EXPLORING THE SOCIAL FACTORS AFFECTING INFANT MORTALITY IN PESHAWAR

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Abstract

Infant health care services are vital in reducing infant mortality. High infant mortality has been associated to many sociocultural factors including poverty, women subordination, and lack of access to health care and cultural practices. The present study investigated social factors affecting Infant Mortality in District Peshawar. The study was conducted in four different hospitals of Peshawar Pakistan including Lady Reading Hospital, Khyber Teaching Hospital, Johar-Khatoon Hospital and Kalsoom Maternity Home. Primary data was collected from a total sample size of 349 respondents selected through proportional allocation method. The study was quantitative in nature and simple random technique was used to select samples from the total population. A conceptual framework consists of independent variables i.e. social factors and a dependent variable i.e. infant mortality was cross tabulated through the application of Chi Square test statistics to ascertain association between the dependent and independent variables. The study revealed a significant association (P≤0.05) of child mortality with the statements such as marriage at early age, anaemia during pregnancy, access to doctor, availing antenatal care services, delivery attended by mid wife at home, birth spacing between children was less than two years, baby born was premature, and fed the baby with formula milk. The government should implement such polices pertaining to early marriages, making vaccination compulsory for every child and provision of health surety through Sehat Insaf card; with collaboration of societal awareness through different seminars, print and social media is the order of the day were put forwarded some of the recommendations in the light of present study.

Keywords: Social factors, Infant Mortality, District Peshawar, Constrains, Facilities

INTRODUCTION

Infant Mortality has been a global public health concern affecting million of people across the world. A number of economic and social factors are associated to childhood and infant mortality in the developing countries. The infant mortality ratio differs due to the social, demographic and economic factors and level of the socioeconomic development of the countries (Gubhaju, Streatfield, & Majumder, 1992). Health care activities during the pregnancy and at the time of delivery play an important role in the health of the newborns (Visaria, 1998). In 2019, 7.5 million children died at global level due to preventable causes, while 96 percent died in the underdeveloped and developing countries (WHO, 2019). In South Asia one out of ten children dies under five year of age. On contrast one out of 143 dies in the higher developed and developing countries.

GLOBAL OVERVIEW OF INFANT AND CHILD MORTALITY

It was estimated that ten millions children die annually before their fifth birthday. Literary evidences indicate that half of these deaths occur in six underdeveloped countries while 90 percent deaths are accounted by other 42 countries across the globe. Similarly, in sub-Saharan Africa, more than 5 percent of children die before reaching their fifth birthday, and this ratio is quite higher i.e. 34 percent in South Asia. The high rate of infant mortality in the underdeveloped and developing countries can widely be attributed to their weak economic situation and thus less spending in health sector and overall in human development sector (Black et al., 2003). There are approximately 9.7 million deaths of children before reaching an age of five. Again, about 41% of these deaths occur in the sub-Saharan African countries widely due to the fact of their weak economy and a huge population lives below poverty line (Rutherford, 2010). Recent estimates put the 2011 global infant deaths at around 7 million (UNICEF, 2012). African sub-Saharn nations are the major contributors in this figure in spite the fact that children deaths have been declined because of the advanced technologies and advancement in medications. A great variation is found in mortality rate of children across the world. For example, the differences in children deaths between developed and developing nations are higher about 70 times (World Fact Book, 2011). These deaths can be prevented even by interventions and health policies at a very low-cost. Mortality among children can be reduced by implementing these policies (Jones et al., 2003).

SOCIAL AND CULTURAL CONSTRAINTS

Health in general and infant health in particular is influenced by a host of sociocultural factors. In traditional societies women face numerous social and cultural constrains in accessing health care services and mostly such decision are taken by her father, husband or mother in law. In many societies including Pakistan, mother in law still exercise the power and make decisions related to the health, pregnancy, and medical checkups of the daughter in law (Alam & Cleland, 1984). In addition, traditional societies are patriarchal and men make major decisions including the decision related to the health of a woman. In these societies, women are dependent upon their men and they are unable to accumulate property, and lack access to financial and other resources (Parlato, Darmstadt, & Tinker, 2004).

Among all the other factors that influence mortality rate in children, the most important among these is mother education and childcare (Cleland & Ginneken, 1988). In this context, education of mother plays a pivotal role in influencing children mortality through healthy patterns and proper care for their children. Effects of short birth interval can also be reduced because of knowledge about resources and healthy patterns (Whitworth et al., 2002). Level of awareness and education on community-level among women also influence children deaths (Kravdal, 2004). Education of mothers also plays an important role in Nigeria against mortality among children (Antai, 2011), it obviously increases their awareness regarding care of the babies, and help them to protect their children from mild and severe infection and other issues that are related to health (Uthman, 2008). In this way, maternal education is significant for children, and the health of children born to educated mothers is comparatively better than the children born to uneducated mothers (Kravdal, 2004). In Brazil, deaths among children were found closely associated with low weighted babies and also with a number of bed's availability in hospitals per one thousand inhabitants while the same was found correlated negatively with cesarean and a number of bed's availability in hospitals per ten thousand inhabitants. In addition, it has also been observed that both community as well as individual level characteristics has strong effects on reducing death rates among infants (Zanini, Moraes, Giugliani, & Riboldi, 2009).

Poor nutrition is an alarming and burning issue in African nations because of their weak economy and low GDP. In India, almost half of children were affected by poor nutritional status. These regular nutritional results are found in all children within a particular community because they share same practices i.e. cultural norms concerning food. Some other covariates of malnutrition among infants are age, size, weight, level of mother education, last diarrhea, and status of breastfeeding (Griffiths, Mary, Worth, Barber, 2004). Nutrition plays a significant role in survival of children (Lykens, Singh, Ndukwe, & Bae, 2009), and infant mortality has been considerable socio-economic burden and affect the socioeconomic fabric of a society (Subramanian et al., 2006). In Indonesia, it has been observed that addition of a doctor can reduce children death by 2 percent which can further improved to 15 percent by adding a maternity clinic.

Similarly, the availability and accessibility to hospitals and health care facilities can greatly reduce infant mortality. In this regard, increase in distance to health centers, mortality rate also increases. Thus, it is quite clear that mortality rate can be reduced by increasing the availability of health facilities (Frankenberg, 1995). In current context, Purdah (Veil) is important factor which restricts women to access hospitals in many developing countries (Wall, 1998). This is a cultural practice, and has significant health outcomes for the infants, because health is a totality of social, economic, cultural, psychological and physiological factors (Antai et al., 2010). In addition, if there has been no proper birth space among children, the mortality risks increases, because this overburdened the already poor parents, and it also results in competition over resources previous sibling and new born baby. In such circumstances, the new born babies are not properly breastfed and thus, increase their risks of poor health and death (Whitworth & Stephenson, 2002).

Survival of a child and various health outcomes in many Asian and American countries are influenced by many factors operating at community as well as at individual level (Omariba et al., 2007). Therefore, debate on this issue is endless. In spite of various researches that were conducted across the world on infant mortality, this phenomenon is still an issue for researchers and policy makers especially in developing countries. The current

research study is also an attempt to build on understanding of the individual and household-level determinants of child mortality.

STATEMENT OF THE PROBLEM

Infant mortality has been a widely known health issue. Throughout the world children are at a risk especially in the developing countries where it is difficult to find some basis needs like shelter, cloths, food, and education etc. Relevant studies show that in the developing countries 70% children die because of malnutrition and preventable diseases. Infant mortality is associated with a country's overall economic growth and in those countries, where spending on health, education is high infant mortality rate decreases (Irum & Butt, 2008). Further, due to the improvement in social and economic sectors life expectancy at birth also increased and death rate decreased ((Irum & Butt, 2008). In developing countries like Pakistan, multiple socioeconomic and cultural factors including unequal access to health services, inadequate health facilities, poverty, male dominancy, unhealthy environment, lack of health related awareness and education influence mortality rate. In addition, nature and location of residence, unsafe drinking water, and frequent pregnancies also result in poor health outcomes, particularly infant health.

Although there has been some decrease in infant mortality across the world, however; the ratio of infant mortality is still higher in most of the developing countries including Pakistan. This study will be important because it will bring the attention of demographers and researchers toward the improvement of Pakistani women. The eradication of child mortality would be planned in better way by the stakeholders. In light of the above discussion, this study was conducted to assess the broader social factors contributing toward child mortality in the target area. The study would diagnose the social factors, and in light of its findings would extend certain policy recommendations in order overcome or reduce the issue.

METHODS AND PROCEDURES

The study was carried out in four randomly selected hospitals of District Peshawar namely; Lady Reading Hospital, Khyber Teaching Hospital, Johar Khatoon Hospital, and Kalsoom Maternity Home Zakia Minhas Hospital. A sample size of 349 respondents was selected as per Sekeran (2003) criteria. Primary information was collected through interview schedule. The conceptual framework of the present study consists of independent variable i.e. social factors (married at an early age, anemia during pregnancy, access to doctor, availing antenatal care services during pregnancy, delivery attended by midwife, birth space, premature birth and babies fed with formula milk) and dependent variable i.e. child mortality (infant deaths and premature birth) was cross tabulated and indexed through application of chi-square test statistics to ascertain the association between the aforementioned variables respectively.

RESULTS AND DISCUSSION
BI-VARIATE ANALYSIS

This section provides the analysis and cross tabulation between the factors and the chi-square test of the association i.e. value of chi-square statistic with p-value mentioned. The cell percentages and total percentages are also mentioned.

Table–1: Association between social factors and infant mortality

Social Factors attributes	Perception	Infant mortality		Total	Statistics P-Value
		Yes	**No**		
I got married at an early age (below 18).	Agree	78(22.4%)	191(54.7%)	269(70%)	χ2=10.37 (P=0.001)
	Disagree	9(2.6%)	71(20%)	80(22.9%)	
I had anemia during pregnancy	Agree	21(6%)	178(51%)	199(57%)	χ2=51.129 (P=0.000)
	Disagree	66(18.9%)	87(24.9%)	150(42.9%)	
I had access to doctor/nurse/health visitor/mid wife.	Agree	40(11.5%)	229(65.6%)	269(77%)	χ2=63.44 (P=0.000)
	Disagree	47(13.5%)	33(9%)	80(22.9%)	
I had availed the antenatal care services during pregnancy	Agree	41(11.7%)	240(68.8%)	281(80.5%)	χ2=82.35 (P=0.000)
	Disagree	46(13.2%)	22(6.3%)	68(19.5%)	
My delivery was attended by doctor/nurse/health worker	Agree	33(9.4%)	209(59.8%)	242(69.3%)	χ2=53.78 (P=0.000)
	Disagree	54(15.5%)	53(15.2%)	107(30.6%)	
My delivery was attended by mid wife at home	Agree	9(2.6%)	141(40%)	150(42.9%)	χ2=50.36 (P=0.000)
	Disagree	78(22%)	121(34.7%)	262(75%)	
The previous birth spacing between children was less than 2 years	Agree	14(4%)	144(41.2%)	158(45%)	χ2=39.83 (P=0.000)
	Disagree	73(20.9%)	118(33.8%)	191(54.7%)	
The previous birth spacing between children was more than 2 years.	Agree	27(7.7%)	209(59.9%)	236(67.6%)	χ2=70.85 (P=0.000)
	Disagree	60(17%)	53(15.2%)	113(32.3%)	
The reason of birth spacing was poor health of my previous child.	Agree	7(2%)	138(39.5%)	145(41.5%)	χ2=53.55 (P=0.000)
	Disagree	80(22.9%)	124(35.5%)	204(58%)	
	Disagree	81(23%)	134(38.3%)	215(61.6%)	
The baby born was premature	Agree	5(1.4%)	135(38.7%)	140(40%)	χ2=56.97 (P=0.000)
	Disagree	82(23.5%)	127(36.3%)	209(59.8%)	
I breast fed my baby	Agree	41(11.7%)	228(65.3%)	269(77%)	χ2=58.40 (P=0.000)
	Disagree	46(13.2%)	34(9.7%)	80(22.9%)	
I fed the baby with formula milk	Agree	20(5.7%)	174(49.8%)	194(55.6%)	χ2=49.88 (P=0.000)
	Disagree	67(19%)	88(25.2%)	155(44%)	

The above table shows an association between social factors and infant mortality through associational test (x^2). A significant association (p=0.001) was found between married at an early age with infant mortality. These results could be attributed that, the persistence nature of early marriages in Pakhtun code of conduct, the situation of women worsen day by day generally while their health conserved particularly could led to the infant mortality ratio higher at macro and micro level. Likewise, a highly significant association (p=0.000) was found between infant mortality and prevalence of anemia during pregnancies. It could be deduced from these findings that the prevalence of poverty is a major ingredients to malnourishment i.e. stunting and wasting rate particularly led to child mortality as higher. Further, a highly significant association (p=0.000) was found between access to doctors and infant mortality. The findings indicated that respondents had no access to doctors evoking agent to infant mortality due to infrastructural and institutional barriers. Furthermore, a highly significant association (p=0.000) was found between infant mortality and availed antenatal care services during pregnancy. These results were in line with exceeding results suggesting that a proper mechanism or preventive measures were not taken by the pregnant women to ensure their child bearing health due to the persistence nature of institutional and socio-cultural impediments worsen the infant mortality ratio increasing in the study area. Moreover, when respondents were asked whether deliveries were attended by doctors or nurses, a highly significant association (p=0.000) was observed between the statement and infant mortality. These results showed that deliveries of the respondents were not attended by doctors or nurses on proper time due to the lack of proper medical gynecologists with collaboration of other health facilities. Similarly, a highly significant association (p=0.000) was found between infant mortality and deliveries attended by mid wife. The findings highlight that deliveries were attended by midwife instead of doctors or nurses resultantly worsen the health of pregnant women as well as their babies on long-term basis.

While asking about a statement whether the birth space between children was less than two years, a highly significant association (p=0.000) was found between infant mortality and the statement. These results revealed that the family planning system is not prevailed due to the existence of poverty or other socio-cultural restrictions i.e. desire for male children and misinterpretation of religious doctrine. Furthermore, a highly significant association (p=0.000) was found between infant mortality and the statement that the baby was born premature. The actual time period of the baby is affected by so many issues pertaining to their health well being, psychological and physiological impede the process of baby growth in a sound manner resultantly evoked to premature birth. Additionally, while asking about a statement whether respondents breastfed their babies, majority of the respondents were in disagreement where a highly significant association (p=0.000) was found between the statement and infant mortality. The findings showed that majority of the infants were not breastfed by their mothers due to lack of proper nutritious diet worsen the situation of infants mortality. Moreover, a highly significant association (p=0.000) was found between infant mortality and the statement that babies were fed by formula milk. The findings revealed that respondents fed their babies with formula milk. These statements were also in line with exceeding while an addition due to inappropriate nutritious diet the mothers

feed their children with formula milk which is not so much nutritious and could led their new born babies into malnourishment.

These results are in line with the findings of similar studies conducted by Lyken et al., 2009, Frankenberg, 1995, Whiteworth & Stephenson, 2002, Rous et al 2004, Maitra, 2004, Jewell & Triunfo, 2006, Rosenzweig & Schultz 1983, Geronimus 1986, Maitra & Pal 2007, Bhalotra & Van Soest 2008, Majumder et al. 1997, Davanzo & Habicht, 1986, Koenig & Lil 1990, Pebley & Stupp 1987 that mothers age at the time of child birth is considered very important. The teen age pregnancy as well as the mothers above 30 years age suffers from a lot of severe pregnancy complications causing death to their babies because of these complications. Similarly, most of the mothers do not take care of their diet which is considered so important in pregnancy due to which the expected mothers got anemic which resulting death of babies. No proper checkup by the concerned doctors also increases the risk of infant mortality. Moreover the literature showed that a male baby have high risk of death as compared to a girl baby as the organs of male body take more time to get mature as compared to a female child which is proved in their study as 234 male babies from combined rural urban areas of Peshawar and 191 female babies of combined rural urban areas of Peshawar are our study cases.

CONCLUSION AND RECOMMENDATIONS

Based on the study findings, the present study concluded that most of the women married at the very early age. Further, their deliveries were attended by untrained traditional birth attendants or midwife as they had no proper access to doctors and medical facilities. Additionally, the birth space between two children was less than two years. It was also found that due to improper or nutrient diet the mothers fed their babies with formula milk, which is not as healthy as breast feeding. Moreover, the pregnant mothers did not avail any antenatal care services during pregnancy as a result they got anemia during pregnancy. The poor health and malnourishment of the mothers resulted in premature birth and death of the new born babies. The government should implement such polices pertaining to early marriages, making vaccination compulsory for every child and provision of health surety through Sehat Insaf card; with collaboration of societal awareness through different seminars, print and social media is the order of the day were put forwarded some of the recommendations in the light of present study.

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