

Determinants of Maternal Mortality in Pakistan

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ABSTRACT

Background: Health provide basis for a productive and meaningful life. Multiple factors are involved as causative agent in maternal mortality like low literacy, poor economy and low socioeconomic status etc. Maternal mortality gives us a true picture of overall health status of a country.

Objective: The objective of this study is to identify the determinants of maternal mortality in Pakistan.

Methodology: A cross sectional study was conducted in obstetrics and gynecology unit of a tertiary health care sector of Pakistan. Previous data pertaining to maternal mortality during September 2012 to 2018 was gathered. Confidentiality was maintained and ethical considerations were followed. Both direct and indirect causes leading to maternal mortality were identified. SPSS version 23 was used to analyze the data.

Results: Pakistan has the highest maternal mortality rate in Asia there are many issues and problems faced by Pakistani maternal mortality. Some most important contributing factors are early marriages, late age pregnancies, lack of trained midwives and lack of asses to hospital.

Conclusion: Maternal mortality has become the serious public health issue in Pakistan and it contributes to low life expectancy among women. It is alarming that Pakistan has the highest maternal mortality rate. Community base interventions can contribute a lot by educating about various factors for controlling the maternal mortality.

Key Words: Determinants, Maternal Mortality, Pakistan.

INTRODUCTION

The health is essential for every individual however for a mother it is crucial. A healthy mother gave birth to healthy child. Health and being healthy is not only a state it is a way of good life. Health provide basis for a productive and meaningful life¹.

Pakistan is a developing country ranking at 6th number with highest population rate. Multiple factors are involved as causative agent in maternal mortality like low literacy, poor economy and low socioeconomic status etc². Maternal mortality gives us a true picture of overall health status of a country³.

According to WHO, Pakistan has the highest mortality rate in Asia that is 340/100,000. In this advance era of science and technology, it is very alarming that women in prenatal and postnatal period are dying due to preventable reasons. Highest mortality is a sign of low treatment opportunities available for women health⁴.

A maternal death is the death of women as a result of pregnancy, from the first stage of gestation up to 42 days after the completion of pregnancy or its management. Maternal death is categorized as direct obstetric death due obstetric problem and indirect obstetric death which may be due to previously standing reason provoked by the physiological effects of gestation⁵. Both types are considered for the measurement of maternal mortality rates (MMR). In developing countries, 70 % of maternal death is linked with direct causes like hemorrhage, eclampsia, obstructed labor, sepsis or unsafe abortion⁶. Pregnancy with infectious diseases like HIV, tuberculosis or malaria may also lead to end of life of a mother in countries having high prevalence of infectious diseases⁷.

A research report presented that 830 women die

every day due to pregnancy and childbirth preventable complications. Around 99% of these deaths occur in developing countries including Pakistan⁸. Pakistan is still unable to achieve the millennium developmental goal of maternal health.

There is a long but preventable list of contributing factors of maternal death in Pakistan like Early marriages, late age pregnancies, lack of trained midwives and lack of asses to the medical aid, physical labor throughout the gestation, inadequate family planning and hemorrhage during or after delivery, infections during and after birth of the baby, eclampsia and unsafe abortion⁹.

Child bearing women in the age of 15 to 47 years is at the risk of death. Hemorrhage during and after delivery also leads mother life to the death pool. Insufficient number of trained midwives, as 60 to 65% population lives in the rural areas¹⁰. Most of the births take place in home setting without proper trained midwives by the traditional birth attendant. Unfortunately, they do not take precautionary measures to control the source of infection¹¹.

Insufficient medical aid or unavailability of maternity homes in the rural areas is also a problem. Also, inability to provide complete health facilities in pregnancy puts the mother in an intricate situation often leading to death. Physical labor during gestation also results in devastating outcomes. In the rural areas, women has to work hard to bring their families up. Also, work at home without rest results in stress and fatigues for pregnant women¹².

MDG also address women health and include one of its goal focusing on reducing MMR. Sustainable developmental goals stress to further decrease the ratio of maternal mortality in developing countries particularly. Maternal mortality poses a great challenge for both developed and developing countries. Efforts to reduce preventable contributors of maternal mortality could help to decrease this burden¹³.

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In community setting, early marriage are a threat to mother health. It has become the tradition commonly practiced in rural areas of Pakistan¹⁴. Improper diet and inaccessibility to health services further worsen the situation and had debilitating effects on mother health. Female education is also a preventable cause in reducing maternal mortality¹⁵.

METHODOLOGY

A cross sectional study was conducted in obstetrics and gynecology unit of a tertiary health care sector of Pakistan. Data was collected from patient records saved in registers. It included mother's age, number of children, reason of death in hospital settings and those without any identifiable reason titled as iatrogenic death. Previous data pertaining to maternal mortality during September 2012 to 2018 was gathered. Confidentiality was maintained and ethical considerations were followed. Both direct and indirect causes leading to maternal mortality were identified. Data relating to mothers age 15 to 45 years was included in this research study.

RESULTS

In this study, record of 326 maternal deaths during a period of 2012 to 2018 revealed multiple contributors of mortality.

Table # 1: Parity status of mothers.

Parity	Frequency	Percentage
Primigravidas	46	14.11
Multigravidas	84	25.76
Grand Multigravidas	196	60.12

Results depict that parity is a leading cause of death. As, in this study it is evident in above table, mostly mothers were grand multigravidas. 14.11% mothers were primigravidas while 60.12 % were grand Multigravidas.

Table # 2: Age of Mothers

Age Group	Frequency	Percentage
< 20	10	3.06
21-30	108	33.12
31-40	178	54.6
>40	30	9.2

Age group prone to death was 31-40 years. Mothers in this age group are vulnerable and at increased risk. As, in this study, most mothers (178) were from age group of 31-40 years. Death rate was low in age less than 20.

Table # 3: Determinants of Maternal Mortality

Factors	Frequency	%age
Hemorrhage	133	40.79
Eclampsia	76	23.31
Infections	42	12.88
Early marriages	13	3.98
Births through untrained personnel	19	5.82
Lack of awareness to pregnancy related complications	14	4.29
Iatrogenic	29	8.89

Results shown in table give obvious indications regarding major determinants of maternal mortality. In this study, hemorrhage was found as main factor as it was

responsible for 40.79% deaths. Eclampsia was second contributor to this rate as 23.31% deaths resulted from it. 12.88% deaths were linked with infections whereas, 8.89% were iatrogenic. Other factors like births through untrained persons (5.82%), access to health care facility (4.29%) and uterine rupture (3.98) also contributed in maternal death.

DISCUSSION

Developing countries have the highest mortality rates and Pakistan is on the top. This study attempted to explore factors accountable for maternal death. Multiple factors were identified that play role in this issue. Among many of the factors, hemorrhage was detected as a priority factor. It contributed a lot towards mortality rate. As, most of mothers having hemorrhage during and after birth were exposed to mortality in this study. Similar studies also depict hemorrhage as a challenging factor for maternal mortality¹⁶.

Eclampsia was noted as a second dominant cause of maternal death. Eclampsia significantly affect maternal outcomes. It also affect the baby by endangering mother life. Previous studies also denote similar finding. Infections were also a reason for maternal death. In this study, infection caused 12.88% deaths in mothers. Multiple infection during pregnancy lead to death by affecting mother and child. These findings are consistent with other studies¹⁷.

This study finds untrained persons facilitating child birth as a threat for mother. Pakistan has different maternal mortality ration in different provision due unequal distribution of health services. Most of the deliveries are conducted by the traditional birth attends which puts the life of mother in danger it has been also declared in another study¹⁸.

Lack of awareness of pregnancy related complication may also worsen the situation. This study showed results related to lack of awareness regarding pregnancy related complications. In rural areas of Pakistan women don't have any asses to social media like TV, Mobile phone etc. So, mother remain unaware to symptoms happening unusually with their gestation and unborn baby. As a study was done in Nigeria in 2017 claimed that most of the mothers are unaware of gestational complications¹⁹.

CONCLUSION

Maternal mortality has become the serious public health issue in Pakistan and it contributes to low life expectancy among women. It is alarming that Pakistan has the highest maternal mortality rate. Moreover, contributing factors of maternal mortality in rural areas like delivering babies at home by traditional birth attendants without aseptic techniques, unavailability of antennal care, lack of awareness regarding dangerous signs of pregnancy play vital role to provoke mortality rate. Community base interventions can contribute a lot by educating about various factors for controlling the maternal mortality.

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