

## ORIGINAL ARTICLE

**Pregnancy Outcomes of Women in Two Health Institutes; A Cross-Sectional Study in Pakistan**ASIMA MUNAWAR<sup>1</sup>, KHADEEJA MUSTAFA<sup>2</sup>, SOHAIB ARIF<sup>3\*</sup>, ROMESA ATTEEQ<sup>4</sup>, EMAMA BHATTI<sup>5</sup>, FIZZAH USMAN<sup>6</sup><sup>1</sup>Senior Registrar, Arif Memorial Teaching Hospital, Lahore<sup>2</sup>Woman Medical Officer, District Headquarter Hospital, Hafizabad<sup>3</sup>Senior Medical Officer, Indus Hospital, QF, NST & SMP Campus, Lahore<sup>4</sup>Medical Officer, Hameed Latif Teaching Hospital, Lahore<sup>5</sup>Demonstrator, Rashid Latif Medical Complex, Lahore<sup>6</sup>Medical Officer, Medicare Hospital, FaisalabadCorresponding author: Sohaib Arif, Email: [Sohaib.arif096@gmail.com](mailto:Sohaib.arif096@gmail.com)**ABSTRACT****Background:** Complications that could be fatal can affect nearly 15% of pregnant women. As a result, it will be helpful to direct the appropriate intervention if a high-risk pregnancy is identified early on.**Objectives:** This study was aimed to ascertain the outcomes of pregnancies among pregnant women.**Methods:** In this study, age groups of 20-40 years of women were involved, among them, 60 women from each hospital participated. The majority of women were from rural areas. The occupation of majority of women husband in DHQ was farming (33.33%), followed by laborer (40%), teaching (16.65%) and trading (10%), while majority of husbands of patients in KTMC were laborer (38.33%) followed by farming (36.66%), teaching (13.33%) and trading (11.66%).**Results:** The normal weight of children in DHQ and KTMC was recorded 75 and 68.33%, respectively. In DHQ and KTMC, 50 and 38.33% children born alive, respectively while 26.66 and 35% abortions occurred, respectively. Neonatal outcome was linked to pregnancy complications and perinatal morbidity.**Practical implications:** This study focused on the neonatal health and the pregnancy outcome of the pregnant women. Improvement in vaginal birth, improvement of neonatal birth weight but caesarean section in high-risk mothers was analyzed in this study.**Conclusion:** The majority of maternal morbidities could be avoided if the mother had access to timely and appropriate healthcare during her pregnancy. As a result, proper care and prompt referral can help reduce perinatal mortality and morbidity and possibly improve maternal outcomes.**Keywords:** Pregnancy; Outcomes; Complications; Low birth weight; prenatal care**INTRODUCTION**

Pregnancy is a normal physiological condition and not a high-risk situation in normal married couples or married women. Most pregnancies end happily with the mother and the fetus in good health, but other pregnancies are complicated by issues with the mother's health, the fetus' health, or pregnancy specific disorders. However, only 10-30 percent of mothers examined during the antenatal period are considered high risk, and they are responsible for 70-80 percent of perinatal mortality and morbidity<sup>1-2</sup>. During pregnancy and childbirth, complications can happen at any point, which could have an impact on the mother's health and the fetus's overall survival.

Therefore, in situations like these, more attention is required to ensure the best outcome for the mother and child<sup>3-4</sup>. Hypertensive disorders of pregnancy are one of the major leading causes of maternal and fetal morbidities among pregnancy-specific illnesses. It has been reported that 10-16% mothers experience hypertensive problems during their pregnancies. At high risk pregnancy maternal mortality contributes to 80% due to severe bleeding / hemorrhage (25%), infections (15%), unsafe abortions (13%), eclampsia (12%), obstructed labour (8%) and other direct causes (8%). There are also many indirect causes such as HIV/AIDS, cardiovascular diseases and malaria account for 20%. The risk factors which include high risk pregnancy are existing medical conditions such as HIV positive, Diabetes mellitus and BP as well as maternal obesity, multiple births and young or old age<sup>5-10</sup>.

Achieving positive maternal, obstetric, and neonatal outcomes requires the identification of high-risk pregnancy, its causes, and its consequences. In order to prevent the development of any maternal or fetal difficulties, women who have been recognized as being at high risk must also be followed up on at regular intervals through routine treatment by the health professionals at health facilities and home visits<sup>11-12</sup>. To improve the outcome of pregnancy, proper laboratory investigations and referral services are also necessary in addition to follow-up treatment. The type of high-risk pregnancy experienced by the expectant woman affects the prognosis of the outcome as well.

Therefore, early detection of the type of high-risk pregnancy will be helpful in guiding the right intervention strategies for expectant mothers.

**MATERIALS AND METHODS**

From April 2020 to March 2021, this study was carried out at the Department of Obstetrics and Gynecology at the Khyber Teaching Medical College (KTMC) of Peshawar and DHQ, KPK. A total 120 women 60 from caesarean sections of each hospital were examined in this study. Married women between the ages of 20 and 40 who underwent Caesarean section and had a gestational age of more than 29 weeks were included in all cases. Patients with IPD and OPD were included in this study. In most IPD cases, there were at least two antenatal exams. At the time of admission, a comprehensive history was taken of the patients, including their age, address, occupation, menstrual history, obstetrical history regarding gravity, parity abortion, number of term and preterm labors, any prior CS history, CS indication, and intraoperative complication. The intrapartum scale focused on problems like induced labor, fetal heart rate deceleration, meconium stained liquor, and abnormal labor progress. Neonatal factors, such as birth weight, gestational age, Apgar score, congenital anomalies, hypothermia, and some significant issues like birth asphyxia and respiratory distress, were also meticulously recorded. After four hours, breastfeeding was allowed in the case of a cesarean section. Using a predesigned and pretested proforma, comprehensive information, as well as a history of neonatal complications and perinatal outcomes, were also recorded. The perceptions in the two gatherings were thought about utilizing p values determined P worth of <0.5 was taken as genuinely huge.

**RESULTS**

Table 1 shows the socio-demographic characters of responded who involved in this study. In this study, age group of 20-40 years of women were involved, among them, 60 women from each hospital were participated. The majority of women were from rural areas. The occupation of majority of women husband in DHQ was

farming (33.33%), followed by laborer (40%), teaching (16.65%) and trading (10%), while majority of husband were laborer 38.33% followed by farming (36.66%), teaching (13.33%) and trading (11.66%) in KTMC.

Table 1: Socio-demographic parameters of respondents

Variables	DHQ		KTMC	
	Frequency (n)	Percentage	Frequency (n)	Percentage
<b>Age in years</b>				
20-22	2	3.33	3	5
23-25	2	3.33	4	6.66
26-28	4	6.66	5	8.33
29-31	6	10	7	11.66
32-34	11	18.33	8	13.33
35-37	14	23.33	10	16.66
38-40	21	35	23	38.33
Total	60	100	60	100
<b>Location</b>				
Urban	24	40	29	48.33
Rural	36	60	31	51.66
Total	60	100	60	100
<b>Husband occupation</b>				
Teaching	10	16.66	8	13.33
Farming	20	33.33	22	36.66
Trading	6	10	7	11.66
Labourer	24	40	23	38.33
Total	60	100	60	100
<b>Education</b>				
Illiterate	15	25	10	16.66
Primary	27	45	30	50
Middle	6	10	5	8.33
FSC	4	6.66	4	6.66
Bachelor	2	3.33	6	10
Master/M.phil	5	8.33	4	6.66
PhD.	1	1.66	1	1.66
Total	60	100	60	100
<b>Religion</b>				
Mulsim	49	81.66	54	90
Christian	8	13.33	4	6.66
Hindu	3	5	2	3.33
Total	60	100	60	100
<b>Family status/class</b>				
Lower class	23	38.33	26	43.33
Middle class	12	20	10	16.66
Upper class	25	41.66	24	40
Total	60	100	60	100
<b>Type of family</b>				
Joint	33	55	24	40
Nuclear	27	45	36	60
Total	60	100	60	100
<b>Parity</b>				
1 <sup>st</sup>	9	15	7	11.66
2 <sup>nd</sup>	16	26.66	18	30
3 <sup>rd</sup>	22	36.66	20	33.33
> 3 <sup>rd</sup>	13	21.66	15	25
Total	60	100	60	100

Table 2: Obstetric outcomes of pregnancy in women in the study area.

Type of delivery	Obstetric outcome			
	DHQ		KTMC	
	Frequency (n)	Percentage	Frequency (n)	Percentage
Preterm	18	30	21	35
Term	33	55	29	48.33
Postterm	9	15	10	16.66

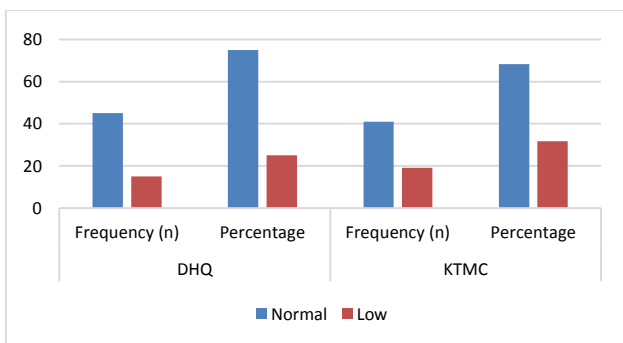


Figure 1: Birth weight of the child in both hospitals.

The type of delivery in majority of women of DHQ was term 33 (55.00%) followed by preterm 18 (30.00%) and postterm 9 (15.00%), while term was the main type of delivery as done in KTMC (Table 2). Table 3 shows the mode of delivery in both hospitals. The spontaneous vaginal delivery was the main mode of delivery in both hospitals.

The normal weight of children in DHQ and KTMC was recorded 75 and 68.33%, respectively as shown in figure 1. In DHQ and KTMC, 50 and 38.33% children born alive, respectively while 26.66 and 35% abortion occurred, respectively as shown in Figure 2.

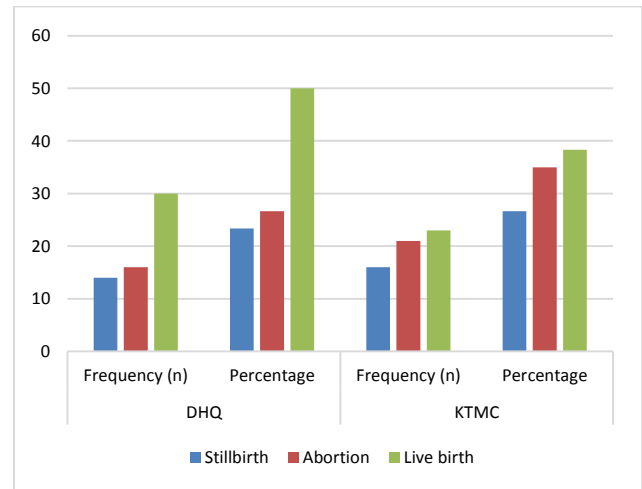


Figure 2: Birth status of child in both hospitals.

Table 3: Mode of delivery in study area.

Mode of delivery	DHQ		KTMC	
	Frequency (n)	Percentage	Frequency (n)	Percentage
Assisted vaginal delivery	11	18.33	13	21.66
Lower segment cesarean section	14	23.33	16	26.66
Spontaneous vaginal delivery	35	58.33	31	51.66

Table 4: The perinatal morbidity in study area.

Mode of delivery	DHQ		KTMC	
	Frequency (n)	Percentage	Frequency (n)	Percentage
Prematurity	17	28.33	19	31.70
Neonatal hyperbilirubinemi	6	10.00	3	5.00
Intracranial hemorrhage	3	5.00	5	8.33
Septicemia	0	0.00	1	1.70
Anemia	8	13.33	6	10.00
Respiratory distress syndrome	5	8.33	7	11.66
Neonatal hypogycemia	4	6.66	3	5.00
UGR	2	3.33	0	0.00
Meconium aspiration syndrome	5	8.33	4	6.66
Birth asphyxia	10	16.66	12	20

The perinatal morbidity is given in Table 4. Prematurity was the main perinatal morbidity in participants followed by birth asphyxia, anemia, respiratory distress syndrome, neonatal hyperbilirubinemi, meconium aspiration syndrome, neonatal hypogycemia, intraceanial hemorrhage and UGR as given in Table 4. The participants in which prematurity was found in DHQ was 28.33% and in KTMC was 31.70%.

## DISCUSSION

Complications during pregnancy and childbirth are the leading cause of death for pregnant women in many low-income nations

like Pakistan. The mortality and morbidity rates are likely to be significantly higher in public hospitals with limited access to neonatal intensive care than in the 12 locations with such facilities<sup>13-14</sup>.

Because of advancements in techniques, blood transfusion, surgery, and the availability of "powerful" antibiotics, Caesarean sections are now safer and even better than they have ever been. In developing nations, where there is a lack of health facilities, appropriate equipment, trained staff, a blood bank, and clean operating rooms, mortality and morbidity may be significantly higher. In non-industrial nation's associative abatement in perinatal mortality has not been validated by an expansion in the pace of CS, whereas in created nations consistent drop in perinatal mortality has been shown<sup>15</sup>. High-risk cases and low-risk cases were divided using Cooplend risk factor scoring. Anemia in pregnancy affects not only the health of the mother but also the outcome of the pregnancy and the health of the baby, resulting in an intergenerational cycle of anemia, malnutrition, etc., known public health issues that are more prevalent in developing countries than in developed ones and any other health problems<sup>4, 16-17</sup>.

Prematurity was the main perinatal morbidity in participants followed by birth asphyxia, anemia, respiratory distress syndrome, neonatal hyperbilirubinemi, meconium aspiration syndrome, neonatal hypoglycemia, intracranial hemorrhage and UGR as given in table 4. The participants in which prematurity was found in DHQ was 28.33% and in KTMC was 31.70%. The similar findings had been reported by many workers working on the pregnancy outcomes in the globe<sup>18-19</sup>.

A study reported that the incidence of abortion and stillbirth among asylum-seeking women was considerably higher than ( $p < 0.05$ ) among resident women. The high rate of abortions and stillbirths can be linked to a variety of pre- and post-migration factors, as well as circumstances in the destination country. The lack of competent health treatments in the country of origin, risky migration voyages and near-death experiences, and living circumstances in receiving centers are seen as particularly stressful by women and negatively affecting their health-related quality of life<sup>20</sup>. Frequent dispersals before to arrival at the final reception facility may also contribute to unfavorable outcomes and disrupt continuity of care, leading to severe impacts on the health and well-being of pregnant asylum-seeking women<sup>21</sup>. In addition, untreated mental diseases such as depression, anxiety disorders, and traumatic stress have detrimental consequences on mothers and their (unborn) children<sup>22</sup>.

Consequently, there is a need for the accurate and quick detection of mental illness during pregnancy by standardized and often deployed screening tools, as well as the provision of low-threshold psychosocial help based on individual need. Such methods and care delivery paradigms do not yet exist in Pakistan, which was the reason to conduct such type of research activities.

**Conflict of Interest:** Authors declare no conflict of interest.

## CONCLUSION

The mother's age is a significant risk factor for poor pregnancy outcomes. It has been discovered that the newborn baby's weight is inversely correlated with the mother's parity. Adolescent pregnancies are also known to be prone to congenital anomalies; this could be due to the teen mother's incomplete biological and anatomical development. Neonatal outcome was linked to pregnancy complications and perinatal morbidity, according to this study. It also indicated that this study's improvement in the delivery rate and decrease in the rate of low birth weight but high caesarean section rate emphasize the importance of focusing on high-risk mothers.

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