Internship
At
District Program Management Unit of NHM Anand
Gujarat

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Abstract

The main purpose of this study is to observe the influencing factors on infant and child mortality in Anand District, Gujarat. Primary data have been used to examine the differential patterns of infant and child mortality based on socioeconomic and demographic characteristics. The study results reveal that several socioeconomic, demographic and health related variables affect on infant and child mortality. Analysis results indicate that the most significant predictors of neonatal, post-neonatal, and child mortality levels are birth interval, poverty level. The risk of neonatal mortality is 86.70 percent lower after a birth interval of 36 months and above than under 18 months. Mother's education and toilet facilities are significant predictors during neonatal and childhood

For instance, risk of neonatal mortality is almost 80% lower among the women having secondary education than those having no education. So, attention should be given to female education and expansion of public health system for reducing the risk of infant and child mortality.

Acknowledgement

At the onset of the report I would like to acknowledge my sincere thanks to my College, **'Institute of Health Management Research'** for providing me the platform to gain enough knowledge and skills in different aspects of Health Management.

Most importantly I am glad to acknowledge **Dr. S.D.Gupta**, Director IHMR, Jaipur, Dean **Dr. P.R.Sodani** Academics and Student Affairs IHMR and for incorporating the right attitude in me towards learning and for helping and supporting whenever required. I am grateful to them for giving me an opportunity to various aspects of health management, so that I came to know how the Health organization caters the society successfully and how it gives quality treatment to the society.

I express my gratitude and respectful regard to my guide **Mr.J.P.Singh Sir** (Assistant Professor) for his able guidance and useful suggestions which helped me in completing the project report. . I feel immensely proud to express my gratitude for his continuous contribution.

I would like to sincerely thank MD-NRHM (Gujarat), **Dr.R.B.Patel** [**Chief District Health Officer of DPMU-Anand,NHM (Gujarat)]** for providing me such a great opportunity to learn at the organization for a period of two-months.

I would like to take an opportunity to express my humble gratitude to **Dr.R.B.Thakkar[Reproductive Child Health Officer of DPMU-Anand,Gujarat]** under whom I executed this project. His constant guidance and willingness to share his vast knowledge made me understand this project and its manifestations in great depths and helped me to complete the assigned tasks. He is the source of inspiration and encouragement for me. During the study period, whenever I faced difficulties, he answered and made issues of concern easy with his valuable comments and advice.

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Lastly, I thank almighty, my parents, husband, kids and friends for their constant encouragement without whom this assignment would not have been possible.

Faheem Fatima

CONTENTS

ABBREVIATIONS

ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWC	Anganwadi centre
AWW	Anganwadi Worker
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha, SowaRigpa and Homeopathy
BCC	Behavior Change Communication
BPM	Block Project Manager
CHC	Community Health Center
CPRC	Community Processes Resource Center
DDK	Disposable Delivery Kits
DH	District Hospital
DLHS	District Level Health Survey
DOTS	*directly observed treatment, short*-course
DPM	*District Project Manager*
EDD	Expected Date of Delivery
FGDs	Focus Group Discussion

FRU	First Referral Unit
GIS	*Geographic Information System*
GPS	*Global Positioning System*
HMC	Health monitoring and planning Committee
HMIS	Health Management Information System
HRMIS	Human Resources Management Information System
ICDS	*Integrated Child Development Services* (*ICDS*)
IEC	Information education and communication
IFA	Iron and folic acid tablet
IMR	*Infant Mortality Rate*
IPHS	Indian Public Health Standards
IT	Information technology
JSSK	Janani Shishu Suraksha Karyakram
JSY	Janani Suraksha Yojana
MHU	Mobile health unit
MMR	Maternal Mortality Ratio
NGO	*Non-governmental organizations*
NHSRC	*National Health Systems Resource Centre*
NIPI	Norway - India Partnership Initiative
NRHM	National rural health mission

NSV	*No-scalpel vasectomy*
OAS	*Orissa Administrative Service*
ORS	*Oral Rehydration Solution*
OSMIS	*ODISHA STATE MALARIA INFORMATION SYSTEM*
OVLMS	*Orissa Vaccine Logistic Management* System
PHC	Primary health centre
PNC	Post natal care
PPP	*public–private partnership*
PRI	Panchayati Raj Institutions
RGH	*Rourkela Government Hospital*
RKS	Rogi Kalyan Samiti
SC	Sub-center
SHRSC	State Health Systems Resource Centre
SPSS	Statistical Package for the Social Sciences
ST	Schedule tribes
TFR	*Total Fertility Rate*
TT	*Tetanus Toxoid*
VHND	Village Health & Nutrition Day

Part - A

Internship Report

1.1 Introduction:

Internship is a part of the second year program, where we have to observe and learn the work culture of organization .Also it will be necessary to participate in various department/activities so we could orient our self with different departments that gives us first hand exposure.

Internship is the process, through which we can understand process of work and thereafter be able to involve in decision making.

I am appointed as District Program Coordinator at Anand in Gujarat in Health Department. It deals with preventive and curative health through a chain of CHCs (Community Health Center)PHC's (Primary Health Center)and Sub centers in the villages.

Objective of Internship:

(a) To understand the work patterns of District Health Society and its organizational structure.

(b) The next objective of internship was to learn various managerial and administrative skills needed to work in a government system and to effectively implement all the health and health related programs in the government setup to ensure the overall benefit of the community.

(c) To identify existing gaps in human resource, service delivery quality, data collection, analysis and implementation of health programs in the District and to propose probable solutions to them.

(d) To coordinate proper functioning of various programs running in the district.

1.2.1 Gujarat State Profile:

Gujarat state, located in the western part of India, has an area of 196, 204 sq. km, representing about 6.19 percent of the total area of the country. The state has a population of 6.03 crore (2011 Census), which is nearly 5 percent of the total population of the country. About 43% of the State's population resides in urban areas, compared to the India average of 28 percent. The population density of the state is 258 as compared to the national average of 324. About 24 percent (1997-98) of Gujarat's population is estimated to be BPL, while 5.8percent and 12.27 percent (2001 census) are classified as SC and ST respectively. Socio-economic indicators are, in general somewhat better than the India average: 79 percent and 71 percent of its total and

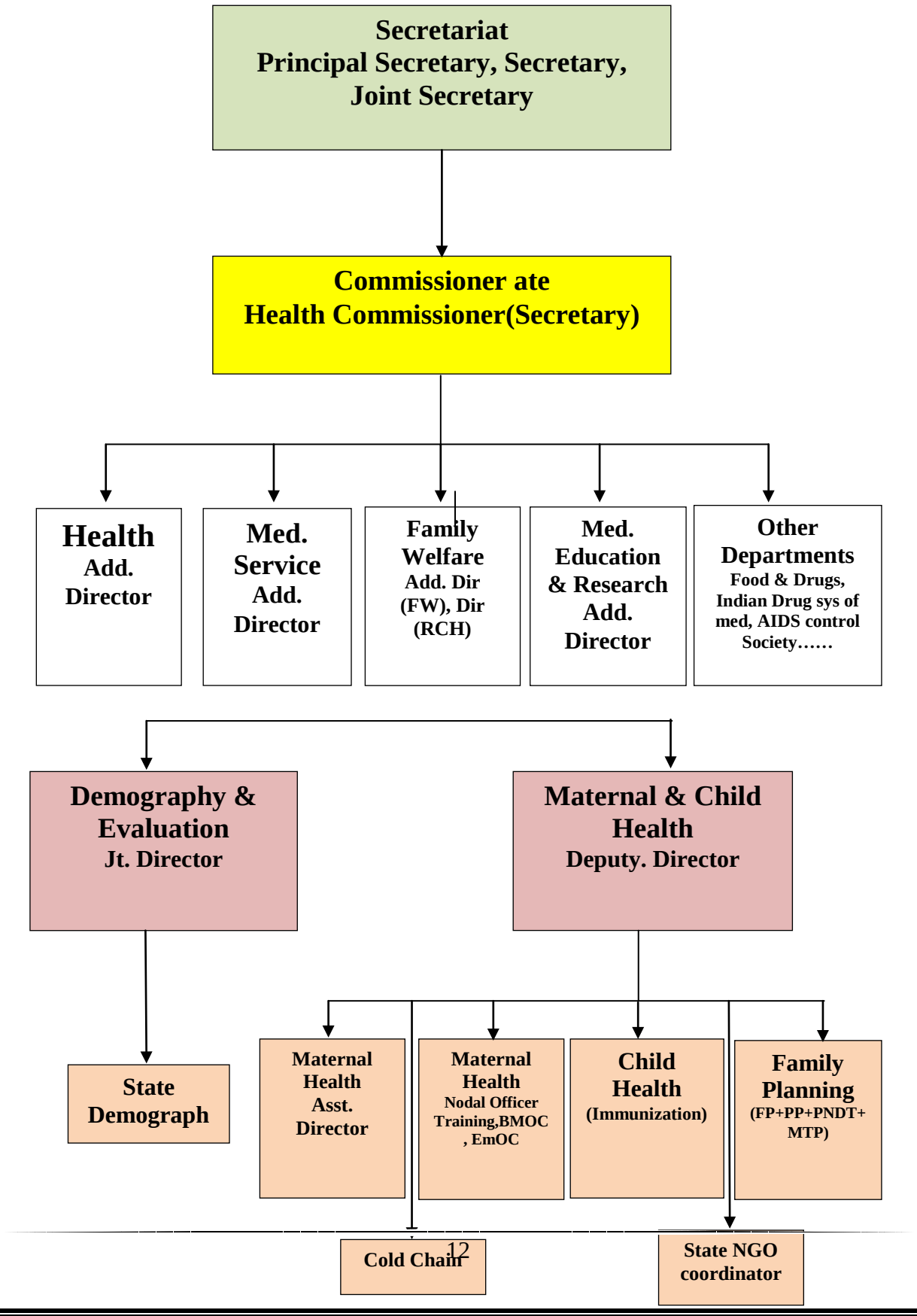
female population respectively are literate (census 2011), the corresponding figures for India being 65.percent and 54.percent respectively. The state has a relatively large (40% of its population) work force.

The state of Gujarat is characterized by sea-coastal, tribal, desert and geographically hostile terrain having sparse and scattered population at the periphery. Communities living in the remote and disadvantaged areas especially BPL population, tribal and women, are generally unable to access reliable and cost effective health care services. The state has 12 districts having population of 89, 96,744 accommodate 70 percent of tribal population (Census 2001). Approximately 18% (89, 96,744) of the total population of the state is living in these Tribal districts. The coastline of the state is about 1600 Kms. About 4487752 persons live in 36 coastal talukas.

Administratively, the state has been divided into 33 districts, sub-divided into 226Taluka's, having 18618 villages and 242 towns. District Tapti is recently created and the health system continues to administer district Tapti from Surat. It has a large three-tier health infrastructure comprising 23 district hospitals, 318 Community Health Centre (CHCs), 1158 Primary Health Centre (PHCs) and 7274 Sub-Centres (SCs). As per RHS 2012, 778 doctors at PHC's, 76 specialists at CHCs, 758 male and 875 female health (LHV) assistants are positioned in these facilities in addition to 4874 male and 6431 female health workers at sub-centers. **(http://nrhm.gov.in/nrhm-in-state/state-wise-information/gujarat.html#state_profile)**

The Department of Health and Family Welfare, Government of Gujarat is committed to promote the right of every woman, man and child to enjoy a life of health and equal opportunity and making all round efforts in this direction. The department has taken steps to bring about outcomes as envisioned in the Millennium Development goals, RCH II / NRHM program, the State Population Policy 2002 (SPP 2002), the National Health Policy 2002 and Vision 2010, Gujarat. It aims at minimizing regional variations in the areas of Reproductive and Child Health including population stabilization through an integrated, focused and participatory program. Meeting unmet demands of the target population, and provision of assured, equitable, responsive quality services are central to program strategies. Based on experience gained during the implementation of RCH II, the department anticipates that current RCH program would produce equitable reproductive and child health outcomes and contribute to raise the status of the girl child.

1.2.3 Organizational Structure of Department of Health and Family Welfare, Government of Gujarat:



Demographic, Socio-economic and Health profile of Gujarat State as compared to India figures

Indicator		Gujarat	India
Total population (In crore) (Census 2011)		6.03	121.01
Decadal Growth (%) (Census 2011)		19.17	17.64
Infant Mortality Rate (SRS 2011)		41	44
Maternal Mortality Rate (SRS 2007-09)		148	212
Total Fertility Rate (SRS 2011)		2.4	2.4
Crude Birth Rate (SRS 2011)		21.3	21.8
Crude Death Rate (SRS 2011)		6.7	7.1
Natural Growth Rate (SRS 201)		14.6	14.7
Sex Ratio (Census 2011)		918	940
Child Sex Ratio (Census 2011)		886	914
Schedule Caste population (in crore) (Census 2001)		0.35	16.6
Schedule Tribe population (in crore) (Census 2001)		0.74	8.4

Indicator		Gujarat	India
Total Literacy Rate (%) (Census 2011)		79.31	74.04
Male Literacy Rate (%) (Census 2011)		87.23	82.14
Female Literacy Rate (%) (Census 2011)		70.73	65.46

Health Infrastructure of Gujarat

Particulars	Required	In position	Shortfall
Sub-centre	9156	7274	1882
Primary Health Centre	1433	1158	275
Community Health Centre	358	318	40
Health worker (Female)/ANM at Sub Centers & PHCs	8432	6431	2001
Health Worker (Male) at Sub Centers	7274	4874	2400

An overview of Anand City

Anand District is an administrative district of Gujarat state in western India and is popularly known as Charotar. It was carved out of the Kheda district in 1997. Anand is the administrative headquarters of the district. It is bounded byKheda District to the north, Vadodara District to the east, Ahmedabad District to the west, and the Gulf of Khambhat to the south. Major towns are Khambhat, Tarapur, Petlad and Sojitra.

Demographics

According to the 2011 census Anand district has a population of 2,090,276,. This gives it a ranking of 219th in India (out of a total of 640). The district has a population density of 711 inhabitants per square kilometre (1,840 /sq mi). Its population growth rateover the decade 2001-2011 was 12.57%. Anand has a sex ratio of 921 females for every 1000 males, and a literacy rate of 85.79%.

Economy

Economy of the Anand is very vibrant which ranges from farming to big scale industries. Major crops includes Tobacco and Banana. Anand is home to the famous AMUL Dairy. Vitthal Udhyog Nagar, very big industrial belt is located on the outskirts of the city. Many famous industries including ELECON , Warm Steam, Milcent and Atlanta Electrics are situated in this industrial belt. Amul is an Indian dairy cooperative, based at Anand in the state of Gujarat, India. Amul spurred India's White Revolution, which made the country the world's largest producer of milk and milk products. Amul is the largest food brand in India and has ventured into markets overseas.

Part-B

Dissertation Report

Introduction:

In low- and middle-income countries, the probability of dying in childhood is strongly related to the socio-economic position of the parents or household in which the child is born. This survey reviews the evidence on the magnitude of socio-economic inequalities in childhood mortality within low- middle-income countries and discusses possible causes and highlights entry points for intervention.

Literature Review:

The relationship between child mortality and socio-economic factors might be relatively weak in developed countries, may be due to low child mortality. In contrast, in the developing countries, a significant portion of deaths occurs during childhood, which may be due to poor public health measures and lack of access to health care facilities. It is documented that the risk of morbidity and mortality is directly influenced by 14 intermediate or proximate determinates including education of mother, sanitation facilities, access to safe drinking water and maternal and child health care services.

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Research Question:

Does the socioeconomic and demographic factor influence the infant and child mortality?

Objective:

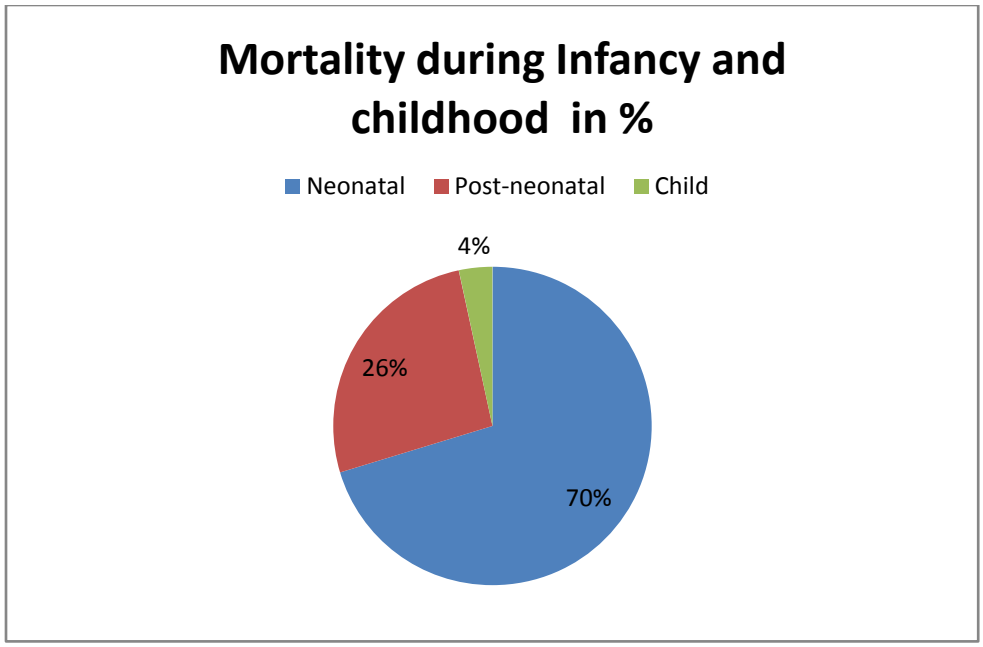
To examine the differential patterns of infant and child mortality with respect to socioeconomic, demographic and health related characteristics.

Study design and methods:

- Type of study: Descriptive cross sectional study
- Sampling : Purposive sampling
- Location of study: Umreth block of District Anand , Gujarat
- Study subjects: Family of the deceased child.
- Data to be collected on: Socio economic and demographic factors
- Data collection tools: Questionnaire (Refer Annexure – 1)

Results

Figure: 1



The pie chart above shows that the most of the childhood mortality has been occurred during Neonatal (70%) and post neonatal period (26%).

Table: 1- Caste * Age of deceased child Cross tabulation

Caste * Age of deceased child Cross tabulation					
		Neonatal	Post-neonatal	Child	Total
Caste	General	27.7%	32.3%	50.0%	29.7%
	schedule caste	14.5%	19.4%	.0%	15.3%
	Other backward caste	57.8%	48.4%	50.0%	55.1%
Total		100.0%	100.0%	100.0%	100.0%

Table 1 show that the maximum death has been occurred in the other backward caste in all the three age groups of the child.

Table: 2- Place of residence * Age of deceased child Cross tabulation

Place of residence * Age of deceased child Cross tabulation					
					Total
		Neonatal	Post-neonatal	Child	
Place_of_residence	Rural	68.70%	71.0%	75.0%	69.5%
	Urban	.0%	6.5%	.0%	1.7%
	slum	31.3%	22.6%	25.0%	28.8%
Total		100.0%	100.0%	100.0%	100.0%

The type of place of residence is also an important determinant of child survival; urban-rural differentials may be attributed to different health care services including higher coverage with immunization, safe delivery of births and access to health care services. Table2 show that in the rural area neonatal, post-neonatal and child mortality levels are higher than urban areas. Neonatal, post-neonatal and child mortality in rural areas is already 68.7%, 71% and 69.5% respectively whereas; in urban areas it is found to be 0%, 6.5% and 1.7+%, respectively.

Table: 3- Birth interval * Age of deceased child Cross tabulation

Birth interval * Age of deceased child Cross tabulation					
		Age of deceased child			Total
		Neonatal	Post-neonatal	Child	
Birth interval	<18 month	19.3%	9.7%	9.7%	16.1%
	18-36 month	33.7%	19.4%	25.0%	29.7%
	>36 months	13.3%	19.4%	50.0%	16.1%
	NA	33.7%	51.6%	25.0%	38.1%
Total		100.0%	100.0%	100.0%	100.0%

Most of the studies in the developing countries, which consider birth spacing, show that the length of preceding birth interval is the prime factors that influence mortality during

Infancy as well as other childhood ages of life. Maternal depletion is often cited as the primary mechanism responsible for the adverse effects of short birth intervals. Women with short intervals between two pregnancies have insufficient time to restore their nutritional reserves,a situation which is thought to adversely affect fetal growth. Table 1 shows that a neonatal born within 18-36(33.7%) months of the birth of its preceding siblings experienced higher mortality level in comparison to the neonatal born >36 (13.3%).

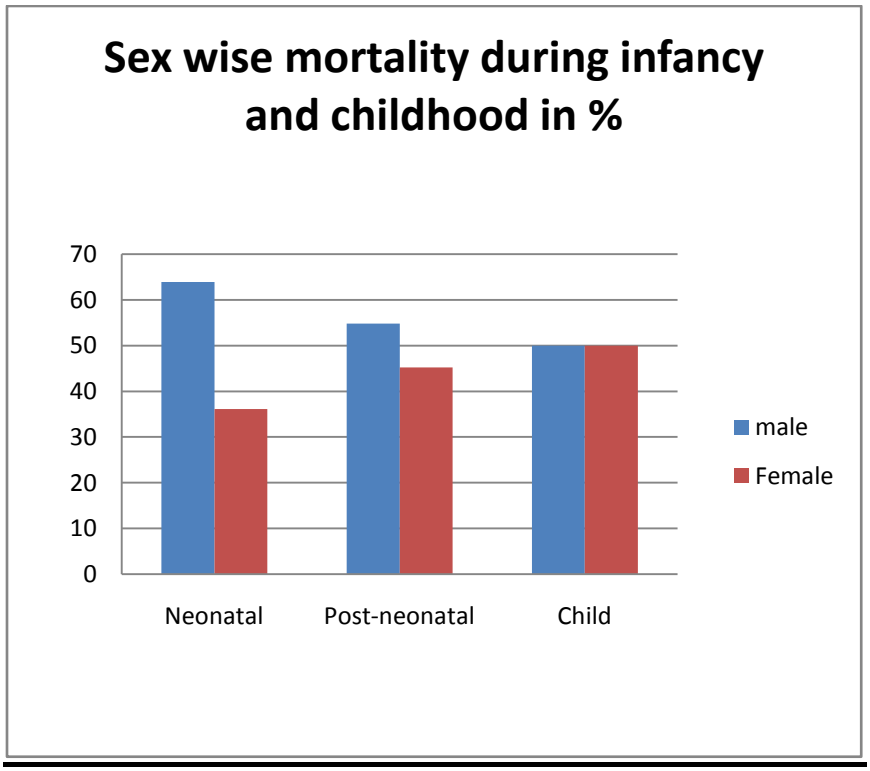
The information provided here indicates that short birth intervals significantly reduced infant probability of survival. It is also observed that the child mortality level is higher for birth intervals of 18-36 months (25.0%) than birth intervals of less than 18 months (9.7%).

Table: 4-Mother's age at the time of birth of deceased child
And Age of deceased child Cross tabulation

		Age of deceased child		
		Neonatal	Post-neonatal	Child
Mother's age at the time of birth of deceased child	<20 yrs	53.7%	51.4%	51.4%
	20-29 yrs	43.8	39.0	43.2
	30-49 yrs	2.5%	9.6%	5.4%

The age of the mother at the time of the child's birth is an important factor for infant and child survival. Infants born to mothers who are less than 19 years of age, or 35 or more years of age Are also at higher risk of dying while infants (Galway et al. 1987). Table 4 represents the Neonatal, post-neonatal, infant and child mortality pattern by age of mother at the time of birth that all the stages of mortality levels are higher for mothers who are under 20 years of age. Infant and child mortality levels are lower for children whose mothers aged between 20-29. Neonatal Mortality of the children whose mothers aged below 20 years at the time of the child's birth is 9.9 % higher than the children whose mothers are in the age range 20-29 years at the time of giving birth. This supports the earlier findings that chances of neonatal mortality are always higher for teenage mother due to complication in pregnancy and delivery, premature birth and Other related causes.

Figure-2



The obtained data shows that during neonatal and post neo natal period, male mortality exceeds female mortality as a sex differential consistent with higher biological risks faced by male children. The childhood (1-4 years), the pattern is same, with male death rates gets equal to those for females.

Table: 5-Sanitation facility * Age of deceased child Cross tabulation

		Age of deceased child		
Sanitation facility		Neonatal	Post-neonatal	Child
	Open field	75.90%	54.8%	75.0%
	Hygienic toilet	24.1%	45.2%	25.0%

Infant and child mortality is also affected by sanitary facility. A better sanitation facility is a primary health care practice and also reduces morbidity. Table 5 presents those households having hygienic latrines considerably lower neonatal (24.1%), post-neonatal (45.2%) and child (25.0%) mortality level than those without such facilities i.e.; open field defecation have higher neonatal (75.90%), post-neonatal (54.8%) and child mortality level (75.0%). It is believed that both infant and child mortality increases when sanitary condition decreases.

Conclusion:

From these findings I found that primarily the endogenous factors are playing significant role on neonatal mortality, whereas in the post neonatal as well as in the childhood period, primarily exogenous factors affect risk of mortality much.

But the negative effects of maternal education, being exogenous seem to have a great impact on infant and child mortality irrespective of the age of the child. From this survey, it is concluded that infant and child mortality levels are still considered to be high despite the introduction of various health interventions.

List of references

- http://www.krepublishers.com/02-Journals/JHE/JHE-26-0-000-09-Web/JHE-26-1-000-09-Abst-PDF/JHE-26-1-031-09-1821-Mondal-Md-N-I/JHE-26-1-031-09-1821-Mondal-Md-N-I-Tt.pdf

- http://censusindia.gov.in/2011-prov-results/data_files/gujarat/table-4.xls

- Health systems performance in sub-Saharan Africa: governance, outcome and equity[BMC Public Health.]
- Mortality Burden and Socioeconomic Status in India[PLoS ONE.]
- http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3056118/
- http://gujecostat.gujarat.gov.in/wp-content/uploads/CMGE/Basic2011.pdf
- http://censusindia.gov.in/2011-prov-results/prov_data_products_gujarat.html

- Socio-demographic correlates of infant and childhood mortality.[Rural Demogr. 1985]
- Women's health in a rural community in Kerala, India: do caste and socioeconomic position matter?[J Epidemiol Community Health. 2006]
- Child mortality, socioeconomic position, and one-parent families: independent associations and variation by age and cause of death.[Int J Epidemiol. 2003]
- Parental education and child health: intracountry evidence.[Health Policy Educ. 1982]
- Determinants of childhood mortality and morbidity in urban slums in India.[Indian Pediatr. 2003]

- Education is associated with lower levels of abdominal obesity in women with a non-agricultural occupation: an interaction study using China's four provinces survey[BMC Public Health.]
- Measuring socio-economic position for epidemiological studies in low- and middle-income countries: a methods of measurement in epidemiology paper[International Journal of Epidemiology. 2012...].

Factors influencing infant and child mortality

(Questionnaire)-Annexure-1

1) Name of deceased child .....
2) Religion of deceased child
    I. Hindu
    II. Muslim
    III. Christian
    IV. Sikh
3) Caste of deceased child
    I. General
    II. Schedule Caste
    III. Scheduled Tribe
    IV. Other Backward Caste

4) Age of deceased child
    I. <28 days
    II. 28days to 1 year
    III. > 1 year to 5 year
5) Sex of deceased child
    i. Male
    ii. Female
6) Place of residence
    i. Rural
    ii. Urban
    iii. Slum
7) Birth order
    i. 1
    ii. 2
    iii. >=3

Note: - If answer is (i) then skip to Q.9.

8) Birth interval
    i. < 18 month
    ii. 18 – 36 month
    iii. > 36 month
    iv. N.A

9) Mother's age at the time of birth of deceased child
    i. <20 yrs
    ii. 20 – 29 yrs

iii. 30 – 49 yrs

10) Mother's education
    i. No education
    ii. Primary
    iii. Secondary
    iv. Graduation
11) Mother's occupation
    i. Not working
    ii. Working

12) Mother's marital status
    i. Married
    ii. Widowed
    iii. Divorced
13) House hold income Rs. Per month
    i. <3000
    ii. 3000 – 6000
    iii. 6000 – 10000
    iv. >10000
14) Poverty status
    i. BPL
    ii. APL
15) Sanitation facility
    i. Open field
    ii. Unhygienic toilet
    iii. Hygienic toilet
16) Immunization status
    i. No immunization
    ii. Partial immunization
    iii. Full immunization
    iv. As per appropriate age
17) Ante natal care received by mother
    i. No ANC
    ii. One ANC
    iii. Full ANC
18) Treatment place while required
    i. Traditional
    ii. Private doctor/ hospital

iii. Govt hospital

19) Place of delivery
    i. Home
    ii. Private hospital
    iii. Govt hospital

20) Weight of child at the time of birth
    i. <1800 gm
    ii. 1800 – 2499 gm
    iii. >=2500 gm

21) Breast feeding practices
    i. No breast feeding
    ii. Yes but not EBF
    iii. Yes EBF