

# Maternal Health Expenditures among Women in Rural Areas of Pakistan.

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## Abstract

### Background:

**Objective:** The objectives of this study was to determine maternal health expenditure among rural women of Rahim Yar Khan

**Methodology:** Study design: Cross sectioned study. Site of study: 3 villages of Union Council, Bagh-o-Bahar. Basti Latifabad, Basti Jam Naseer, Chak 33-P. **Duration of study:** 3 months (from 25th January to 25<sup>th</sup> April, 2017).

**Sample size:** A total of 66 study subjects were involved in this study.

**Sampling Technique:** Convenient sampling technique was used for selecting household and head of family. **Study subject:** Head of family (husband) from household, where there is history of pregnancy in last 1 year and/or any other gynaecological check-up of the married woman of child bearing age. **Inclusion criteria:**

Household having married couple, married child bearing aged woman living with her husband. History of pregnancy in last 1 year. History of delivery or C-section in last 1 year. Any related gynaecological check-up of married, child bearing aged woman in last 1 year.

**Exclusion criteria:** Household having no child bearing aged, married couple in last 1 year. Not willing to give data/information. No event of health seeking behavior regarding pregnancy and gynaecological care in last 1 year.

**Conclusions:** Our study revealed that there is high financial cost of maternal health expenditure paid both in private and public sector facilities by rural population of Rahim Yar Khan. Although private sector cost is more but public sector cost is also high keeping in view, the notion of free health care services as raised by Governments in

Pakistan.

### Introduction

#### Maternal health expenditure among women in rural area

#### Maternal Health; Definition

Maternal health refers to the health of the women during pregnancy, childbirth and the postpartum period. While motherhood is often a positive and fulfilling experience for too many women it is associated with suffering, ill-health and even death.<sup>i</sup>

#### Public services in Pakistan

Pakistan is attributed to the lack of access to basic health care services, poverty, lack of health infrastructure and personnel, illiteracy, women's low status, inadequate water supplies and sanitation.

There are 127,859 doctors and 12,804 health facilities in the country to cater for over 180 million people.

In 2007 there were 85 physicians for every 100,000 persons in Pakistan, or in other words, one doctor for 1,225 people.

There are only over 62,000 nurses all over Pakistan who are supplemented with a strong force of 96,000 Lady Health Workers (primary health care providers).

There were 13,937 health institutions in the country including 945 hospitals (with a total of 103,285 hospital beds), 4,755 dispensaries, 5,349 Basic Health Units (mostly in rural areas), 903 Mother and Child Care Centres, 562 rural health centres and 290 TB centres.<sup>ii</sup>

#### Health system in Pakistan

Healthcare in Pakistan is administered mainly in the private sector which accounts for approximately 80% of all outpatient visits. A pilot universal health care program is underway in Punjab, with the eventual aim of covering 10

million people.<sup>iii</sup> Ministry of Health of Pakistan states that health expenditure of period 2007-08 was 3.791 billion Pakistani rupees while that spent on development was 14.272 billion.

### **Health problems in Pakistan**

In Pakistan the health sector has been badly neglected and the policy makers have shown a callous lack of concern for educating the people and providing them with health care. Life expectancy at birth is 59 years while the average for other comparable countries is 61 years.

The infant mortality rate is 95 per thousand as compared to 60 in other countries. Expenditure on health as a percentage of GNP also remains low. Adequate food availability, water supply and sanitation will also be included in this program. Health facilities in Pakistan are inadequate, mainly due to a lack of resources and a high population growth rate. The country needs food, a proper water supply, and adequate sanitation. However, Pakistan is the first country to nearly completely eradicate disease, having reported fewer than 100 cases in 1995. Pakistan is also working toward universal immunization, disease prevention, health promotion, and curative and rehabilitative services.

Several programs are underway to improve health care coverage and control tuberculosis, leprosy (disease), and cancer.

### **Maternal health in Pakistan**

Maternal health problems are widespread in Pakistan, complicated in part by frequent births most of which take place at home under untrained supervision during getting the maternal health care. **Factors that prevent women in Pakistan from getting health care**

#### **Factors that prevent women in Pakistan from getting the health care they need include distance from health services are**

1. Cost (direct fees as well as the cost of transportation)
2. Women's lack of decision-making power within the family.
3. The poor quality of services, including poor treatment by health providers, also makes some women reluctant to use services.

4. Many social, environmental and policy matters account for the high numbers of deaths among women and children.

5. The lack of education among the masses prevents them from being educated or informed about pregnancy issues and maternal and child health issues.

6. Allopathic and hakeem culture is widely prevalent among Pakistani societies, the patients prefer to hear miracles regarding health and wellness of mother and child, rather than listen to the correct and unbiased judgment made by the doctor.

### **Millennium Development Goals**

Millennium Development Goals were eight international development goals that all 192 United Nations member states and at least 23 international organizations had agreed to achieve by the year 2015.

They included;

- Reducing extreme poverty.
- Reducing child mortality rates.
- Improving maternal health.
- Fighting disease epidemics such as AIDS, and developing a global partnership for development.

Mother's health in Pakistan remains neglected due to a multiplicity of factors—social, economic, and political. Many women lose their lives in the process of giving births to their children and this means that, in Pakistan, pregnancy is not safe in its effects on the mother, newborn and household.

The overall development process also ignores of what is needed to improve the welfare of the vulnerable group such as the expecting mothers.

Pakistan, therefore, represents an unacceptably high maternal mortality setting and needs an immediate attention for substantial and sustained reduction in the risk of dying during pregnancy

### **Millennium Development Goals in Pakistan**

Pakistan is currently working towards achieving the Sustainable Development Goals, after being unsuccessful in MDG goals.

The global MDG 5 target for maternal health was to reduce the number of women who die in pregnancy and childbirth by threequarters between 1990 and 2015. When applying this target to Pakistan, maternal mortality should have fall to 123 cases per 100,000 live births. In the period 2007-11 Pakistan had a reported maternal mortality ratio of 280 deaths per 100,000 live births (this figure was estimated at 260 deaths per 100,000 by UN agencies/World Bank in 2010). Based on the data reported by the country, Pakistan's maternal mortality target was unlikely to be achieved. Part of the goal also stipulates that 100 per cent of births must be attended by a skilled health professional. In the period 2007-12 this figure stood at 43 per cent.

## Methodology;

### Study design

Cross sectioned study.

### Site of study

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### Duration of study

3 Months (from 25<sup>th</sup> January to 25<sup>th</sup> April, 2017).

### Sample size

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### Sampling Technique

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### Study subject

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### Inclusion criteria

Household having married couple, married child bearing aged woman living with her husband.

History of pregnancy in last 1 year.

History of delivery or C-section in last 1 year.

Any related gynaecological check-up of married, child bearing aged woman in last 1 year.

### Exclusion criteria

Household having no child bearing aged, married couple in last 1 year.

Not willing to give data/information.

No event of health seeking behavior regarding pregnancy and gynaecological care in last 1 year.

### Data collection

Data was collected on a pre-designed, pre-tested questionnaire after getting informed verbal consent from head of family. The data regarding household family composition, like male, female, children. Maternal health expenditure, like ante-natal visit for ultrasound of gynae/obs, delivery, D&C, C-section, travel cost and medicine cost.

### Data analysis

Data was entered in SPSS version-20 and analyzed. Quantitative variables, like age of mother, monthly family income, cost of maternal health expenditure, was presented as Mean  $\pm$  Standard Deviation. Whereas qualitative variables, like occupation of husband, public/private sector distribution was presented as frequency and percentages.

**RESULTS:**

**Table I: Comparison Of Descriptive Statistics Of Maternal Health Expenditure In Public And Private Sector**

Public /Private		Age of head of family	Monthly family income	Number of family members	Number of children in home	Distance travelled	Distance of nearest private health centre	Distance of nearest public health centre
Public	Mean	37.19	11562	5.5625	2.6875	15	18.	1
	Median	32.50	7500	4.5000	2.0000	17	18.	1
	Mode	30	5000	4.00	2.00	22	18.	1
	Std. Deviation	15.096	10929.8	2.82769	1.70171	8	0	0
	Minimum	20	3000	2.00	.00	0	18	1
	Maximum	70	40000	12.00	6.00	22	1	1
Private	Mean	41.34	12720	6.5400	4.1000	12	18.	1.0000
	Median	40.00	10000	6.0000	4.0000	15	18.	1.0000
	Mode	35 <sup>a</sup>	10000	6.00	3.00	15	18.	1.00
	Std. Deviation	13.651	10214.11	2.83714	2.76457	7.79	0.	.00000
	Minimum	18	2000	3.00	1.00	0	18.	1.00
	Maximum	80	60000	18.00	18.00	22	18.	1.00

Table no I, shows that Mean age of head of family was 37±15 years and median was 32 years among those who sought maternal health care in Public sector as compared to 41± 13 years among those in Private. Mode of monthly Family Income was 5000 among those in Public sector as compared to 10000 among those in Private sector. Mode of number of Family members was 4 among those in Public as compared to 6 of Private

sector. Median of number of Children in home was 2 among those in Public as compared to 4 among those in Private. Mean distance of nearest Rural Health Centre was 1 km. Mean distance of nearest Private Health Centre is 18 km. Mean distance travelled was 15 km to Public Health Centre (Tehsil Head quarter Hospital) as compared to 12 km to Private Health Centre.

**Table 2: Total Expenses In Last Maternal Health Care Event**

Total expenses in last maternal health care event		
<b>Gyne/Obs</b>	Mean	2188
	Median	2000
	Mode	2000.00
	Std. Deviation	1431
	Minimum	400.00
	Maximum	5500.00
<b>Delivery</b>	Median	6000
	Mode	10000
	Std. Deviation	3060
	Minimum	200.00
	Maximum	10000
<b>C-Section</b>	Mean	20316
	Median	20000
	Mode	20000
	Std. Deviation	3930
	Minimum	10000
	Maximum	25000

Table no 2 shows that mean expenses of gyne/obs ultrasound were  $2188 \pm 1431$  rupees and mean expenses for delivery were  $6075 \pm 3060$  rupees and mean expenses for c section were  $20316 \pm 3930$ .

**Table 3: Description Of Maternal Education**

Public / private	Maternal Education	Frequency	Percentage
<b>Public</b>	Illiterate	9	56.2%
	Primary	4	25.0%
	Matric/FSC	3	18.8%

	Total	16	100.0%
Private	Illiterate	32	64.0%
	Primary	10	20.0%
	Matric/FSC	7	14.0%
	Graduate & above	1	2.0%
	Total	50	100.0%

Table no 3 shows that among those who sought public health care 9 mothers were illiterate as compared to 32 who sought private health care. Among those who sought public health care 4 were primary passed as compared to 10 who sought private health care.

**Table 4: Description Of Maternal Occupation**

Table no 4 shows among those who sought public health 1 mother was labour as compared to 4 in private and 14 were housewife as compared to 43 in private.

Public / private	Maternal occupation	Frequency	Percentage
Public	Labour	1	6.2%
	Farmer	1	6.2%
	House wife	14	87.5%
	Total	16	100.0%
Private	Labour	4	8.0%
	Farmer	2	4.0%
	land owner	1	2.0%
	house wife	43	86.0%
	Total	50	100.0%

**Table 5: Comparison Of Different Maternal Health Event In Public And**

## Private

Maternal event in last 6 months	public or private	N	Mean	Std. Deviation	Std. Error Mean	P value
Gyne/Obs US	Public	10	1560	800.277	253.070	0.02
	Private	7	3085	1704.336	644.178	
Delivery	Public	4	7000	2160.246	1080.123	0.5
	Private	26	5932	3185.747	624.776	
C Section	Public	2	14000	5656.854	4000	0.01
	Private	17	21059	3131.904	759.598	

Table 5 shows that mean expenses were  $1560 \pm 800$  rupees among those who sought gyne/obs ultrasound in public as compared to  $3085 \pm 644$  rupees among those in private. Mean expenses for delivery in public health centre were  $2160 \pm 1080$  rupees as compared to  $3185 \pm 624$  rupees in private health centre. Mean expenses for c section in public were  $14000 \pm 5656$  rupees as compared to  $21059 \pm 3131$  rupees in private sector.

## DISCUSSION

This study was conducted to assess maternal health expenditure incurred during health care event in public and private sectors of rural Rahim Yar Khan, by using household survey as source of information. In our study, it was found that mean age of head of family was  $37 \pm 15$  years (no data regarding mean age of head of family was found). In our study

mode of total monthly Income was 5000 rupees among those who sought health care in Public sector. In another study made in Chakwal southern Punjab in (2010-2011) the average monthly income was 10000 rupees among those who sought health care in private sector. In our study Mode of number of Family members was 4 among those in Public as compared to 6 of Private sector. NO work regarding this was found. Median of number of Children in home was 2 among those in Public as compared to 4 among those in Private. We found that mean distance of nearest Rural Health Centre was 1 km. In another study made in Nankana Sahib, it was

found that only 19 %of total of total health facilities (95% CI:13.3 to 25.5%)were fulfilling the criteria of geographic accessibility where the catchment area population was falling within in a 5 km radius . 28% of RHCs and 18% of BHUs were located with specified radius. within the specified radius. In our study, mean distance of nearest Private Health Centre was 18 km, mean distance travelled was 15 km to Public Health Centre (Tehsil Head quarter Hospital)as compared to 12 km to Private Health Centre. In our study mean expenses of gyne/obs ultrasound were  $2188\pm 1431$  rupees, whereas in another study in Tanzania maternal health care cost for antenatal visit was 11 US \$ and in a study conducted in Uganda the cost of antenatal visits in public sector was dollar 2.21 US \$. In our study mean expenses for delivery were  $6075\pm 3060$  rupees, whereas in another study the cost of normal vaginal delivery was 2.71 US \$ in Uganda and was 140 US \$ in Argentina .In a previous study c -section cost was 46 US \$ in Uganda and 525 US \$ in Argentina, the total cost of a scheduled C-section in the district hospital during the fieldwork period was approximately 7000–10,000 rupees (75–100) US \$ and mean expenses for c section were  $20316\pm 3930$  rupees in our study. In a study conducted in Uganda the cost of antenatal visits in public sector was 2.21 \$. In

Argentina it was 42.41 .Ref (bbm,megdicheH).In a previous study in Tanzania maternal health care cost for antenatal visit was 11 US \$ and c section was 135 US \$.in private A normal vaginal delivery attended by the trained midwife cost 2200 rupees (23 US \$) and by a physician 5500 rupees (56 US \$), excluding medicines or other costs. A C-section by a private physician cost about 25,000 (255 US \$). A ten month study (May 2010–February 2011) was conducted in Ganji village; district Chakwal, northern Punjab .Antenatal care utilisation (65%) in developing countries is low when compared to that of developed countries, where it stands at 97%. Skilled attendance at delivery is 53% in developing countries and 99% in developed country.Out of pocket expenditure on percentage of private expenditure on health is 98% {ref;Uzma Afzal ,Anum yousaf ,(the state of health in Pakistan ;overview).The Lahore Journal of Economics-18:SE-2013:233-247} In our study the frequency of education of head of family in public, 5 were illiterate and in private 18 were illiterate among those who sought public health care the frequency of labour was 4 and among private was 13.Our study shows that among those who sought public health care 9 mothers were illiterate as compared to 32 who sought private health care. In a previous study made by Sohail Agha 58% of the mothers were uneducated (changes in proportion of facility based deliveries and related maternal services among poor in rural Jhang Pakistan ,International Journal for equity in health 2013.10:57:pg 225-235). Among those who sought public health care

4 were primary passed as compared to 10 who sought private health care. it was reported that a high proportion of poor (46% for ANC) and less well-educated (33% for ANC) women were not receiving any, or less than the WHO- and nationally-recommended schedule of ANC.<sup>13</sup>

Our study shows that those who sought public health 1 mother was labour as compared to 4 in private and 14 were housewife as compared to 43 in private ,no study regarding this was found in past .in our study it was calculated that mean expenses were 1560±800 rupees among those who sought gyne/obs ultrasound in public as compared to 3085±644 rupees among those in private. Mean expenses for delivery in public health centre were 2160±1080 rupees as compared to 3185±624 rupees in private health centre. Mean expenses for c section in public were 14000±5656 rupees as compared to 21059±3131 rupees in private sector.

Antenatal care was not being provided in ten %(17) of the facilities due to the non-availability of LHVs or other healthcare providers, the data was collected using an objectively developed semi-structured questionnaire from October-November 2010.The questionnaire was pre-tested in a non-sampled district, Nankana Sahib. Nearest public health centre was visited by 16.Nearest private health centre was visited by 50. The analysis revealed that only 19% of the total health facilities (95% CI: 13.3 to 25.5%) were fulfilling the criteria of geographic accessibility where the catchment area population was falling within a five kilometre radius. Analysis by type of facility revealed that only 28% of RHCs and 18% of BHUs were located within the specified radius. The accessibility of RHCs was relatively better than that of BHUs the data was collected using an objectively developed semi-

structured questionnaire from October-November 2010.The questionnaire was pre-tested in a non-sampled district, Nankana Sahib.(ref) The frequency of those who were provided health care by lhw in public health care was 16. The frequency of those who were provided health care by doctor in private was 50

## Conclusion

Our study revealed that there is high financial cost of maternal health expenditure paid both in private and public sector facilities by rural population of Rahim Yar Khan. Although private sector cost is more but public sector cost is also high keeping in view, the notion of free health care services as raised by Governments in Pakistan. It is suggested that alternative financing mechanisms may be used in public sector health system to improve its utilization by community and cater the issue of low wages paid to health care service providers in rural areas.

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