

**PATTERNS OF HEALTHCARE ACCESS AND DETERMINANTS OF  
MATERNAL HEALTH ISSUES AMONG WOMEN IN RURAL KARACHI,  
PAKISTAN**

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**ABSTRACT**

**Background:** Maternal health is a priority public health problem in Pakistan, and rural women face socioeconomic as well as structural impediments to care. One of the explanations for bad maternal outcomes is limited access to specialists and medical centers.

**Objective:** The research objective was to recognize the determinants of maternal health issues and measure the impediments to the use of healthcare among pregnant and postpartum women residing in rural Karachi, Pakistan.

**Methods:** A cross-sectional survey of 200 postpartum and pregnant women was conducted through purposive sampling. The information was collected using pre pre-tested structured questionnaire along with a verbal interview. The instrument gathered data on socio-demographics, health care service use, barriers to seeking health care, and maternal health practices. Data were analyzed using descriptive statistics in SPSS 25.0, with data presented as frequencies and percentages.

**Results:** The age group 18–28 years was a strong majority of the respondents (88.5%), and a big majority had not yet achieved middle-school education (59.5%). Pregnancy care was not common; only 27.5% of women said they had received treatment. The facility used most was the clinic (61.5%), then hospital (25%), whereas 13 used home-based services. The most common hindrances to access for professional treatment were transport-related problems (32.5%), affordability of treatment (29.5%), financial instability (27.5%), and apprehension regarding doctors' attitude (10.5%). Most participants had the view that more healthcare facilities were

needed, and 87% called for tertiary-care hospitals and 97% for gynecologists in the rural environment. Proper laboratory reporting during pregnancy was feasible for just 9% of the sample.

**Conclusion:** Extensive levels of barriers to utilization of maternal healthcare in rural Karachi are revealed by the study, initiated predominantly because of socioeconomic constraints, diagnostic service unavailability, and shortages. Gap filling through the strengthening of healthcare facilities, making services accessible, and patient-oriented provider behavior is needed to bridge gaps and enhance maternal health in poor neighborhoods.

## INTRODUCTION

One facet of women's health that is well acknowledged is maternal health. Pregnancy-related problems, early childbirth, and maternal mortality are more prevalent among women in underdeveloped nations. There is a 33 percent difference between developed and developing nations(1). In the world's poorest regions, the risk of a woman dying during pregnancy and childbirth is around one in six. Asia, including Pakistan, has the highest mortality rate(2).

The majority of maternal fatalities occur at the time of labor, delivery, and the first few days after giving birth(3). The use of health care services, whether public or private, in Pakistan is often influenced by sociodemographic characteristics, educational attainment, economic circumstances, cultural views, women's social standing, gender discrimination, political climate, etc.(4).

Pakistan continues to lag behind many other nations in terms of maternal health metrics(5). Some risk factors include short birth intervals, a lack of understanding about available treatments, late prenatal booking, a preference for traditional means of treatment rather than seeking medical assistance at the time of delivery, malnutrition, and inadequate access to high-quality healthcare services(6, 7). The World Health Organization's recommendation that all nations allocate at least 5% of their GDP on health, Pakistan has managed to increase this to 3.5%, with the government contributing just 0.5% and the private sector providing the remaining 2.5%(8). The expense of maternity care may make it

difficult for certain people to go to a hospital, which might lead to more maternal or newborn fatalities(9). The poverty gap and poverty severity have grown in both rural and urban regions, indicating that poverty is a significant problem in Pakistan(10).

Lodhi, Wazir, and Jadoon analyzed a study in Abbottabad, Pakistan, to identify the root causes of maternal and infant deaths. They indicated that Pakistan reports almost 500 maternal deaths per 100,000 live births every year(11). Nisar and White placed great importance on antenatal care as a means of preventing maternal and neonatal deaths, stressing the urgent need for periodic checkups and state-funded healthcare services for pregnant women(12). Equally, Shah et al. conducted a retrospective observational study in Karachi, where they looked at 104 maternal deaths and considered several socio-economic and demographic factors. The results highlighted the key role of women's education and household incomes in determining access to antenatal care(13). Mortality rates across the globe have reduced remarkably over the last three centuries. China, Brazil, Sweden, and Germany, among other nations, have made significant strides in meeting antenatal and postnatal health needs. For example, in the 18th century, Sweden and Germany witnessed very high neonatal mortality rates, with one out of every two or three children succumbing to death before reaching the age of five years. Reductions in poverty levels and improvements in healthcare systems have, however, over time, helped ensure steady decreases in maternal and child mortality.

Roser indicated that since the Enlightenment period, under-five and neonatal mortality have consistently reduced. However, a wide gap remains between developed and developing nations, with the latter still experiencing disproportionately higher death ratios(14). Olusanya went on to indicate that under-five mortality takes place primarily during the first month of life, and therefore, neonates may be especially vulnerable as opposed to older children. Lawn, Cousens, and Zupan further questioned the validity of neonatal death reporting in the developing world, as weak health information systems tend to underreport the actual burden. Incomplete immunization coverage also leaves infants vulnerable to preventable illnesses(15). Reidpath and Allotey claimed that survival at the neonatal stage is directly related to living conditions, quality of the environment, and general well-being. Confirming this, Khadka, Lieberman, Giedraitis, Bhatta, and Pandey also documented from Nepal that infant death rates were considerably greater in poor households than in richer ones, where there was a strong link between socio-economic determinants and infant survival(16). The study aimed to determine the determinants of maternal health problems and evaluate barriers to healthcare access of pregnant and postpartum women living in rural Karachi, Pakistan.

## **METHODOLOGY**

### **Study Design and Setting**

This is a cross-sectional study which carried out in the rural area of Karachi, Pakistan. The primary objective was to evaluate the determinants of maternal health problems and barriers to healthcare access of pregnant and postpartum women living in rural Karachi, Pakistan.

### **Study population**

The research population consisted of 200 pregnant and postpartum women with prenatal sickness or pregnancy-related problems. Participants who might offer informative information on the healthcare challenges they encountered during pregnancy were selected through the use of purposive sampling. Researchers were able to concentrate on the women in these marginalized groups who are most impacted by maternal health problems because of this metric.

### **Inclusion and Exclusion Criteria**

Women who were between the ages of 18 and 39, resided in rural Karachi, and either had prenatal care or experienced pregnancy complications were included. Women who refused to complete the questionnaire or provided only partial responses were not allowed to participate in the study.

### **Data Collection Tool and Procedure**

A pre-tested structured questionnaire was used to collect data. The instrument was made to obtain data on multiple areas, i.e., socio-demographic status like education and age, antenatal care access like number of visits and place of visit, barriers to care access like affordability, transport, and attitude of health providers, and maternal care practices like self-treatment dependence, diagnostic tests, and delivery.

### **Data Analysis**

For data analysis, the responses were coded and entered in Microsoft Excel. Descriptive statistical techniques were used to summarize the results. The categorical variables were calculated for frequencies and percentages, and the outcomes were described in tables to depict the prevalence of maternal health concerns and challenges in accessing healthcare among women residing in rural Karachi.

## RESULTS

**Table I: Maternal healthcare practices, barriers, and needs among women in rural Karachi**

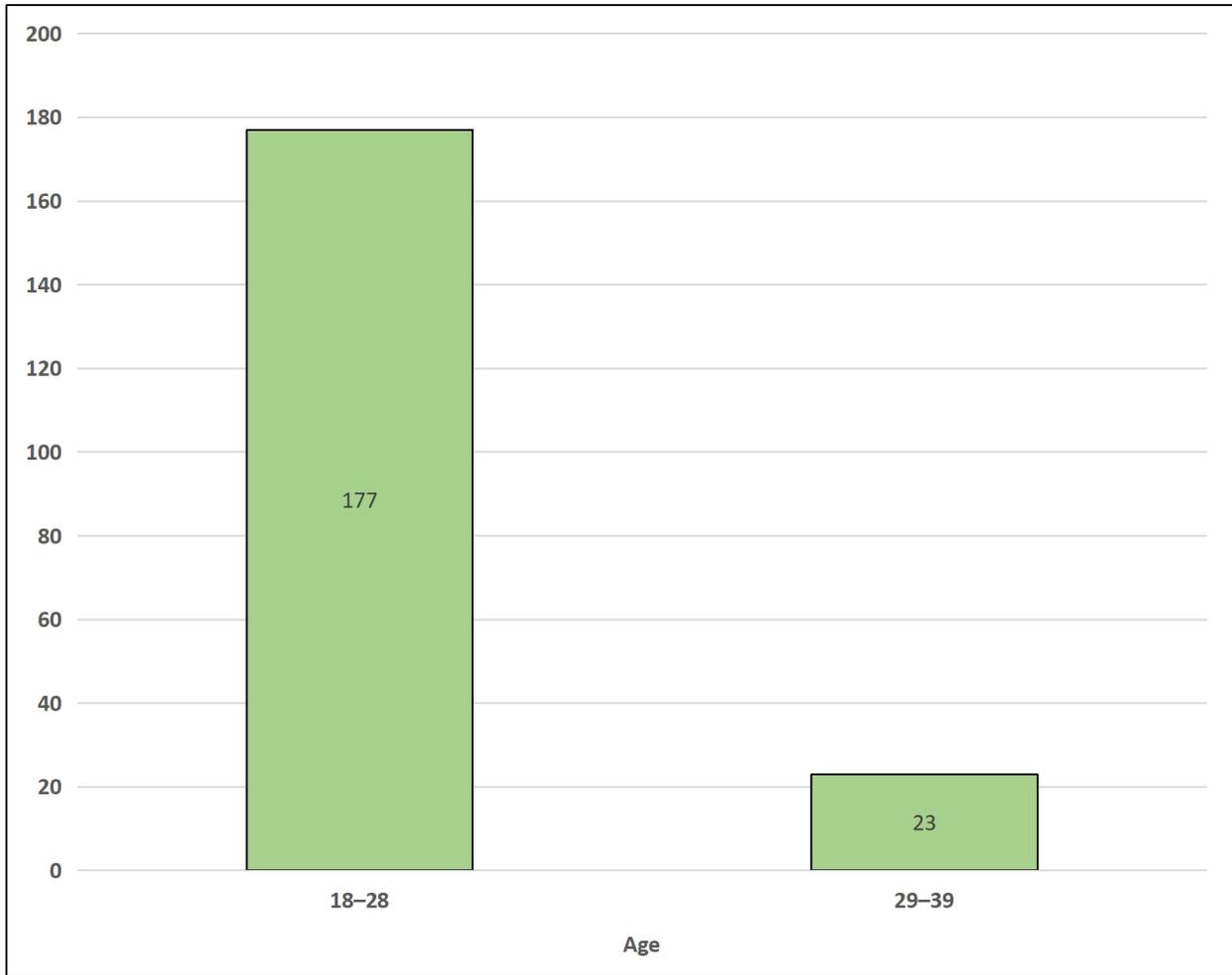
Category	Variable	Frequency (n)	Percent (%)
<b>Taking Treatment in Pregnancy</b>	Yes	55	27.5
	No	145	72.5
<b>Preferred Place for Treatment</b>	Clinic	123	61.5
	Hospital	50	25.0
	Home	27	13.5
<b>Reason for Avoiding the Doctor</b>	Scared of the doctor's behavior	21	10.5
	Too expensive	59	29.5
	Transport problem	65	32.5
	Financial status	55	27.5
<b>Need for Tertiary Care Hospital</b>	Yes	174	87.0
	No	26	13.0
<b>Need for a Gynecologist</b>	Yes	194	97.0
	No	6	3.0
<b>Proper Lab Reporting During Pregnancy</b>	Yes	18	9.0
	No	182	91.0

The research included two hundred pregnant and postpartum women. The majority of the participants were young people, 177 females (88.5%) aged between 18-28 years, and 23 females (11.5%) aged between 29-39 years, as indicated in Figure 1. Regarding education, the majority of the participants had a middle level of education, as indicated by 119 females (59.5%), and 76 females (38%) had primary education, and a negligible percentage of 5 females (2.5%) had attained education up to the intermediate level, as indicated in Figure 2. These findings suggest that the sample of the present study was mostly young women with relatively lower education. To one question regarding healthcare-seeking behavior, 55 women (27.5%) admitted to receiving treatment during pregnancy, while the rest of 145 women (72.5%) had not received formal medical treatment. Among the treatment-seeking women, the most preferred site of care was clinics (123 women; 61.5%),

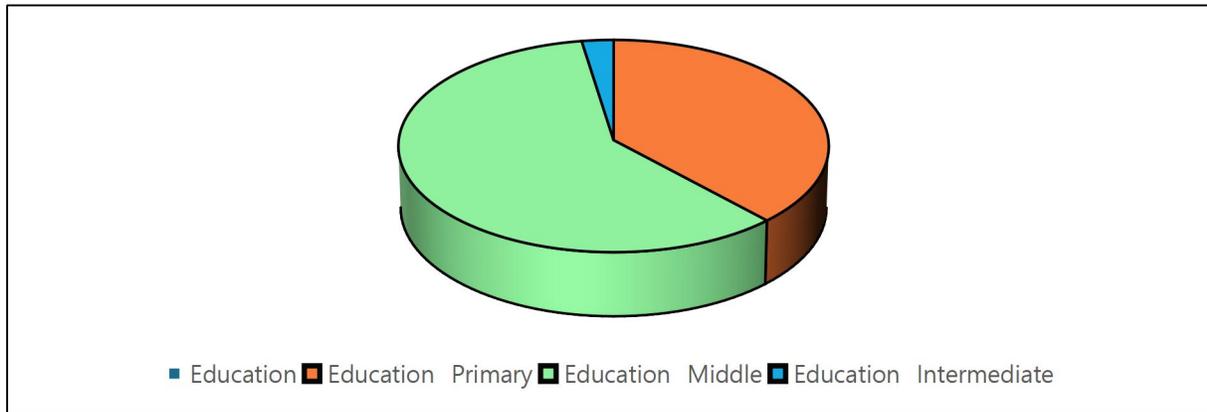
followed by hospitals (50 women; 25%), with a mere 27 women (13.5%) treated at home. This reflects a trend both of dependency on local facilities and low-level preference for hospital-level care. High rates of women had more than one barrier to reaching healthcare services during pregnancy. The most frequent issue was transportation issues, with 65 women (32.5%) reporting. 59 women (29.5%) reported that treatment was expensive, and 55 women (27.5%) reported financial difficulties as the most significant reason for avoiding healthcare providers. Additionally, 21 women (10.5%) reported fear of physician behavior as a constraint to care, a concern about provider attitude. These findings demonstrate that economic and non-economic obstacles were correlated with ineffective use of maternal health care in rural Karachi. The participants highly regarded enhanced health facilities and expert medical care. The vast majority, 174 women (87%), conveyed the need for a tertiary hospital in the locality, and

194 women (97%) emphasized the availability of gynecologists in the rural areas, as indicated in Table I. These results tally the unmet maternal specialty treatment and specialist medical staff's demand for the rural areas. Poor utilization of diagnostic services during pregnancy. Only 18 (9%) women had

appropriate laboratory reporting in the antenatal checkup, but the majority of patients, i.e., 182 (91%), did not have appropriate lab investigations. This highlights an appalling lack of availability of routine diagnostic services for early detection and treatment of disorders during pregnancy.



**Figure 1: Age Category Distribution of Study Participants**



**Figure 2: Percentage Distribution of Respondents Across Different Education Levels**

## DISCUSSION

This research investigated maternal health issues and healthcare access barriers among pregnant and postpartum women in rural Karachi, Pakistan. The results showed poor maternal healthcare utilization, with less than one-third of the women (27.5%) accessing treatment during pregnancy. This is in line with other research in Pakistan and other low- and middle-income countries, where infrastructural, socioeconomic, and cultural barriers usually restrict women from accessing antenatal care services(17). Lack of treatment during pregnancy enhances the risk of avoidable complications and adds to the continually high maternal morbidity and mortality rates being reported among rural communities. The socio-demographic characteristics of the study participants revealed that most were young women in the 18–28 years' age group with minimal levels of education, a trend consistent with studies undertaken in rural Sindh provinces. Education has been identified as a key determinant of maternal health behavior, affecting pregnancy risk awareness and acceptance of antenatal care services. The limited level of education among participants in this study could, in part, account for the poor uptake of maternal healthcare services(18). Healthcare access barriers were

a prevailing theme in the current study. Transportation challenges, economic instability, and affordability of treatment were cited as the most prevalent barriers, with a lesser but significant percentage of women staying away from doctors because they feared negative behavior on the part of providers. These results are consistent with previous studies in rural Pakistan in which distance to facilities, out-of-pocket payments for healthcare, and negative attitudes on the part of healthcare providers have been reported as major deterrents to seeking care(19-22). Overcoming these barriers calls for multiple interventions, such as enhancing rural primary healthcare infrastructure, decreasing costs through subsidized or free maternal care, and encouraging more respectful maternity care. One especially concerning result was the very low rate of women (9%) who said they received appropriate laboratory tests during pregnancy. This diagnostic services gap indicates system weaknesses in maternal healthcare delivery. Laboratory testing is an important aid in the early detection of disorders like gestational diabetes, anemia, and preeclampsia. Rural women lacking access to such services risk unknown complications, which may lead to unfavorable maternal and neonatal outcomes. Parallel diagnostic support deficits have been

seen in Bangladesh, India, and other low-access districts of Pakistan, making it even more critical to extend diagnostic services to rural health centers(23). Women's inflated demand for tertiary care hospitals, 87 percent, and gynecologists in 97%, reflects perceived unmet needs for rural populations. But this evidence points to the need for skilled birth attendants, midwives, and mobile health units in all rural areas, and how they may not be economically viable. The addition of community health workers alongside digital health services such as telemedicine could close the gap between rural women and experienced maternal health professionals.

## CONCLUSION

This study showed that rural women in Karachi never received maternal health care during pregnancy due to transport problems, lack of resources, excessive fees, and unsuitable attitudes of physicians. The diagnostic centers were almost inaccessible, and tertiary-level health centers and gynecologists were in high demand. These findings emphasize the need to provide access, affordability, and quality of healthcare in the rural world today, to minimize maternal health risks and improve outcomes.

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## Conflict of interest

None

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