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Abstract

Pakistan has one of the highest Infant mortality rates in the world. Most death takes place as a result of Health seeking behavior of mothers or rather lack of it. This study was aimed at finding out situation of Infant mortalityin low-income areas in Karachi, the capital of Sindh, Pakistan. Due to limited resources this study is restricted to only one locality, Shershah, Karachi. The data was collected from the ever-married women aged 15-49 in sample locality. Detailed information on women's socio-economic background, birth histories and health status was obtained for analysis.

تلخيص مقالم

Introduction

In last few years, social scientists and economists have become critical of GNP and per capita statistics as the major indicator for the level of development, especially in the case of underdeveloped countries. Other more sensitive indicators, which reflect a border range than does the GNP per capita, have begun to be preferred. One of the most important indicators to replace or supplement the GNP per capita concept is the Infant Mortality (IMR) statistics. The importance of this indicator as a reflector of the level of development is further enhanced when one considers the fact that it was one of the three indicators chosen by Morris (1979) for his monumental Physical Quality of Life Index. Thus, the careful observation overtime of the IMR is an important, albeit still crude, sign for the way a country is progressing. And given this importance, it becomes one of the

main targets, which needs to be addressed by policy makers. However, before one is able to implement measures that bring this rate down, i.e. pushing the 'policy package', it is necessary to study carefully the actual causes that result in the high rate. Seeking explanations for a high level of infant mortality, thus, becomes an important objective. Mortality studies in developing countries are often related to the level of economic development of the nation, or have examined mortality differentials by sociodemographic and environmental factors, both at aggregate and individuals levels within nation (Martin et al, 1983).

According to UNICEF statistics, in Pakistan the infant mortality rate was around 150 to 180 deaths per thousand live births at the time of independence in 1947. This has declined to 96 in 1991, in 2010 it was 70/1000 live births per annum. Neonatal mortality rate was 41 in 2010, mainly due to improved health services and a successful immunization program. Available evidence suggests that slightly more than one-third (36 %) of all deaths occur during infancy in Pakistan. Moreover, one-third of all infant deaths occur within one week of birth. An additional 22 % of deaths occur in the second to fourth week. In other words, more than half of infant deaths are neonatal deaths that occur within four weeks of birth. Much could be done to eliminate some of the causes of neonatal deaths such as short birth intervals and high parity births (PDHS, 1991).

For the most recent five-year period preceding the Pakistan Demographic and Health survey (2006), infant mortality was 78 deaths per 1,000 live births and under-five mortality was 94 deaths per 1,000 live births. The pattern shows that over half of deaths under five occur during the neonatal period, while 26 per centoccur during the post neonatal period. Under-five mortality has declined from 117 in 1986-90 to 94 in 2002-06, a 20 per cent decline in 16 years. Differentials by place of residence show that the underfive mortality rate was 28 percent higher in rural areas than in urban areas (100 vs. 78 deaths per 1,000 live births). As might be expected, rates are lower in major cities than in other urban areas. The major causes of death among children under five are birth asphyxia (accounting for 22 per cent of deaths), sepsis (14 per cent), pneumonia (13 per cent), diarrhea (11 per cent), and prematurity (9 per cent). As expected, causes of death are highly correlated with the age at death. Deaths during the neonatal period (first month of life) are almost entirely due to birth asphyxia, sepsis, or prematurity. Deaths in the post neonatal period (age 1-11 months) are mostly due to diarrhea and pneumonia, while the main causes of deaths to children age 1-4 years are diarrhea, pneumonia, injuries, measles, and meningitis. These results support a strong focus on addressing new born deaths and a continued focus on reducing deaths from diarrhea and pneumonia. The Pakistan Demographic and Health Survey (PDHS) .2006-7.

A review of literature on mortality suggests that a gap exist in the knowledge of the factors, particularly operating at the household level that is influential in determining

mortality of children (Pakistan Demographic and Health Survey, 1991; UNICEF, 1995). There is, therefore a need for a study to understand the health-seeking behavior of mothers; affecting infant mortality.

Infant Mortality Rate (IMR) is defined as the number of infant deaths under one year of age per 1,000 live births. IMR specifically expresses the probability of dying between birth and the first birthday. IMR is divided into neonatal (deaths in the first 4 weeks of life) whereas postnatal (deaths between one to 11 months of age) mortality. Neonatal mortality is determined mainly by prenatal and obstetric factors and post neonatal by environmental factors such as child care, immunity against infections, water and sanitation. In past, infant mortality claimed a considerable percentage of children born, but the rates have significantly declined in the West in modern times, mainly due to improvements in basic health care, though high technology medical advances have also helped. Infant mortality rate is commonly included as a part of standard of living evaluations in economics.

Studies on infant mortality in Pakistan have been estimation of levels, trends and differentials in mortality (Irfan, 1986). The level of infant and child mortality is widely used not only as a demographic measure, but also as an important indicator of the level of health in a society and of its living standard. Like most developing countries, Pakistan has experienced a rapid decline in mortality during the last three decades (Afzal et al., 1988). This decline in mortality has been attributed mainly to health and medical interventions such as immunization and availability of antibiotics to treat infectious diseases; and also to improvements in the socio-economic conditions (Alam and Cleland, 1988). Pakistan's health policy initiatives since independence in 1947 have been concerned with the reduction in infant and child mortality, the development of an extensive public health infrastructure to provide both curative and preventive services, provision of clean drinking water, and a set of social and economic reforms intended to improve the average standards of living (Afzal et al., 1988).

Ahmed, Bhatti&Bicego (1991) examined levels, trends, determinants and differentials in the mortality of infants and children under the age of five, they studied major areas of child survival intervention and found out that it include: (1) control of diarrhoeal disease, (2) management of acute respiratory infection, (3) the Expanded Programme on Immunisation (EPI), and (4) nutrition. Careful examination of changes in the level of infant and child mortality is essential in assessing whether and to what extent such efforts have been effective.

Sathar's (1987) study shows that maternal education was a strong indicator of survival, much more so than paternal education. Similarly, female heads of households increased survival, probably because they control financial allocations. The study suggested that

rather than attempting to eliminate poverty overall, improvements in maternal education, nutrition, health care facilities and their use, and childbearing and child-rearing methods would do more to improve child survival in Pakistan.

<u>Hobcraft</u>, <u>Mcdonald</u> & Rutstein(1984) in theirstudy considered five socio-economic factors of infant and child mortality, using results from World Fertility Survey enquiries in 28 developing countries. They considered differences inthe variables such as mother's education, mother's work status, husband's occupation, husband's education and type of place of residence. The result shows that in general, differences are most strongly associated with only three of the variables considered: mother's education and the husband's occupation and education. Socioeconomic differences increase with age through the first five years of life. Mother's education seems to be particularly strongly associated with infant mortality during the first five years of life in the Asian countries.Hobcraft (1993) points out, that Mother's education may influence child health and mortality through different pathways. Education enhances the acquisition and use of health knowledge

Objectives of the Study

This study has the following main objectives

- 1. To collect demographic details of mothers and their families who have suffered from infant mortality.
- 2. To examine the pattern of health-seeking behavior of mothers residing in sample locality.
- 3. To examine main factors or reasons of infant mortality in sample locality.

Method and Material

Major aim of the study is to address the poor health conditions prevailing in some low income localities. Data was collected from respondents living in low-income areas in Karachi, the capital of Sindh, Pakistan. It is the biggest city in the country, with a population of around 15 million and an average annual growth rate of 5%. Due to limited resources this study is restricted to only one locality, Shershah, Karachi. The data was collected from the ever-married women aged 15-49 in sample localities. Detailed information on women's socio-economic background, birth histories and health status was also obtained. Keeping in view the objectives of the study, interview-cum-questionnaire was prepared and it was translated into Urdu so that field investigators could collect the data easily from the study area. It was decided that sample size of 220 respondents from the universe be taken randomly. At first stage field investigators were trained to collect the data under the supervision of Principle Investigator. We pre-tested

the questionnaire on 0.5% respondents from the sample area to check the reliability and validity of the data. The problems faced by the investigators in completing the questionnaires were discussed and thereafter made necessary amendments/changes. The data was clean and edit to control errors at every step while collecting information from the respondents. The database was established regarding the proportion of health population. Problems faced by mothers and their infant were presented in simple tables for analysis and interpretation.

Analysis and Interpretation of Data

This study was spread over in area of Shershah and a sample of 220 was selected on random basis.

Age of Respondents, their Past Residence and Language Spoken

A vast majority of respondents were between 21 and 40 years of age (91.81%). These most of the respondents were capable to understand our questions and were well aware of the possible problems they were facing. It shows that most of these respondents (64.53%) have been living in city whereas only 78 respondents (35.47%) migrated from village to the city area (see Table# 1). Most of the respondents were bilingual, Out of 220 mothers 138 (62.72%) speak Urdu. We thus assume that the respondents' group is quite homogenous.

Type and Size of Family and Income Group

Poor economic conditions do not allow these families to live in a joint family system and thus majority of them (65.45%) were living in a nuclear family system (see Table # 2). The poor earning capabilities are obvious from Table # 2 where it is quite obvious that 93% respondents earn less than 6,000 rupees per month.

Educational Level and Occupational Status

As stated in above paragraph that our respondents have low earning, it could be due to the meager education these people have. Table # 3 shows that out of 220 respondents a higher proportion (44.54%) have not received any education and could be classified as "illiterate" people. Table # 3 also indicates that the poor literacy rate prevails among the spouses as well. Table # 3 reveals that high proportion (80%) respondents were non-working. The poor economic condition plus a low literacy rate made the health conditions worst in the families.

Age at Marriage and Age at Birth of the First Child

Table #4 shows that almost 41% respondents got married before reaching the age of 18 while 73% got married before reaching age of 24. Male also in Pakistan, get married at early age which give rise to a larger family size. People living in these localities are compelled by social structure and family traditions.

Type of Household Construction

Table #5 shows that most of the respondent (56. %) do not have Pucca house and many of them (48.18%) have semi Pucca houses. These houses are small and many respondents (46.36%) have one or two rooms only. Only smaller families (15.45%) or more respondents have constructed large houses which consist of five or six rooms.

Household Facilities

Table #6 shows that (90%) respondents have access to natural gasfor their kitchens and 100% have electricity. These facilities eases their living and decrease pollution, improves environmental condition and leave live for these respondent to do some other work, if they wish so. Unlike natural gas and electricity other facilities like refrigerator, TV, Telephone, VCR are not too common in these localities, thoughmost people own cell phone now a days.

Sanitation and Water Facilities

Table # 7 reveals that almost 80% of our respondents keep garbage in open containers. Garbage disposal is a problem for residents for these localities. Access to clean water is a right of every citizen, yet it is far away from these residents.

Health Education

It was observed at Table # 8 that almost 90% of our respondents (196) do not regularly spend a particular amount on health problems. Illiteracy plays a vital role in this ignorant attitude. Vast majority of our respondents (51%) received health knowledge after consulting doctors. There should be more programs and gathering arranged by the community member where people can learn more about health hazard and possible preventive measures.

Ideal and Desired Number of Children

Son preference is evident in the result .74% respondents (74%) do not wish any more girls in their family. None of them wanted more than 4 or more girls but 35% wanted to have more than 4 boys.

Number of Alive and Still Births

It is alarming and need specific measures when we look at Table # 10 we find that the 66.36% families has less than four alive births and only 14.53% had more than 5 live births. The poor economic condition can easily portray the conditions in which their children and the entire family must be living.

Duration of Sickness of Diseased Infant

The situation is not so good and does not provide a good picture when we look at Table # 11 that all the 220 respondents have had faced infant mortality. Among the 150 respondents (68.81%) had seen at least one infant died in their family. Diarrhea was major cause of death of infants which is due to unclean contaminated water.

Awareness of Health Conditions

Feedback revealing information regarding health awareness is also very poor. Table # 12 shows that 57% respondents were partly satisfied with their health condition during pregnancy, very few were concerned of their diet . 33% had blood pressure either low or high or they were anemic during pregnancy.

Vaccination Program

Our study shows that 68.18% (150) respondents have followed the vaccination program thus ensure a good healthy life for their children while 10.90% follow the vaccination program casually (see Table #13). Unhygienic living condition, mother's malnutrition and high rate of fertility were the major causes of infant mortality, identified by respondents.

Recommendations

In our country considerable progress against infant mortality, neo natal mortality can be accomplished through the implementation of basic public health measures. Public health department should play its role so it could reduce infant deaths due to diarrhea and infectious disease. Proper trained medical voluntaries should be hired to work in the community. Volunteers should provide education to parents that a smaller healthier family is far better than a large unhealthy family. Proper vaccinations should provide in specified time span at prescribed time to understand that duration are extremely essential. Any negligence at any stage may cause heavy health related problems while ultimate could result in a retarded human being. Different organizations working in the community need to address the problems through advertisement and easy accessibility

mass media.More health related Centre especially with maximum facilities should be opened in less privileged areas. Nurses and community workers should contact people regularly, encourage and educate them about health related problems, their causes and their after effects. This might be a long journey but would be a very fruitful for future generation. The spread of health knowledge cannot be fast without the support of the influential people of the area. They must be contacted in advance, communicated and then motivated to guide the residents. The residents should strictly follow the health education codes. If the elders of the society use their influences it could be done quite successfully. For example cleanliness is an acute problem in such localities if the elders and influential people decide that appropriate cleaning measures should be used and if they compel resident to keep area clean, many people would response. We also suggest that government and NGOs working in their particulars once should work hard at publicize the correct effect of infants mortalities could face due to the negligence of their aware of the deprecation of negligence at these early stages of infants deaths.

Bibliography

- Afzal, M.T; A. Raja and A. Muhammad (1988). Some Differentials in infant and child mortality risks in Pakistan 1962-1986. The Pakistan Development Review, 27:2,635-642.
- Ahmed, T. and B. Monsoor-ul-Hssan (1991). Infant and child mortality. Chapter in Pakistan Demographer Health Survey, 111-123.
- Alam, A. and J. Cleland (1988).*Infant and child mortality: Trends and determinants in IqbalAlam and Betzy Dinesen (ed.). Fertility in Pakistan: A review of findings from the Pakistan Survey*.Voorburge: International Statistical Institutes, 187-212.
- Caldwell, J.C. (1979). Education as a factor in mortality decline: An examination of Nigerian data, Population Studies, 33:2, 395-413.
- Caldwell, J.C.; P.J. Reddy and P. Caldwell (1983). *The social component of mortality decline: An investigation in South India employing alternative methodologies*. *Population Studies* 37:2,185-205.
- Hobcraft, J.N; J.W. Mcdonald, and S.O. Rutsetein (1984). Socio Economic factors in infant and child mortality: Across-national comparison. Population Studies, 38:2,193-223.
- Irfan, M.M. (1986). Mortality trends and patterns in Pakistan, ESCAP, UN.Asian Population Studies Series #75.

- Khan, Z. (1991). Are breastfeeding pattern in Pakistan changing. The Pakistan Development Review, 30:3,297-311.
- Martin, L.G., J. Trussell, F.R. Salvail, and N.M. Shah (1983). Covariates of child mortality in Philippines, Indonesia and Pakistan: An analysis based on hazard model. Population Studies, 37:4,417-432.
- Morris, David. (1979), "Measuring the Conditions of the World Poor, the Physical Quality of Life Index", Pergaman Press, New York.
- Pakistan Devolpment and Health Survey, (1991).Pakistan Demographic and Health Survey, 1990.*Macro/IRD and National Institute of Population Studies, Pakistan.*
- Rutstein, SO. (1984). Infant and child mortality: Levels trends and demographic differentials. WFS Comparative Studies 24 Vooburg, Netherlands: International Statistical Institutes.
- Sathar, Z.A. (1987). Seeking explanations for high levels on infant mortality in *Pakistan.The Pakistan Development Review*, 26:1,55-70.
- Sathar, Z.A. (1987). Infant and child mortality in Pakistan, Some trends and differentials. Journal of Biosocial Science, 17:3,351-359.
- UNICEF (1995). State of the world's children. 1986-1995. UNICEF, New York, USA.
- UNICEF(2011).availableat<u>http://www.unicef.org/infobycountry/pakistan_pakistan_statist</u> <u>ics.html .Retrieved</u> on July 24th,2012.

Table: 1
Frequency and Percentage Distribution of Respondents by their Age, Past
Residence and Language Snoken

	Frequency	Percentage (%)
Age Group (Years)		
Less than 20	8	04
21-30	136	62
31-40	66	30
41 and above	10	04
Past Residence		
City	142	65
Village	78	35
Language Spoken		
Urdu	138	63
Punjabi	24	11
Pushto	12	05
Barohi	04	02
Siraiki	14	06
Sindhi	28	13

	Frequency	Percentage (%)
Type of Family	. .	
Nuclear	144	65
Joint	76	35
Size of Family		
2-4 members	04	05
5-7 members	30	39
8-10 members	18	24
11-13 members	20	26
14 & above Members	04	06
Income Level (Rupees)		
Less than 2000	28	13
2000-3000	78	36
3000-4000	58	26
4000-5000	18	08
5000-6000	22	10
6000 and above	16	07

Table: 3
Frequencies and Percentage Distribution of Respondents and Their Spouses'
Educational Level and Occupational Status

	Frequency	Percentage (%)
Educational Status of Respondent	• •	
Illiterate	98	44
Primary	40	18
Matriculation	46	21
Intermediate	22	10
Graduate	10	05
Post Graduate	04	02
Educational Status of Spouse		
Illiterate	60	27
Primary	80	36
Matriculation	40	18
Intermediate	12	06
Graduate	14	06
Post Graduate	08	04
No Response	06	03
Employment Status of the Respondent		
Housewife	176	80
Govt. Service	04	02
Private Service	20	09
Labor	20	09
Employment Status of Spouse		
Govt. Service	30	14
Private Service	78	35
Business	18	08
Labour	97	43

Frequencies and Percentage Distribution of Respondents and Their Spouses' Age at Marriage and Age at Birth of the First Child

	Frequency	Percentage (%)
Respondent's Age at Marriage		
14-18 Years	90	41
19-23 Years	70	32
24-28 Years	36	16
29-33 Years	20	09
34-38 Years	04	02
Spouse Age at Marriage		
14-18 Years	04	04
19-23 Years	36	16
24-28 Years	104	47
29-33 Years	50	23
34-38 Years	22	10
Age of the Respondents at Birth		
of the First Child		
15-19 Years	42	19
20-29 Years	168	76
30-39 Years	10	05
40-49 Years	-	-

Table: 5

Frequencies and Percentage Distribution of Households by Type of Construction and Number of Rooms

	Frequency	Percentage (%)
Type of Construction		
Kutcha / Wooden	18	08
Semi-Pucca	106	48
Pucca	96	44
Number of Rooms		
1-2	102	46
3-4	84	38
5-6	34	16

Table: 6			
Frequencies and Percentage Distribution by Households Facilities			
	Frequency	Percentage (%)	
Electricity			
Yes	220	100	
No	-	-	
Sui Gas			
Yes	200	90	
No	20	10	
Telephone			
Yes	22	10	
No	198	90	
Refrigerator			
Yes	18	08	
No	202	92	
TV			
Yes	40	18	
No	180	82	
VCR			
Yes	10	05	
No	210	95	
Radio/Tape Recorder			
Yes	50	23	
No	170	77	

Table: 7
Frequencies and Percentage Distribution of Households by Sanitation and Water
Facilities

	Frequency	Percentage (%)
Toilet Facilities		
Flush	144	65
Bucket	14	06
Pit Latrine	54	25
No Facility	08	04
Garbage Container		
Covered Bin	46	21
Open Container	174	79
Garbage Disposal		
In the Area	14	06
Outside the Area	26	12
Burn	12	06
Handover to Sweeper	168	76
Source of Drinking Water		
Private Pipe	56	25
Public Tape	22	10
Sprig/Well	76	35
Tanker	66	30
Purifying Water		
Yes	84	38
No	136	62
Purification Method		
Boiling	60	71
Chemical	24	29

	Frequency	Percentage (%)
Spent Income on Health		
(Monthly)		
Yes	24	11
No	196	89
Amount Spent on Health		
(Monthly in Rupees)		
100-300	12	50
400-600	04	17
700-900	08	33
Received Health Education		
Yes	144	65
No	76	35
Source of Health Education		
Friends	06	04
Relatives	14	10
Community Members	30	21
Doctors	74	51
Mass Media	20	14
Rate Health Condition		
Excellent	26	12
Very Good	22	10
Good	142	65
Bad	20	09
Poor	10	04

Table: 8Frequencies and Percentage Distribution by Health Education

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Frequencies and Percentage Distribution by Ideal and Desire Number of Children in a Family

	Frequency	Percentage (%)
Ideal Number of Boys		
1-2	138	63
3-4	58	26
More than 4	24	11
Ideal Number of Girls		
1-2	174	79
3-4	46	21
More than 4	Nil	Nil
Desire More Boys		
None	24	11
1-2	112	51
3-4	78	35
5 and More	06	03
Desire of More Girls		
None	162	74
1-2	54	24
3-4	04	02
5 and More	Nil	Nil
At Least Preferred Birth		
Duration		
1 Year	30	13.63
2 Years	96	43.63
3 Years	90	40.90
4 Years	04	1.81
At Most Preferred Birth		
Duration		
1 Year	Nil	Nil
2 Years	74	34
3 Years	114	52
4 Years	32	14

	Frequency	Percentage (%)
Number of Children		
2 or Less	86	39
3-4	88	40
4-5	26	12
More than 6	20	09
Number of Alive Births		
Less than 2 Births	60	27
2-3 Births	86	39
4-5 Births	42	19
More than 5 Births	32	15
Number of Still Births		
None	144	66
1-2	60	27
3 or More	16	07

 Table: 10

 Frequencies and Percentage Distribution by Number of Alive and Still Births

Frequencies and Percentage Distribution by Number, Ages and Duration of
Sickness of the Diseased Infant

	Frequency	Percentage (%)
Number of Infant Mortality		
1 Child	150	69
2 or More Children	70	31
Age of Deceased Infant		
Less than 3 Months	76	35
3-4 Months	66	30
5-6 Months	46	21
7-8 Months	12	05
8-12 Months	20	09
Duration of Sickness of Deceased		
Infant		
Less than 3 Months	94	43
3-4 Months	72	33
5-6 Months	30	14
7 and above Months	24	10
Cause of Death		
Phenomena	76	34
Diarrhea	66	30
Fever	46	21
Fits	32	15

Table: 12

Frequency and Percentage Distribution of Respondents by Health, diet and Sickness Conditions during the Pregnancy of the Deceased Infant

8	Frequency	Percentage (%)
Satisfied with Health	• •	
Conditions during Pregnancy		
Fully	70	32
Partly	126	57
Not at All	24	11
Concerned of Diet		
Yes	76	35
No	144	65
Type of Diet		
Milk	21	28
Meat	19	25
Eggs	12	16
Fruits	24	31
Reasons for Lack of Diet Care		
Low income	64	44
Inflation	18	12
Lack of Information	22	15
Lack of Availability	26	18
Joint Family	14	10
Fell in Disease During		
Pregnancy		
Yes	72	33
No	148	67
Nature of Disease		
High Blood Pressure	18	25
Low Blood Pressure	22	31
Anemic	32	44

Table: 13
Frequencies and Percentage Distribution by Vaccination Program for the Deceased
Infant

	Frequency	Percentage (%)
Follow Vaccination Program		
Yes	150	68
To Some Extent	24	11
No	46	21
Reasons not Follow		
Vaccination Program		
Lack of Awareness	28	61
Financial Problems	04	09
Distance from Center	14	30
Causes of Infant Mortality		
Lack of Education	37	17
Lack of Medical Facilities	22	10
Lack of Awareness	28	13
High Fertility Rate	45	21
Malnutrition of Mothers	58	26
Unhygienic Conditions	30	13

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