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# Socio-Economic and Cultural Determinants of Maternal and Neonatal Mortality in Pakistan

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**Abstract**

*The current study analyzed socio-economic and cultural determinants of maternal and neonatal mortality in Pakistan. This research was conducted at PIMS, Islamabad, Pakistan. In the first phase of research, we used a survey method to collect data from 56 respondents (36 female doctors and 20 female nurses) and their perceptions were enumerated about the socio-economic and cultural determinants of maternal mortality. In the second phase of the research, 200 mothers (who had a baby under 1-year) currently admitted at PIMS were sampled for in-depth interviews and they were asked about the multiple determinants of neonatal mortality. In both phases, we employed a purposive sampling technique with a special inclusion criterion. The study highlighted multiple reasons influencing mortality of mothers and neonates such as lack of awareness, lack of transportation facilities, illiteracy, poverty, lack of antenatal care services and deliveries handled by unskilled birth attendants at homes.*

**Key Words:** Determinants, Islamabad, Maternal and Neonatal Mortality, Pakistan, PIMS.

## Introduction

For many years the World Health Organization remained at the forefront to devise strategies to counter maternal and neonatal mortality across the world considering it as its prime objective for the worldly countries to adhere to the UN' Millennium Development Goals and later on Sustainable Goals related to the health. There could be enormous definitions of the maternal mortality but most of the scholar conceptualize it in the same way as it has been done by the WHO (1992) with its tenth amendment in it. WHO (1992) defined it as "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes."

Høj, da Silva, Hedegaard, Sandstroma, and Aabya (2003) finds maternal mortality as one of the challenging health concerns for both developed the developing world. We all need to focus it with all possible efforts to timely curb otherwise many mothers would die in the coming years. Sustainable Development Goals placed 'good health and wellbeing' at its third priority in the list of 17 goals. All signatory states are complying with this particular goal and making efforts to ensure the quality of health and wellbeing for every citizen. WHO (2019) estimated, based on the various UN subsidiary organizations' statistics, that about 295,000 women died following pregnancy and childbirth in 2017. The neonatal mortality is defined as the death of the newborns within four weeks time. In 2018, about 4.0 million (75% of all under-five years) deaths occurred within the first year of their life (UNICEF, WHO, World Bank, UN DESA/Population Division, 2019) and in addition to this, the death rates of neonates in the world were about 18 per 1000 live births. As per UNICEF's (2019) estimates, there were more than 2.5 million neonatal deaths worldwide and during 2018 and it was further reported that around 7,000 neonates' deaths occurred each day worldwide. In Pakistan, the situation is moderately improving as the infant

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and neonatal mortality rates were 57 and 42 respectively during 2018 (UNICEF, 2018). During the last two decades, the country has witnessed a substantial decline in neonates' mortality rate.

Pakistan currently stands at the fifth position in the list of the world's most populous countries with total a population size of 220 million (Worldometer, 2020). According to the Countrymeters (2020) Pakistan constitutes about 50% female population. World Economic Forum's (2019) "*Global Gender Gap Report 2020*" places Pakistan at the 151st position out of the 153 countries' list in terms of gender disparities. Only two countries (Iraq and Yemen) were the worst performers than Pakistan. There could be multiple factors responsible for maternal mortality in the case of Pakistan. The social and clinical behaviors practiced under cultural and traditional pressures could lead to maternal and neonatal mortality in Pakistan. It is one of the most important social issues further complicated by reactionary and primitive social norms under which most of the women suffer, particularly in the lesser-developed areas across the country. Society must be sensitized to recognize this fundamental problem and the present study is one of the major contributions in this regard to highlight the significant determinants responsible for neonatal and maternal mortality in Pakistan.

## Review of Literature

Pakistan was grouped with the world's top 5 countries having the highest maternal mortality during 2015. The 5 countries, including; (a) Nigeria, (b) India, (c) Democratic Republic of Congo, (d) Ethiopia, and (e) Pakistan, had the highest maternal mortality rates in the world with total maternal deaths counted as 58,000, 45,000, 22,000, 11,000, and 9,700 respectively (Roser & Ritchie, 2020). Even after being a signatory to SDGs, many of the developing counties, including Pakistan, are not performing well in terms of ensuring healthcare facilities to all women during pregnancy. The maternal mortality rates mentioned above showed the nonseriousness of these countries. Although, many scholars believed that the actual number of maternal is much higher as these countries do not have efficient reporting mechanisms (Sagheer *et al.*, 2019).

Lodhi, Wazir, and Jadoon (2010) conducted a study in Abbottabad, Pakistan to explore the reasons behind maternal and infant mortality. They mentioned that in the case of Pakistan there are about five hundred maternal deaths per year per 100,000 live births. Nisar and White (2003) mentioned that the role of antenatal care is very pivotal in the case of controlling the high prevalence of mother and neonatal deaths. There is a dire need to maintain the regular antenatal checkups and the state should come up with some solutions in providing the pregnant women with required healthcare services. A retrospective, observational study was conducted by Shah, *et al.* (2009) in which they reviewed 104 maternal deaths in Karachi, and information about different socio-economic and demographic variables was also compiled. Later on, a correlation was run to see the cause and effect relationship between these selected variables. They mentioned that the role of education and income levels of such women were very crucial for their access to antenatal care.

For the last three centuries across the globe, a substantial decline in mortality has been observed in many countries across the world. The majority of the countries, like, China, Brazil, Sweden and German has made tremendous improvements in the healthcare services addressing the antenatal and postnatal needs. During the eighteenth century Sweden and Germany had higher ratios of neonatal mortality- almost every second to third baby was dying under 5 years' age. Since ages, we have been witnessing a decline and overall reduction in poverty and improvements in the healthcare sectors both of these variables are directly related to the maternal and neonatal deaths. Roser (2014) mentioned that since the enlightenment period we have witnessed a decline in the neonatal and under-5 years' age mortality. A contrasting ratio can be observed in recent years across the developing and the developed world while the latter has a lesser ratio in comparison to the former. Olusanya (2005) also highlighted that majority of the under-5 years' age mortality rates are of those who are under one month of their ages. It means that neonates are at more risk as compared to the children in other age cohorts.

Lawn, Cousens and Zupan (2005) mentioned that there are also issues with the way we enumerate the neonatal deaths. Since in the developing world the data is not accurately measured that's why the ratios of such deaths could be much higher. The children in early age could face a number of disease risks as the immunization system is not so efficient. Reidpath and Allotey (2003) stated that there are a number of factors which directly related to neonatal mortality. The welling, quality environment and better living conditions are proportionately

related to the survival of children under one month of age. Khadka, Lieberman, Giedraitis, Bhatta and Pandey (2015) found a positive correlation between the socio-economic determinants with the infant mortality in the case of Nepal where they found the higher ratios of infant mortality among the poor families in comparison to the richer ones.

## Methodology

The current research study was conducted in PIMS, Islamabad. In the first phase of the research 56 respondents (36 female doctors and 20 female nurses) were approached and in the second phase, 200 in-depth interviews were conducted from the mothers admitted in PIMS. There were two main objectives of the research: (a) to study the major causes of maternal deaths and (b) socio-economic and cultural determinants of neonatal deaths. The data was collected through a survey from the lady doctors and nurses (having service length of at least five years) about the first objective. For the second objective, we gathered information from hospitalized mothers (having a baby under 1-year) in the PIMS, Islamabad. The data collected through both approaches were analyzed and inferences were drawn to understand the major socio-economic and cultural determinants behind the neonatal and maternal mortality in Pakistan. The selection of the respondents for both the approaches was done through purposive sampling technique.

## Results

In the first part of the results section, we have presented quantitative analysis and in the second part the data related to the qualitative findings is given. Table 1 presents the information about the complications faced by mothers and infants due to negligence on the part of their families during the pregnancy.

**Table 1.** Complications for Mother and Neonate Due to Ignorance during Pregnancy

| Careless Attitude during Pregnancy | F | % |
|---|---|---|
| No Prior Booked Appointments | 06 | 16.6 |
| No Antenatal Visits | 11 | 30.5 |
| Poor Diet | 12 | 33.3 |
| Hypertension | 05 | 13.8 |
| Others | 02 | 5.5 |
| Total | 36 | 100.0 |

Table 1 indicates that 33.3% of respondents believed that taking a poor diet could be due to the non-serious attitudes of women and in some cases lesser interests of their families while 30.5% of respondents highlighted the careless attitudes of women in the case of antenatal checkups. About 16.6% of respondents expressed that they do not take it seriously and even do not go for prior booking at times of antennal checkups. Moreover, hypertension may also be the outcome of non-serious attitudes. Due to this negligence, a mother can face different problems when they visit hospitals in case of emergency and suffer from major complications at the time of delivery. A high number of respondents emphasized early antenatal booking in any hospital which is very important for the health of the mother and the newborn. Further, the respondents shared that most of the patients visit the hospitals only once at the time of delivery with no prenatal checkups and even they do not go for postnatal checkups which further enhance their chances to face complications in post-birth period.

Most patients visit only at the time of delivery with numbers of complications which can cause complications and threats to the life of pregnant mothers and it can also lead to fatalities. These findings show that carelessness in prior booking and lack of frequent antenatal visits can also cause major complications during pregnancy and at the time of delivery as well. Families' negligence towards the health of pregnant women is also a major problem of our society which leads to a higher risks during pregnancy.

**Table 2.** Social Factors Influencing Maternal Mortality

| Social Factors Influencing Maternal Morality | F | % |
|---|---|---|
| Lack of Education | 05 | 13.8 |

| | | |
|---|---|---|
| Poverty | 17 | 47.2 |
| Lack of Transportation | 06 | 16.6 |
| Social Pressures | 04 | 11.1 |
| Cultural Barriers | 04 | 11.1 |
| Total | 36 | 100.0 |

Table 2 shows that 47.2% of respondents believed that poverty is the main cause of the maternal deaths followed by the 16.6% of respondents who considered the lack of transportation is the real problem from women visiting the hospitals from the far-flung areas. However, 13.8% expressed that it is the illiteracy that plays a major role in maternal deaths whereas about 11.1% of respondents shared that social pressures influence the health of mothers. About 11.1% expressed that cultural barriers may also play a role in deteriorating the health of mothers. Responses show that poor knowledge about health, lack of transport facilities and delay in seeking proper healthcare are among the major causes of maternal mortality.

**Table 3.** Risks of Early Marriages and Teen Pregnancies

| **Early Marriages and Risk of Complications (for Teen Mothers)** | **f** | **%** |
|---|---|---|
| No | 06 | 16.6 |
| Yes | 20 | 55.5 |
| Sometimes | 10 | 27.7 |
| Total | 36 | 100.0 |

Table 3 shows that 55.5% of respondents agreed that early marriages and teenage pregnancies are generally causing maternal health problems and these are the greater risk for mothers to face complications during pregnancy and at the time of delivery. However, 27.7% of respondents shared that teenage pregnancy may cause complications but in some cases overall condition matters, whereas 16.6% stated that early marriages might not lead towards complications during delivery.

## Descriptive Analysis

The qualitative study focuses on the causes of neonatal deaths keeping in view the second objective of the current study. These findings are depending on the in-depth interviews conducted with 200 mothers who were admitted in the PIMS, Islamabad. The majority of mothers reported that the vaccination of women during pregnancy is necessary because it not only protects them from diseases but also saves the infants. However, they revealed that even uneducated mothers are now conscious about the importance and expediency of immunization and they go for it on a regular basis. The practices of prenatal checkups are more important and common as compared to the postnatal checkups according to the participants. Some of them shared that newly born babies are not checked until they face ailments.

The majority of the mothers mentioned that poverty is a big hurdle in their way of getting quality health services because they cannot afford a good diet and environment which plays an important role in quality health. Few of the mothers shared that they lost their child due to the unavailability of the appropriate facilities. One of the mothers shared that the role of a healthy diet can affect the health of both mother and the child. They also added that only rich people can afford a healthy diet. It is very difficult for poor women to arrange a healthy diet -within limited resources. Some of the babies died because of post birth infections, premature births, or because of congenital abnormalities. The focus of the discussion of the mothers was also about the unavailability of the appropriate medical facilities, professional female doctors and poverty.

The challenges during pre and postnatal periods are managed by the mothers in different ways. Challenges may vary from one family to another and from one cultural setting to another. One of the respondents, who belonged to rural areas, expressed that:

*"There are so many restrictions on pregnant women such as to follow the cultural norms of not visiting doctors in the absence of male or elder women of the family. They are discouraged to take independent decisions about their pregnancies and antenatal checkups."*

The respondents mentioned that people remained hesitant to take their women to hospitals, sometimes for social reasons like *parda* and other customs, or sometimes because of financial problems. Some of the respondents mentioned that they were facing pressures from their families to have more children. On one side these mothers were secluded by the rigid norms which ultimately created hurdles for them to access quality health services while on the other side they had to adhere to the expectations of the in-laws of having more children.

The majority of women opposed the idea of early marriages and argued that early marriages might lead to severe complications for women and neonates. However, one of the interviewees expressed that even a female gets early marriage but if she has a good diet and care, the situation could not become so worst for her. She believed that richer women do not face problems related to access to good health facilities. The majority of respondents emphasized that the socio-economic factors contribute in maternal and neonatal deaths because maternal malnutrition impedes the delivery of healthy babies. Conversely, there are stronger chances that they may have pre-mature, sicken or a weaken baby.

Moreover, a respondent shared that the problems may be persistent and therefore, it is the responsibility of the mothers and their families to have proper and regular checkups at hospitals. The study indicated the social determinants of infant mortality including gender decimation as people, especially in rural areas, are more concerned about the health of babies (especially the boys) rather than of the mothers. Sometimes, women had to face domestic violence during their pregnancies due to various issues. It was also shared that the family pressures for having baby boys play a vital role in the frequent deliveries which make them internally weaker. One of the respondents added that:

*"I live in a joint family and majority of in-laws, the men and elderly women, are curious about having more baby boys. My mother-in-law always asks me to fulfil her wishes of having at least three boys. I keep quiet on her provocative wishes which she daily shares with me."*

## Discussion

The study found that maternal and neonatal deaths are usually more prevalent in the rural regions and among the poor due to lesser awareness and lack of access to healthcare services. Based on the results, the major socio-economic and cultural factors causing the maternal and neonatal deaths have been discussed below:

### Poverty

The study supports that poverty is a major cause of maternal and neonatal mortality. Pregnant women may face multiple problems due to poverty as they cannot take well-balanced diet and appropriate nutritional supplements. In many cases, poor families had to borrow money from their relatives to access healthcare services. They borrow money for any health emergency of their baby and consequently face real economic hardships for paying it back. Poverty also influences the social life of women and might cause stress for the mothers. An unhealthy material environment and unhealthy behavior could have direct harmful effects for baby and mother.

### Cultural Barriers

The findings of the present study show that women were afraid to go to hospitals for antenatal care due to male doctors. This social issue causes different kinds of complications and could lead to maternal and neonatal deaths. Moreover, women while living in a patriarchal society were facing inequality and oppression when it comes to accessing healthcare services.

### Early Marriages

Early marriages and teenage pregnancies could lead to maternal complications and a risk to the infants' health. Socio-cultural problems and low living standards can make such problems more worst. Some complications occur in teenagers due to hereditary and congenital abnormalities which can lead to maternal mortality.

### Lack of Appropriate Transport

The lack of transportation is a big issue for the respondents particularly those who belong to the rural and mountainous areas. The unavailability of transport often makes it difficult to access healthcare facilities and can cause complications. Sometimes, it also results in maternal deaths. The unavailability of ambulances for long distances is a serious problem as well.

### Delay in Decisions

The swift decision matters a lot in the case of a good health of both mothers and infants. If there are some issues in taking decisions about antenatal care that further creates trouble at the time of pregnancy. Since people are not highly educated in rural areas and they cannot understand the complications and risks of pregnancy. They are unable to understand the sensitivity of situation when the medical treatment is needed. Due to delays in decisions, women suffer from serious life threats and complications which can lead to maternal and neonatal deaths.

### Lack of Access to Medical Facilities

Due to the lack of medical facilities, women cannot get basic antenatal care and guidance about healthy pregnancy. A large population in Pakistan is living in the rural areas and they don't have sufficient medical facilities available for prenatal, pregnancy and postnatal care in such areas. Ronaq (2014) rightly pointed out that, "more than eighty percent of women are delivered at home in the presence of unskilled birth attendants." Only in the case of severe illnesses or health emergencies, they visit the hospitals otherwise they consult midwives for deliveries and quacks and Hakeem for the treatments.

### Illiteracy

Illiteracy has become a prominent threat to the lives of mothers and children. The fundamental health-related education is very necessary for women. The pitiable knowledge of women about pregnancy increases the risk of complications for them and their babies. It was also observed that there is a greater need to promote a more effective drive to educate women and help them to acquire appropriate knowledge about pregnancy.

## Conclusion and Recommendations

The current study explored the socio-economic and cultural factors which influence the health of pregnant women and can cause severe problems during pregnancy and for the neonates. Poor socio-economic status is a big obstacle in the way of getting quality health services for women and neonates. Most of the population is unable to access medical facilities when required and they cannot afford routine antenatal checkups. The situation can cause a number of complications during pregnancy and at the time of labor. Another important factor contributing to high maternal mortality is lack of awareness particularly among women living in rural areas. Illiteracy is high among women as compared to men rendering them unaware of reproductive health and hygiene. Moreover, in the presence of strong traditional norms, women hesitate to visit male doctors in hospitals and prefer to have deliveries at home.

It is the primary responsibility of the government to raise the living standards of the people by increasing the numbers of jobs and wages in all sectors of the economy. The government should also focus on educating the people particularly women about reproductive health. Primary and secondary education should be made compulsory for all women and children enabling them to understand health and hygiene needs. Moreover, orthodox traditions need to be addressed to promote and preserve basic human rights particularly the right of women for healthcare.

## References


Countrymeters (2020). Pakistan population. Retrieved from https://countrymeters.info/en/Pakistan

Hoj L, da Silva D, Hedegaard K, Sandstroma, A. & Aabya, P. (2003). Maternal mortality: only 42 days? *BJOG: An International Journal of Obstetrics and Gynaecology, 110,* 995 –1000.

Khadka, K.B., Lieberman, L.S., Giedraitis, V., Bhatta, L. & Pandey, G. (2015). The socio-economic determinants of infant mortality in Nepal: Analysis of Nepal Demographic Health Survey, 2011. *BMC Pediatr, 15*, https://doi.org/10.1186/s12887-015-0468-7

Lawn J. E., Cousens S, & Zupan J. (2005). 4 million neonatal deaths: When? where? why? *Lancet, 365*(9462), 891-900.

Lodhi H. S., Lodhi F. S., Wazir S., & Jadoon H. (2010). Assessment of nutritional status of 1–5 year-old children in an urban union council of Abbottabad. *Journal of Ayub Medical College, 22*(3):124-127.

Nisar N. & White F. (2003). Factors affecting utilization of antenatal care among reproductive age group women (15-49 years) in an urban squatter settlement of Karachi. *Journal of the Pakistan Medical Association, 53*(2), 47-53.

Olusanya B. O. (2005). State of the world's children: life beyond survival. Archives of disease in childhood. *Archives of Disease in Childhood, 90*(3), 317-318.

Reidpath D. & Allotey, P. (2003). Theory and methods infant mortality rate as an indicator of population health. *Journal of Epidemiology and Community Health, 57*, 344–346.

Ronaq S. (2014, February 28). Environmental Challenges in Pakistan. *Sharnoff's Global Views*. Retrieved from https://www.sharnoffsglobalviews.com/environmental-challenges-pakistan-220/

Roser, M. & Ritchie, H. (2020). Maternal mortality. Published online at OurWorldInData.org. Retrieved from https://ourworldindata.org/maternal-mortality

Roser, M. (2014). Fertility rate. Published online at OurWorldInData.org. Retrieved from https://ourworldindata.org/fertility-rate.

Sageer, R., Kongnyuy, E., Adebimpe, W.O., Omosehin, O, Ogunsola, E. A., & Sanni, E. (2019). Causes and contributory factors of maternal mortality: Evidence from maternal and perinatal death surveillance and response in Ogun state, Southwest Nigeria. *BMC Pregnancy Childbirth, 19*(63). Retrieved fromhttps://doi.org/10.1186/s12884-019-2202-1

Shah N., Hossain N., Shoaib R., Hussain A., Gillani R. & Khan N. H. (2009). Socio-demographic characteristics and the three delays of maternal mortality. *Journal of The College of Physicians and Surgeons Pakistan, 19*(2), 95-98.

UNICEF, WHO, World Bank, UN DESA/Population Division (2019). *Levels and Trends in Child Mortality*. Geneva: UNICEF.

UNICEF. (2018). *Pakistan: Key Demographic Indicators*. Geneva: UNICEF. Retrieved from https://data.unicef.org/country/pak/

UNICEF. (2019). *Neonatal Mortality*. Geneva: UNICEF. Retrieved from https://data.unicef.org/topic/child-survival/neonatal-mortality/

World Economic Forum. (2019). *Global gender gap report 2020*. Geneva: World Economic Forum. Retrieved from http://www3.weforum.org/docs/WEF_GGGR_2020.pdf

World Health Organization, ICD-10. (1992). *International statistical classification of diseases and health related problems*. Geneva: WHO.

World Health Organization. (2019). *Maternal mortality*. World Health Organization. Retrieved from https://www.who.int/news-room/fact-sheets/detail/maternal-mortality

Worldometer (2020). *Countries in the world by population: Pakistan- 2020*. Retrieved from https://www.worldometers.info/world-population/population-by-country/