Volume-2, Issue-8, December-2018: 197-205
International Journal of Recent Innovations in Academic Research ISSN: 2635-3040

Infant and Child Mortality in Kashmir

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Abstract: The present study is conducted to study the number of infant and child deaths in Kashmir valley since 2015-2017 and to compare the infant and child deaths in rural and urban Kashmir on the basis their Gender and Dwelling. The study reveals that majority of infant deaths occurred in Baramulla district followed by Anantnag, kupwara, Srinagar, Budgam, pulwama, kulgam, Bandipora, Shopian, Ganderbal district and the maximum number of child deaths occurred in kupwara that is followed by Baramulla, Budgam, Anantnag, Srinagar, pulwama, Bandipora, kulgam, Ganderbal, Shopian since 2015 to 2017. The majority of infant and child deaths occurred in urban Kashmir followed by rural area from 2015 to 2017. The maximum number of infant and child deaths was high among boys than girls since 2015 to 2017.
Keywords: Mortality, Infant Mortality, Child Mortality, Kashmir, Gender, Dwelling.

Citation: Shazia Bashir, Muzamil Jan and Sobia Jan. 2018. Infant and Child Mortality in Kashmir. International Journal of Recent Innovations in Academic Research, 2(8): 197-205.

Introduction

Children are significant properties of a country, therefore decrease in infant and child mortality is likely the most significant objective of the Millennium Development Goals (MDGs). Infant and child mortality rates replicate a country's level of socio-economic progress and quality of life and are used for observing and evaluating population, health programs and policies (Kapoor, 2010). It is an effect rather than a cause and hence directly dealings with the result of the distribution and use of resources, (Haines, 1995).

Mother and child create a priority group in a public. They comprise of approximately 57.5% of the total population and constitute a vulnerable group. Maternal mortality and infant mortality are the main health pointers of any cultured society. The universal Declaration for Human rights of 1948 in article 25 stressed that Motherhood and Childhood are entitled to special care and assistance. (Dolma, 2015). Under five mortality (U5MR), the possibility of dying between birth and age 5 expressed per 1000 live births, and infant mortality (IMR), the probability of dying before age 1 expressed per 1000 live births has been used as measures of children's well- being for many years (Amouzou and Hill, 2004). Worldwide, every year about 500, 000 women expire due to childbirth and over 9 million children under age five die mostly from preventable and curable diseases (WHO, 2003). The infant mortality rate (IMR) is one those core populace health indicators as it reveals the quality of life of mothers and

other family members, the entree to a good nutrition, education, human rights, and security, inequity in deprived population groups and the environment. Decrease in infant and child mortality is not a major goal but also an important policy to achieve health for all (Krishna *et al.*, 2016). Among the reasons cited for the poor state of infant and child health in India are insufficient newborn care, deficient breastfeeding, malnutrition, short immunity and high incidence of infectious diseases (Sharma, 2008).

Review of literature

The causes associated with maternal and child mortality includes poor socio-economic development, weak health care structure, low socio cultural barriers to care utilization (Olusegun *et al.*, 2012). The determinants such as income (unemployment), cultural\traditional practices, demographic variables (parity), interval, maternal age etc. as major elements touching infant mortality (Chabila, 2004) and also the causes accountable for child mortality were urban to rural dwelling, work status of the parent and per capita income (Sagagi, 2016). The outcomes of the research also show that edification, cleanliness, low income, short distance, deficiency and occupation of the households connected with infant mortality (Kami Luis, 2010). This study exposed that mother's education, mother's place of dwelling, sex, birth order, labor interval, mother's age at the time of delivery of the subject child, nutritious deficiency, and place of delivery were the factors accountable for under-5 mortalities (Buwembo, 2010). The work status of a mother is an important determinant of mortality of her children at the younger ages from 0-5years (Tawiah, 1979).

The various features contribute for infant mortality were urban rural variation such as improved education, upgrading of public and health infrastructures in urban than in rural areas (Slam *et al.*, 2003). Both the immunization and gross domestic product per capita meaningfully affect infant and child mortality rate (Fortugaliza, 2017). This study found that the factors associated with child death were birth interval with previous child and mother's standard of living index (Kumar *et al.*, 2010). Acute respiratory infections were commonly found after other infections and in connotation with severe malnutrition and ARI mortality were uppermost in the neonatal period (Garenne *et al.*, 1992).

The most common cause of death in infants was acute respiratory infection (ARI), whereas in children it was malaria and other foremost causes of death were acute gastro enteritis, malnutrition and septicemia (Jaffar *et al.*, 1997). The studies also found that the place of birth, the kinds of birth assistants, and application of health facilities might be connected with differentials of infant mortality (Huang *et al.*, 1997). The most important forecasters of neonatal, post-neonatal, and child death levels are immunization, ever breastfeeding, maternal age at birth and birth interval (Mondal *et al.*, 2009). The maternal education, wealth index, breast feeding status, labor order, previous birth and watching TV have effect on child mortality (Islam *et al.*, 2013). Mother's education and profession, extent of breast feeding, number of children ever born, current place of dwelling, household income affect infant and child mortality meaningfully (Bailey, 1988).

The reasons responsible for infant deceases were poor housing, poor environment sanitation, low maternal education, early marriage and pregnancy (Rathod *et al.*, 2011). The lack of doctors and nurses, gap between two deliveries, age of marriage, unhygienic conditions, illiterate mothers, uneven vaccination were the factors responsible for infant death rate (Nityananda *et al.*, 2014). The findings also expose that the people incarnate in rural areas have minute or no access to healthcare facilities with which they can delight their ill children and because of poor infra-structure in the rural communities' children were more frown to

extreme infection and more vulnerable diseases (Hobs Craft *et al.*, 1984). Short birth interval, sex differences in infant and child death reflect strong son preference and discrimination against female children are very strong and mother's literateness, access to a flush or pit toilet, household heads religion and caste\tribe membership, and economic level of the domestic have substantial effect on infant and child death (Pandey *et al.*, 1998).

The studies also found that the children were more likely to die before partying their first birthday due to mothers lower schooling, fathers low level of education, lack of revelation to mass media, families belong to SC\ST\OBC categories, low and average standard of living index, labor order, small size at birth, multiple at birth, irregular antenatal checkups, mother's delivery at non formal place (Dwivedi, 2013). Home environment, congestion, inadequate ventilation, using cooking fuel other than LPG, age of the mother, order of pregnancy, mothers not getting gynecological care, smoking during pregnancy were the chief factors accountable for infant death (Qadir, 2007).

Socio cultural factors associated to the persistent high infant death were recognized as widespread poverty and its concerns, severe starvation and early age at marriage child posture practices and breast feeding (Khan, 1993). The reasons accounted for neonatal deaths were prematurity, low birth weight, newborn infections, birth suffocation, birth trauma, pneumonia and diarrheal diseases (Bassani *et al.*, 2011). The main threat causes for perinatal death were deficiency of antenatal care, unexperienced birth attendants in nonstandard labour, previous miscarriages, lack of information and skill among untrained birth attendants of reviving the new born and maternal malnourishment (Shah *et al.*, 1984).

Rationale of the study

Infant and child death rate is regarded as significant and sensitive indicators of the health status of a public. It also replicates the general standard of living of the people and efficiency of interventions for improving maternal and child health in a country. Compared to other indicators like crude birth rate, maternal mortality rate etc, and these indicators have always been of greater reputation by the public health specialists because infant and child mortality is the largest category of mortality.

Studies conducted globally and in India suggest associations of sex of the child, mother's exposure to mass media, use of clean cooking fuel, access to a toilet facility, improved\ safe drinking water facility mother's religion and civilization, income of the household, birth order, mother's age at birth, birth intervals, availability of expert antenatal and delivery care, full immunization of children, mother's education, and urban- rural dwelling with infant and child mortality. The rate of infant and child mortality in Kashmir follows a particular trend over the years. Infant mortality and child mortality are usually used for monitoring an evolution of population and health programmes and policies. Infant and child mortality form a large faction of the deaths of all ages. Major determining factor of infant and child mortality in Kashmir are home environment, overpopulation, inadequate ventilation, using cooking fuel other than LPG, age of the mother, order of pregnancy, mothers not receiving gynecological care and smoking during pregnancy.

Objectives

1. To study the number of infant and child deaths in Kashmir since 2015-2017.
2. To compare the infant and child deaths in rural and urban Kashmir.
3. To compare the infant and child deaths as per their gender.

Materials and methods

The present study is conducted in Kashmir region. The study is based on whole population of infant and child mortality cases from the year 2015-2017. For the present study secondary sources of data are used. The source of information was obtained from GB PANT hospital Sonwar.

Result and Discussion

According to the table no. 1 majority of infant deaths occurred in Baramulla district i.e., 20.23 per cent (f=220), followed by Anantnag i.e., 18.21 per cent (f=198), kupwara 13.43 per cent (f=146), Srinagar 10.67 per cent (f=116), Budgam 9.84 per cent (f=107), pulwama 8.64 per cent (f=94), kulgam 6.80 per cent (f=74), Bandipora 5.61 per cent (f=61), Shopian 5.05 per cent (f=55) and only 1.47 percent (f=16) deaths in Ganderbal district.

The maximum number of child deaths occurred in kupwara district i.e., 19.26 per cent (f=21) followed by Baramulla i.e., 17.43 per cent (f=19), Budgam 14.67 per cent (f=16), Anantnag 11.92 per cent (f=13), Srinagar 11 per cent (f=12), pulwama 9.17 per cent (f=10), Bandipora 5.50 percent (f=6), kulgam 4.58 per cent (f=5), Ganderbal 3.66 per cent (f=4) and the least deaths occurred in Shopian i.e. 2.75 per cent (f=3) in the year 2015 to 2017.

Table 1. Population of reported Infant and child mortality in Kashmir (2015-2016)

Districts	Infant-mortality (universe)	%	Child mortality (universe)	%
Srinagar	116	11.00	12	11.00
Baramulla	220	20.00	19	17.00
Budgam	107	10.00	16	15.00
Pulwama	94	9.00	10	9.00
Kulgam	74	7.00	5	5.00
Anantnag	198	18.00	13	12.00
Ganderbal	16	1.00	4	4.00
Bandipora	61	6.00	6	5.00
Kupwara	146	13.00	21	19.00
Shopian	55	5.00	3	3.00
Total	1, 087	100	109	100

Source: GB PANT Hospital Sonwar Srinagar

Table no. 2 shows infant and child mortality in rural and urban Kashmir. Table no. 2 reveals that the majority of infant deaths i.e., 55.01 per cent (f=598), and child deaths 60.55 per cent (f=66), occurred in urban Kashmir since 2015 to 2017. The deaths which occurred in rural area are infant mortality i.e. 44.98 per cent (f=489), and child mortality 25.29 per cent (43).

The study revealed that the people living in rural areas have little or no access to healthcare facilities with which they can treat their ill children and because of poor infra structure in the rural communities children were more frown to excessive temperature and more vulnerable diseases (Hobscraft *et al.*, 1984). The studies also found that the causes responsible for child mortality were urban to rural residence, work status of the parent and per capita income (Sagagi, 2016).

Table 2. Rural\Urban wise data of infant and child mortality from 2015-2017

Districts	Infant mortality (universe)				Child mortality (universe)			
	Rural	%	Urban	%	Rural	%	Urban	%
Srinagar	21	4.29	95	16.00	2	5.00	10	15.00
Baramulla	120	25.00	100	17.00	7	16.00	12	18.00
Budgam	50	10.22	57	9.53	8	18.60	8	12.00
Ganderbal	11	2.00	5	0.83	2	5.00	2	3.00
Kulgam	21	4.00	53	8.86	1	2.00	4	6.06
Kupwara	67	14.00	79	13.21	7	16.00	14	21.21
Pulwama	54	11.00	40	6.68	6	14.00	4	6.06
Bandipora	16	3.00	45	7.52	2	5.00	4	6.06
Shopian	7	1.43	48	8.02	Nil	NIL	3	5.00
Anantnag	122	25.00	76	13.00	8	18.60	5	8.00
Total	489	100	598	100	43	100	66	100

Source: GB PANT Hospital Sonwar Srinagar

Table no. 3 depicts infant and child mortality on the basis of boys and girls from 2015 to 2017. The majority of infant deaths occur in Kashmir i.e. 58.04 per cent (f=631), among boys than girls 41.95 per cent (f=456). The Maximum number of child deaths that occurred in Kashmir i.e. 52.29 per cent (f=57), among boys than girls 47.70 per cent (f=52), from 2015 to 2017. This study revealed that short birth interval, sex differentials in infant and child mortality reflect strong son preference and discrimination against female children are very strong and mother's literacy, access to a flush or pit toilet, household heads religion and caste\tribe membership, and economic level of the household have substantial effect on infant and child mortality (Pandey *et al.*, 1998).

Table 3. Boys\Girls wise data of infant and child mortality of districts from 2015-2017

Districts	Infant mortality (universe)				Child mortality (universe)			
	Boys	%	Girls	%	Boys	%	Girls	%
Srinagar	63	10.00	53	12.00	6	11.00	6	11.00
Baramulla	129	21.00	91	20.00	10	17.00	9	18.00
Budgam	58	9.00	49	11.00	10	17.00	6	11.00
Ganderbal	10	2.00	6	1.00	2	4.00	2	4.00
Kulgam	47	7.00	27	6.00	2	4.00	3	6.00
Kupwara	89	14.00	57	12.00	9	16.00	12	23.00
Pulwama	54	9.00	40	9.00	7	12.00	3	6.00
Bandipora	30	5.00	31	7.00	3	5.00	3	6.00
Shopian	28	4.00	27	6.00	1	2.00	2	4.00
Anantnag	123	19.00	75	16.00	7	12.00	6	11.00
Total	631	100	456	100	57	100	52	100

Source: GB PANT Hospital Sonwar Srinagar

Table no. 4 shows district wise data annually from 2015 to 2017. In the year 2015, majority of infant deaths occur in district Baramulla 20.83 per cent (f=85), followed by Anantnag 18.38 per cent(f=75), kupwara 12.74 per cent (f=52), Srinagar 4.59 per cent (f=5o), Budgam 9.06 per cent (f=37), kulgam 7.84 per cent (f=32), pulwama 7.35 per cent (f=30), Bandipora 6.61 per cent (f=27), Shopian 3.43 per cent (f=17) and only few 0.73(f=3) deaths occurred in Ganderbal district. The maximum number of child deaths occur in kupwara district i.e. 24.44 per cent (f=11) followed by Baramulla i.e., 22.22 per cent (f=10), Budgam 15.55 per cent

(f=7), Anantnag 13.33 per cent (f=6), while as 8.88 per cent (f=4) deaths occur in each district pulwama, Srinagar 4.44 per cent (f=2), in Ganderbal, kulgam 2.22 per cent (f=1) and no deaths occur in district Shopian and Bandipora.

Table 4. District wise data of infant and child mortality from 2015 to 2017

Districts	Infant mortality(annually)						Child mortality(annually)					
	2015	%	2016	%	2017	%	2015	%	2016	%	2017	%
Srinagar	50	12.00	35	10.00	31	10.00	4	9.00	3	10.00	5	15.00
Budgam	37	9.00	33	9.00	37	12.00	7	16.00	4	13.00	5	15.00
Pulwama	30	7.00	37	10.00	27	9.00	4	9.00	4	13.00	2	6.00
Baramulla	85	21.00	69	19.00	66	21.00	10	22.00	4	13.00	5	15.00
Bandipora	27	7.00	21	6.00	13	4.00	0	Nil	4	13.00	2	6.00
Kulgam	32	8.00	26	7.00	16	5.00	1	2.00	3	10.00	1	3.00
Anantnag	75	18.00	71	20.00	52	16.00	6	13.00	1	3.00	6	19.00
Ganderbal	3	1.00	5	1.00	8	2.00	2	5.00	0	Nil	2	6.00
Shopian	17	4.00	15	4.00	23	7.00	0	Nil	1	3.00	2	6.00
Kupwara	52	13.00	51	14.00	43	14.00	11	25.00	7	22.00	3	9.00
Total	408	100	363	100	316	100	45	100	31	100	33	100

In the year 2016 majority of infant deaths occur in district Anantnag i.e. 19.55 per cent (f=71), Baramulla 19 per cent (f=69), kupwara 14.04 per cent (f=51), pulwama 10.19 per cent (f=37), Srinagar 9.64 per cent (f=35), Budgam 9.09 per cent (f=33), kulgam 7.16 per cent (f=26), Bandipora 5.78 per cent (f=21), Shopian 4.13 per cent (f=15), Ganderbal 1.37 per cent (f=5). The maximum number of child deaths occur in kupwara district 22.58 per cent (f=7), and 12.90 per cent (f=4) deaths occurred in each district Budgam, pulwama, Baramulla, Bandipora, while as 9.67 per cent (f=3) deaths occurred in districts namely Srinagar, kulgam, 3.22 per cent (f=1) deaths occurred in Anantnag, Shopian and no deaths occurred in district Ganderbal.

In the year 2017 majority of infant deaths occur in district Baramulla i.e. 20.88 per cent (f=66) followed by Anantnag i.e., 16.45 per cent (f=52), kupwara 13.60 per cent (f=43), Budgam 11.70 per cent (f=37), Srinagar 9.81 per cent (f=31), pulwama 8.54 per cent (f=27), Shopian 7.27 per cent (f=23), kulgam 5.06 per cent (f=16), Bandipora 4.11 per cent (f=13) and only 2.53 per cent (f=8)deaths occurred in Ganderbal district.

The maximum number of child deaths occurred in Anantnag district i.e.18.18 per cent (f=6) followed by each district Srinagar, Budgam, Baramulla 15.15per cent (f=5), kupwara 9.09 per cent (f=3) and 6.06 per cent (f=2) deaths occurred in each district pulwama, Bandipora, Ganderbal, Shopian while as only 3.03 per cent (f=1) death occurred in kulgam district in the year 2017.

Summary and conclusion

Children are important assets of a nation, therefore reduction in infant and child mortality is likely the most important objective of the Millennium Development Goals (MDGs). Infant and child mortality rate is regarded as important and sensitive indicators of the health status of a community. It also reflects the general standard of living of the people and effectiveness of interventions for improving maternal and child health in a country. Among the reasons cited for the poor state of infant and child health in India are inadequate neonatal care, insufficient breastfeeding, malnutrition, low immunity and high incidence of communicable

diseases. Studies conducted globally and in India suggest associations of sex of the child, mother's exposure to mass media, use of clean cooking fuel, access to a toilet facility, improved\ safe drinking water facility mother's religion and ethnicity, income of the household, birth order, mother's age at birth, birth intervals, availability of professional antenatal and delivery care, full immunization of children, mother's education, and urban-rural residence with infant and child mortality.

The deaths have been occurred in GB PANT Hospital Sonwar. The deaths that occurred in all districts of Kashmir. The majority of infant deaths occurred in Baramulla district followed by Anantnag, kupwara, Srinagar, Budgam, pulwama, kulgam, Bandipora, Shopian, Ganderbal district and the maximum number of child deaths occurred in kupwara that is followed by Baramulla, Budgam, Anantnag, Srinagar, pulwama, Bandipora, kulgam, Ganderbal, Shopian since 2015 to 2017. The majority of infant and child deaths occurred in urban Kashmir followed by rural area from 2015 to 2017. The maximum number of infant and child deaths was high among boys than girls since 2015 to 2017. The majority of infant deaths occurred in year 2015 in Baramulla district followed by Anantnag and the maximum number of child deaths occurred in year 2015 in kupwara followed by Baramulla district, while as no deaths occurred in each district Bandipora and Shopian. It is concluded that infant and child mortality have become alarming in Kashmir valley due to inadequate care during pregnancy, absence of doctors and nurses, urban\rural residence, lack of awareness regarding programmes, lack of immunization\vaccines, lack of availability of facilities in hospitals, domestic environment and cultural practices etc.

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