00	23.00	12.00	8.20	6.00
7	Parbhani	64.00	48.00	33.00	31.00	14.00	10.00	11.00
8	Study region	52.60	44.00	28.34	24.57	12.91	8.80	7.99
9	Maha. State	63.00	50.80	43.00	29.40	19.40	15.44	13.18

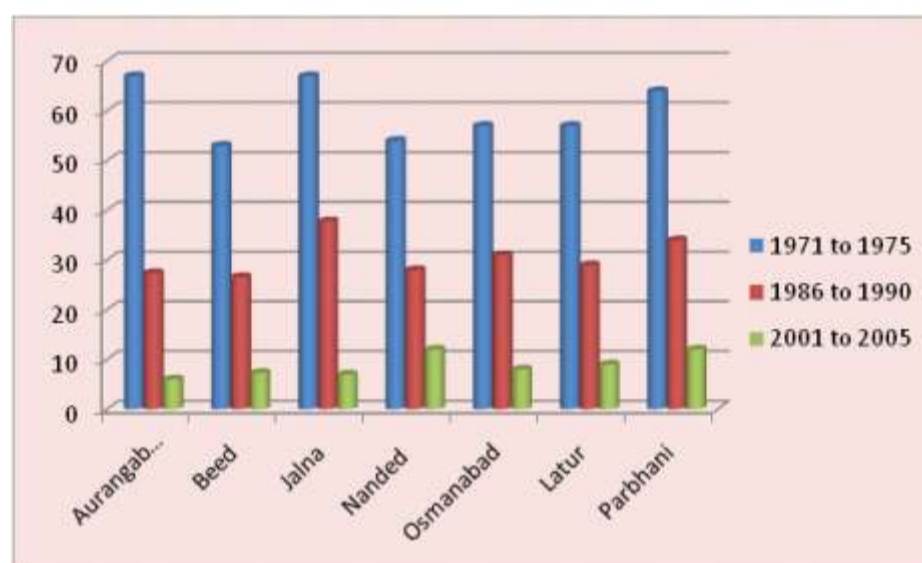
Source: Computed by Authors Based on Vital Satatics Report Published by Govt. of Maharashtra from 1971 to 2005

Table No.2
Marathwada region shwong ranking of infant mortality rates/1000 live births (Rural)

Sr.No.	District Name	1971 to 1975	1976 to 1980	1981 to 1985	1986 to 1990	1991 to 1995	1996 to 2000	2001 to 2005
1	Aurangabad	67.00	55.00	38.00	27.40	14.60	8.80	6.00
2	Beed	53.00	46.00	29.00	26.60	11.00	11.00	7.30
3	Jalna	67.00	55.00	32.80	37.80	13.00	9.80	7.00
4	Nanded	54.00	47.00	32.60	28.00	18.00	14.00	12.00
5	Osmanabad	57.00	48.00	31.00	31.00	17.00	10.20	8.00
6	Latur	57.00	48.00	27.00	29.00	16.00	13.00	9.00
7	Parbhani	64.00	52.00	36.00	34.00	15.40	9.20	12.00
8	Study region	59.00	49.60	32.34	29.11	15.00	10.86	8.76
9	Maha. State	68.00	52.20	37.00	26.40	14.20	9.52	8.13

Source: Computed by Authors Based on Vital Satatics Report Published by Govt. of Maharashtra from 1971 to 2005

Graph No 1
Marathwada region shwong ranking of infant mortality rates/1000 live births (Rural)



The lowest infant mortality rate is found in Beed district i.e.26.27 per thousand live births in the study region.

The trend shows that the rural I.M.R. is decreasing. The regional rural average IMR has decreased from 59 per thousand live births in 1971 to 1975 to 26.31 per thousand live births in 2001-2005, at that time the state average of IMR is decreased from 68 to 30.78 per thousand live births. All the districts in the study region have observed decreasing trends. This shows that the development in various sectors and facts lends to reduction in IMR in the study region.

Urban infant mortality rate(IMR):

Urban areas are a double-sided effect on human health on the one hand, it causes many health and environmental problems and on the other hand, it helps in the development of many essential services including medical facilities (Agnihotri R.C.1995). The table 3 shows the urban IMR.

The table shows that the regional average IMR is 17.07 per thousand live births and the state average in 34.02 per thousand live births. The regional average is half that of state average.

The IMR is not even in all the districts of the study region. There are four districts having IMR above the regional average. These are Parbhani, Aurangabad, Beed and Nanded district. The district of Parbhani observed highest IMR in the study region i.e. 25.34 per thousand live births other districts are Aurangabad(20.11), Beed

(16.20) and Nanded(18.14) district.

High mortality rate is observed in Parbhani (including Hingoli), Aurangabad and Nanded districts. These districts observed mortality rate between 15 to 25 per thousand live births. The moderate mortality rate is observed in the Jalna district. These districts observed mortality rate between 12 to 14 per thousand live births, whereas low mortality rate is observed in the two districts of Osmanabad and Latur. These districts observed mortality rate between 7 to 11 per thousand live births.

There is no any districts observed very high and very low infant mortality rate in the study region. The lowest infant mortality rate is found in Latur district i.e. 7.94 per thousand live births in the study region.

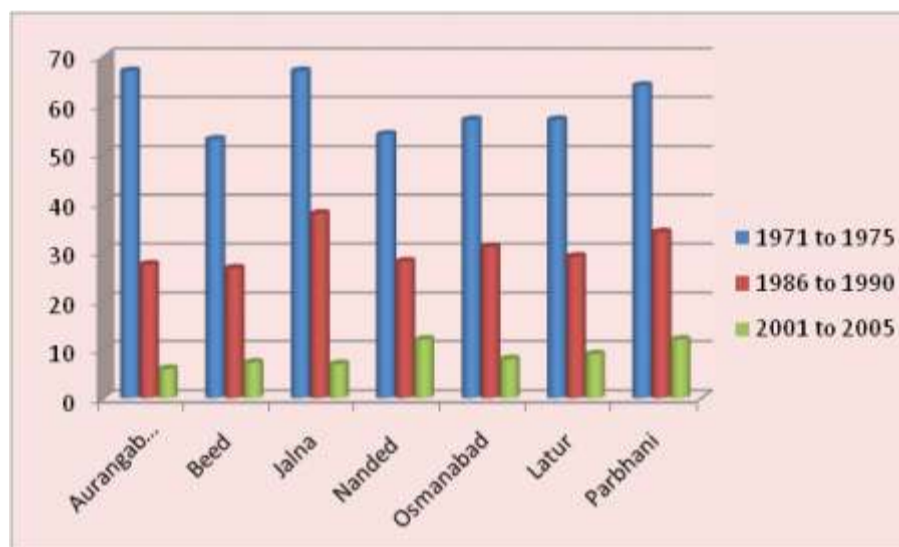
There are three districts have IMR below the regional average. These are Latur, Osmanabad and Jalna districts. The urban IMR shows decreasing trends. The regional urban IMR decreased from 30.6 per thousand live births in 1971 to 1976 to 15.18 per thousand live births in 2001-2005. In this period the state average shows decrease from 55.8 to 34.02 per thousand live births. The rate of decline in urban IMR is less as compared to that in rural areas of the study region.

Table No.3
Marathwada region shwong ranking of infant mortality rates/1000 live births (Urban)

Sr. No.	District Name	1971 to 1975	1976 to 1980	1981 to 1985	1986 to 1990	1991 to 1995	1996 to 2000	2001 to 2005
1	Aurangabad	34.00	31.00	25.60	21.00	15.00	5.20	9.00
2	Beed	21.00	35.00	26.40	16.00	13.00	12.00	11.00
3	Jalna	34.00	31.00	8.00	14.00	5.80	4.00	5.00
4	Nanded	20.00	32.00	31.00	13.00	9.00	10.00	12.00
5	Osmanabad	14.00	13.00	13.00	12.00	10.00	4.60	6.00
6	Latur	14.00	13.00	6.00	11.00	6.00	3.60	2.00
7	Parbhani	64.00	33.00	25.00	22.00	13.20	10.20	10.00
8	Study region	30.6	28.8	19.29	15.57	10.29	7.09	7.86
9	Maha. State	55.8	49.4	40.8	32.00	23.6	19.46	17.08

Source: Computed by Authors Based on Vital Statistics Report Published by Govt. of Maharashtra from 1971 to 2005

Graph No 2
Marathwada region shwong ranking of infant mortality rates/1000 live births (Urban)



The net decrease in the urban area s Infant mortality rate is 49.84 per live births in rural area where as in urban areas the net decrease is 22.75 per thousand live births.

All the districts in the study region have observed decreasing trends in IMR. The development of medical facilities, increasing per capita income, increasing literacy rate, increasing standard of living and Government practices etc leads to decrease in IMR in the urban areas of the study region.

CONCLUSION AND SUGGESTIONS:-

The infant mortality rates and their district wise distribution have been explained in depth. In the study region 25.60 % total infants deaths are occurring one year of infants. Among them 29.23% infant deaths are observed in rural and 17.07% infant deaths are observed in urban areas.

The spatial emphasis has been giving to study infant mortality rates dividing them in rural and urban areas. The neo-natal and post-natal variations are studied. Rural infants are more in Parbhani and Aurangabad district, while urban infants deaths are maximum in Parbhani. It seems that the causes of rural infant mortality rate are associated with mother's negligence about childcare cause malnutrition, lack of transportation facilities, undulation area, and lack of health facilities. The region comprising of Parbhani, Aurangabad and Nanded districts is a tribal areas and infants of the tribal population are victimized due to malnutrition and poor health facility. The special attention needs to be paid to fight with this malnutrition with taking childcare.

An important contributory factor to high infant mortality is the absence of maternal and pediatric services in our rural parts. An expectant mother should have both antenatal and postnatal care to enable her to produce a healthy child. The specialized child clinics and child health development camps need be arranged for the benefits of Parbhani, Aurangabad, Nanded, Jalna district tribal as well as rural populations.

REFERENCES:

- 1"Annual vital statistics of Maharashtra Report" published by Government of Maharashtra from 1971 to 2005.
- 2Hussain, Majid(1994): Medical Geography: Perspective in Economic Geography series-7 Anmol Publication Pvt. Ltd, New Delhi, P.31.
- 3Mayer, I.A. (2007): Medical Geography, APH Publishing Corporation New Delhi P 133.
- 4Misra, R.P.(2007): Geography of Health: A Treatise on Geography of Life and Death in India, Concept Publishing Company, New Delhi. Pp 1-2.
- 5Park. J.E., and Park k. (2011): "Text Book of Preventive and Social Medicine" Mrs Banarsidas Bhanot, Jabalpur, pp 12-13.
- 6Savant S.B. and Athwale, A.S. (1994): "Population Geography" Mehta Publishing house, Pune pp 75-76.
- 7Statistical abstract of Maharashtra State published by Government of Maharashtra, Directorate of Economics And Statistics, Govt. Press Nagpur 1971 to 2001.
- 8CRS(2002): Infant Mortality Rate in India- Analysis of Civil Registration Data, Office of the Registrar General of India, vital statistics division New Delhi.



Tathe S. V.

Head, Ast. Prof and Research Guide , Dept. of Geography , Sant Ramdas Arts, Comm. And Science. college, Ghansawangi Dist. Jalna.

Publish Research Article International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper, Summary of Research Project, Theses, Books and Book Review for publication, you will be pleased to know that our journals are

Associated and Indexed, India

- * International Scientific Journal Consortium
- * OPEN J-GATE

Associated and Indexed, USA

- EBSCO
- Index Copernicus
- Publication Index
- Academic Journal Database
- Contemporary Research Index
- Academic Paper Database
- Digital Journals Database
- Current Index to Scholarly Journals
- Elite Scientific Journal Archive
- Directory Of Academic Resources
- Scholar Journal Index
- Recent Science Index
- Scientific Resources Database
- Directory Of Research Journal Indexing

Golden Research Thoughts
258/34 Raviwar Peth Solapur-413005, Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.aygrt.isrj.org