

# A SURVEY OF INFANT AND UNDER-5 MORTALITY IN FAISALABAD TEHSIL

Pages with reference to book, From 244 To 245

Abid Pervez, Naseer Ahmed Chaudhry, F.M. Chaudhry ( PMRC Research Centre, Punjab Medical College, Faisalabad. )  
Muhammad Ashfaq ( PMRC Research Centre, University of Agriculture, Faisalabad. )

## ABSTRACT

A household survey was carried out to study infant and under-5 mortality in urban and rural areas of Faisalabad Tehsil. The overall infant mortality rate was 110.1 (per 1000 live births). The under-5 mortality rate was calculated as 158.6 (per 1000 live births). These rates were higher in rural areas than in urban areas. The infant as well as under-5 mortality rates for females were higher than those for males (JPMA 41: 244, 1991).

## INTRODUCTION

The infant mortality rate (IMR) is a sensitive index of the health status of any population. It reflects the health of mothers, the level of antenatal and post-natal care of mothers and infants, family planning policy and the environmental health situation. In general it reflects the socio-economic development of a society<sup>1</sup>. The under-5 mortality reflects the broader environmental conditions affecting health status. These include the general level of poverty, nutrition, access to water and sanitation; and the prevention and treatment of the major communicable diseases of early childhood<sup>2</sup>. In Pakistan, the reliability, validity and non-availability of health statistics including infant mortality rate has always disturbed the planners and decision makers<sup>3</sup>. Presently the major sources of such data are only from studies at national level. They do not reflect, in most cases, the prevailing conditions of a particular area. With a view to collect some demographic statistics a household survey was carried out in early 1987 in urban and rural areas of Faisalabad Tehsil which due to its industrial, commercial and agricultural set up is quite representative of wide central areas of Punjab. Also Faisalabad is 3rd largest city of Pakistan with an urban population of 1.12 million. The rural population of Faisalabad Tehsil is 0.93 million<sup>4</sup>. The specific objectives of the survey were:

- i) To determine infant and under-5 mortality rates for urban and rural areas of Faisalabad Tehsil.
- ii) To study distribution of infant deaths in neonatal and post-neonatal periods.
- iii) To study sex-specific infant and under-5 mortality rates.

## METHODOLOGY

The study randomly included 900 households from urban areas and 700 from rural areas. The urban areas consisting of enumeration blocks were classified into 3 strata according to the type of blocks while in rural area each village was treated as a separate block thus constituting the fourth stratum. By using two stage-stratified cluster sample, two clusters of 10 households were selected from each of first stage selected units which were blocks in urban areas and villages in rural areas. Thus a total number of 1600 households was surveyed to collect data on births, deaths under-5 years of age and various demographic characteristics for the year 1986. Following formulas were used for finding out infant and under-5 mortality rates.

## RESULTS & DISCUSSION

A total number of 1600 households were surveyed to collect necessary data for determining infant and under-5 mortality rates.

Infant and under-5 mortality rates:

$$\text{Infant mortality rate} = \frac{\text{Number of deaths under 1 year of age in 1986}}{\text{Total number of live births in 1986}} \times 1000$$

$$\text{Under-5 mortality rate} = \frac{\text{Number of deaths under-5 years of age in 1986}}{\text{Total number of live births in 1986}} \times 1000$$

$$\text{Sex-specific Infant mortality rate} = \frac{\text{Number of specific sex deaths under 1 year of age in 1986}}{\text{Total number of specific sex live births in 1986}} \times 1000$$

$$\text{Sex-specific under-5 mortality rate} = \frac{\text{Number of specific sex deaths under-5 years of age in 1986}}{\text{Total number of specific sex live births in 1986}} \times 1000$$

The overall infant mortality rate was determined 110.1 (per 1000 live births) and was higher in rural areas (124.0) as compared to urban areas (93.1). The overall under-5 mortality rate was calculated as 158.6 (per 1000 live births). It was also found higher in rural areas (176.0) than in urban areas (137.2) (Table I).

**TABLE I. Infant and under-5 mortality rates during 1986.**

Description	Rate (per 1000 live births)		
	Urban areas	Rural areas	Total
Infant mortality rate.	93.1	124.0	110.1
Under-5 mortality rate.	137.2	176.0	158.6

The higher infant mortality rate in rural areas is in similarity with estimates of infant mortality rate for rural areas in Pakistan<sup>5</sup>. Hammoud (1987) analysed data on urban/rural differentials for 13 countries and showed that the infant mortality rate was higher in rural areas, the ratio ranging from 120-210% of the rates in urban areas<sup>1</sup>. Comparatively higher infant and under-5 mortality rates in rural areas reflect poor health status of rural population particularly the health of mothers, the level of antenatal and post-natal care of mothers and infants, environmental health situation and socio-economic conditions.

Percentage distribution of infant deaths

Present study indicates that 56% of infant deaths occurred during the neonatal period (0-27 days). The estimate of infant deaths occurring in this age group in Pakistan is 52%. According to data available on infant deaths by age, the proportion of infant deaths occurring in this period is 66% in Sri Lanka, 42% in Philippines and 16% in Egypt (Table II).

**TABLE II. Percentage distribution of Infant deaths.**

Period (Days)	% Infant deaths				
	Faisalabad (Present study)	Pakistan	Sri Lanka	Phillipines	Egypt
Neonatal (0-27)	56	52	66	42	16
Postneonatal (28 +)	44	48	34	58	84
Total	100	100	100	100	100

Source: World Health Statistics Annual 1984, 1985 by W.H.O<sup>6</sup>.

The causes of mortality in this period have been described as antenatal, natal and postnatal whereas the mortality after 27 days of life is more due to environmental and nutritional factors<sup>7</sup>.

Sex-Specific Infant and under-5 mortality rates

Infant mortality rate for females (128.2) was found higher than for males (90.9). Similarly under-5 mortality rate for females (175.2) was also higher than that of males (140.9) (Table III).

**TABLE III. Sex-Specific Infant & under-5 mortality rates during 1986.**

Description	Rate (per 1000 live births)	
	Males	Females
Infant mortality rate.	90.9	128.2
Under-5 mortality rate.	140.9	175.2

This may be due to the discriminate attitudes of the parents towards their female children. Particularly noticeable are differential feedings, low rate of attendance for immunization, maternal and child care, less prompt medical attention which lead to higher mortality rates in female children<sup>8</sup>.

Infant and under-5 mortality rates in Pakistan and other Countries

The overall infant mortality rate determined in the present study (110) is nearest to estimates for Pakistan (111). During 1986, the estimate of infant mortality rate for India and Sri Lanka are 101 and 34 respectively. The highest and lowest infant mortality rate among the W.H.O. member countries were estimated for Afghanistan (185) and Sweden (6) respectively. The under-5 mortality rate calculated in present study (159) is lower than the Pakistan (170). It was 154 and 46 for India and Sri Lanka respectively for that period. The highest and lowest under-5 mortality rate in the world was estimated for Afghanistan (325) and Sweden (7) respectively for the year 1986 (Table IV).

**TABLE IV. Infant and under-5 mortality rates in Pakistan and other Countries during 1986.**

Description	Rate (per 1000 live births)					
	Faisalabad (Present study).	Pakistan	India	SriLanka	Afghanistan	Sweden
Infant mortality rate.	110	111	101	34	185	6
Under-5 mortality rate.	159	170	154	46	325	7

Source: The State of The World's Children 1988 by UNICEF<sup>9</sup>.

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