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Research Article

**SIX MONTHLY DESCRIPTIVE RESEARCH ABOUT GRAND
MULTIPARITY FREQUENCY AND RELATED
FETOMATERNAL OUTCOME AT MAYO HOSPITAL,
LAHORE**¹Ammarah Safdar, ²Hafiz Muhammad Rashid Javaid, ³Zohaib Iftikhar¹Lahore General Hospital²UHS³Jinnah Hospital Lahore**Abstract:**

Objective: To find out the occurrences of grand multiparity and to estimate the magnitude of its effect on the mother and the newly born baby in a local health care facility.

Design: The design of the study was descriptive.

Place and Duration: The study was carried out from February – July 2016 at Mayo Hospital, Lahore (Obstetrics and Gynecology Department), Pakistan.

Subjects and Methods: The females having grand multiparity were selected for the study. The women having less frequency and with other medical conditions were excluded. The subjects were interviewed and examined physically. Laboratory results were gathered for the grand multipara women and data was analyzed by using software (SPSS Ver 10.0).

Results: A total of 630 cases of deliveries were reported during the span of the study. One hundred grand multipara women were selected out of 630 (15.9%) according to inclusion criteria. The selected women were having the ages between 26-30 years. The subjects in the study were also facing conditions like anemia (90%), antepartum haemorrhage (28%), obstructed labor (21%), postpartum haemorrhage (19%) and hypertension (18%). Grand multipara women who suffered from fetal loss were 25%.

Conclusion: The risk associated with grand multiparity and pregnancy is often very high. The reasons are complicated, interlinked and multifold but yet can be stopped or minimized. Such pregnancies have got all the potential to affect the maternal and fetal health with unwanted outcomes. To overcome the complications in such cases regular evaluation, antenatal care and post-natal follow up visits are recommended for the health of both.

Keywords: Grand Multiparity, Pregnancy, Fetus, Outcome

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INTRODUCTION:

The associations between the risk factors of parity and child birth are under discussion for long. Number of pregnancies older than 6 months (24 weeks) is referred to as parity. Grand multi parity refers to the child birth from last 5 or more pregnancies [1]. Pakistani women, especially from lower and/or middle class are often marked with grand multiparity. The reasons might include early marriages, lack of awareness, social norms and religious concepts [2]. Different studies define grand multi parity differently. According to some authors, grand multipara is a woman who had given birth seven time or greater [3, 4]. There are studies like Toohey and others [5], which argue that a woman who had delivered 5 babies is also a multipara. According to International Federation of Gynaecology and Obstetrics, women giving births to 5 – 9 infants are grand multipara whereas the women with the 10th infant are great multipara [6]. The great multiparity is rarely seen in developed countries. It is generally found in localities where contraception is condemned [6]. Some studies validate the statement that grand multiparity do not involve complications prior to or post deliveries, specifically in upper class of society [7]. Normally grand multiparity is marked with complications such as antepartum haemorrhage, gestational diabetes mellitus, pregnancy-associated hypertension, premature rupture of membranes, preterm labor and postpartum haemorrhage [8]. After the fourth delivery the duration of labor is significantly increased. The grand multipara women after the 4th child have got a higher cesarean section rate [9] and cracked uterus. Resultantly, the morbidity and mortality rate induced by these complications have increased [10]. The current study evaluates some of these issues faced at Mayo Hospital, Lahore.

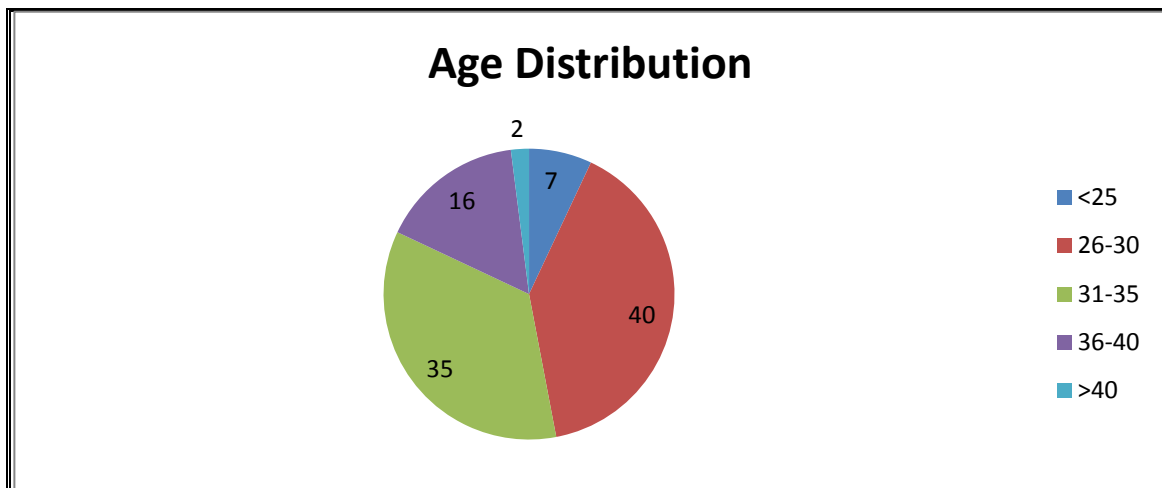
SUBJECTS AND METHODS:**TABLE I: AGE DISTRIBUTION OF GRAND MULTIPARA WOMEN**

AGE (In years)	NUMBER OF WOMEN	PERCENTAGE
< 25	07	07
26 - 30	40	40
31 - 35	35	35
36 - 40	16	16
> 40	02	02
Total	100	100

This study was carried out from February – July 2016 at Mayo Hospital, Lahore (Obstetrics and Gynecology Department), Pakistan. All the subjects were having deliveries for the fifth time or greater. Exclusion criteria for the study were not compromised. Details were collected through questionnaires. Possible maternal outcomes were kept in mind for grand multipara women involved in the study. SPSS (Ver 10) was used to analyze the data. No statistical approaches were used as this was a descriptive study.

RESULTS:

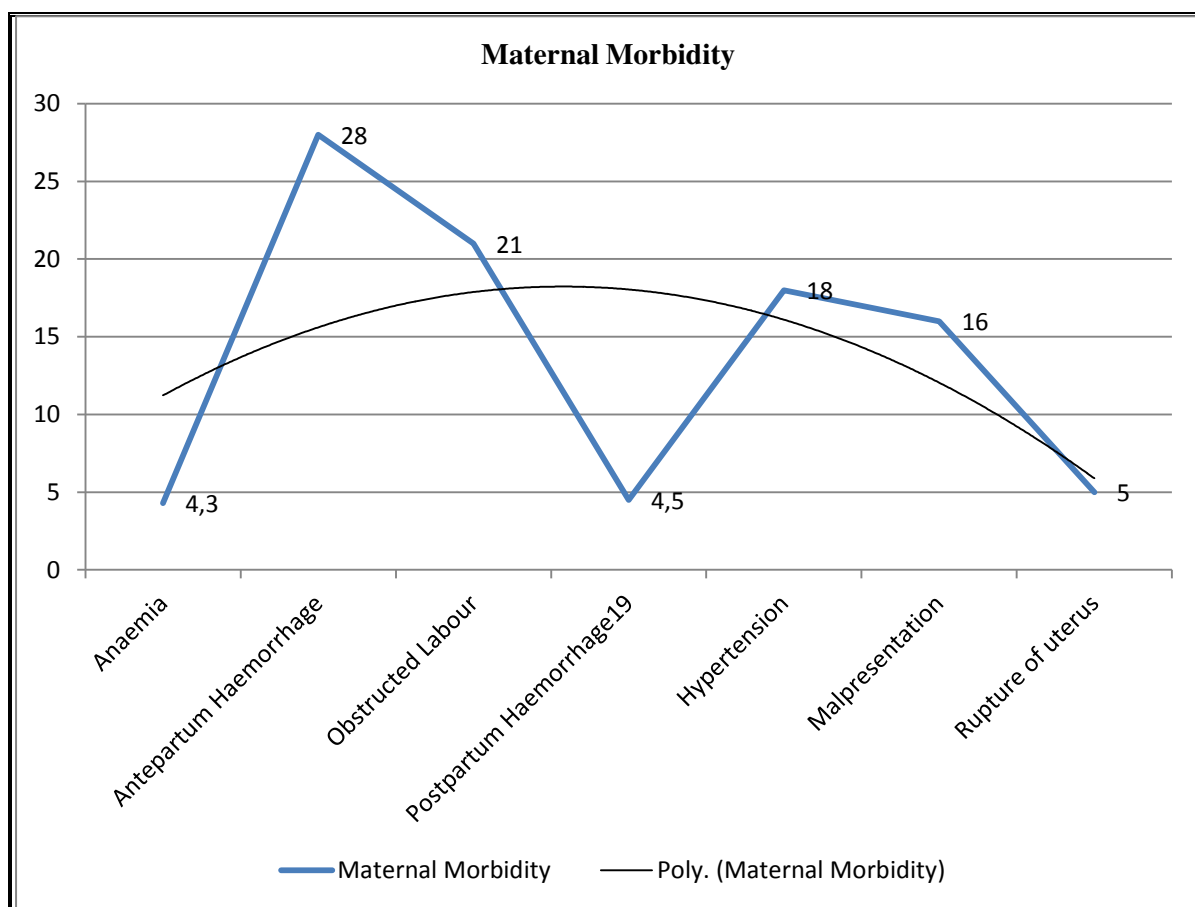
A total of hundred grand multipara women were selected from 630 pregnant women. Most of the women were from lower middle class with an average household monthly income of 5000 or less. Out of 100 patients, 87 were unbooked and 13 were booked. The age range for the selected sample was from 26-30 years. Only 02 cases of grand multipara were over 40 years (**Table I**). Most of the women were suffering from related complications such as anaemia (haemoglobin <11g/dl), antepartum haemorrhage, postpartum haemorrhage and malpresentation (**Table II**). Uterus complications including uterus rupture, postpartum haemorrhage were contributing the most. Obstetrical hysterectomy was necessary in 04 cases - 02 had caesarean hysterectomy due to broken uterus while 02 required hysterectomy due to postpartum haemorrhage. In 75% of grand multipara women, Hypovolemic shock was the cause of death (**Table III**). The grand multipara managed to produce 73 breathing babies (**Table IV**) whereas 08 cases of early neonatal deaths were occurred (35%). The weight of the new born babies ranged from 3-3.5 kg and no congenital issues among the babies were observed in this study. The results collected from the study are being represented in the form of tables and graphs for a better overall understanding.



Age Distribution of Grand Multipara Women

TABLE II: MATERNAL MORBIDITY IN GRAND MULTIPARA WOMEN (n=100)

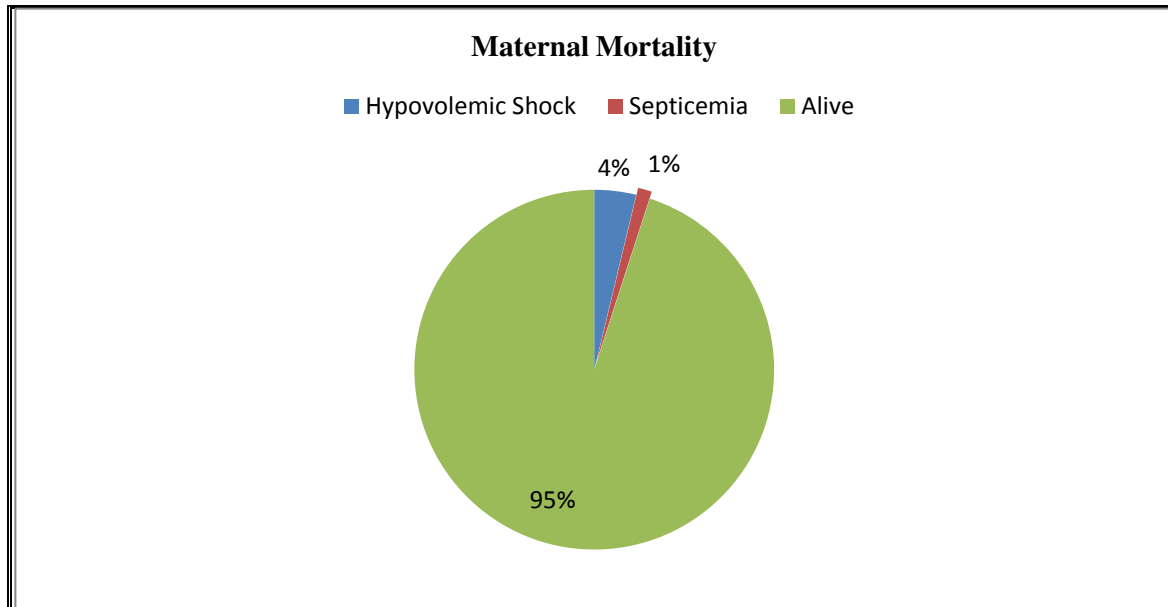
MORBIDITY	NUMBER OF WOMEN
Anemia	90
Antepartum hemorrhage	28
Obstructed labor	21
Postpartum hemorrhage	19
Hypertension	18
Malpresentation	16
Rupture of uterus	5



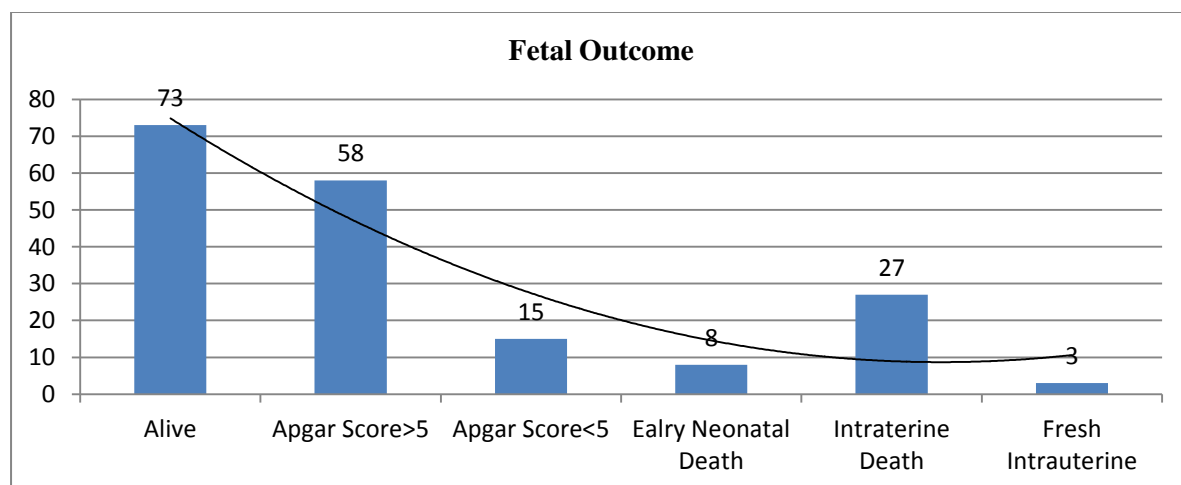
Maternal Morbidity in Grand multipara Women

TABLE III: MATERNAL MORTALITY IN GRAND MULTIPARA WOMEN

CAUSE	NUMBER OF WOMEN	PERCENTAGE
Hypovolemic shock	03	75
Septicemia	01	25
Total	04	100

**Maternal Mortality in Grand Multipara****TABLE IV: FETAL OUTCOME IN GRAND MULTIPARA WOMEN**

FETAL OUTCOME	NUMBER OF CASES	PERCENTAGE
Alive	73	73
Apgar Score > 5	58	58
Apgar Score < 5	15	15
Early neonatal death	08	08
Intrauterine death	27	27
Fresh intrauterine	24	24
Macerated still birth	03	03
Total	100	100

**Fetal Outcome in Grand Multipara Women**

DISCUSSION:

Grand multiparity is rarely seen in developed countries but it is found often in underdeveloped countries. Pakistan also has frequent cases of grand multiparity. The findings of this study are somewhat similar to the results of other studies on this subject [10]. Most of the subjects under discussion in our study were from remote/rural areas and no antenatal health care was provided to them. Most of them were middle aged (>26-30 years). The results were matched with another study carried out by Saadia & others and found equal results. A study carried by a group lead by Munium produced slightly different results. A high rate of multiparity for the ages >35 was observed by this group. Samuel's work founded that the grand multiparity was occurring at a higher frequency in the age group >35 years. The parity distributions for our study was 30% (para 5) whereas in Saadia and Eide Iman study it was 14% and 10% respectively [6]. 90% of the subjects in our study were having anaemia with Hb less than 11gm/dl. The anaemia with matching values of haemoglobin reported by Karim was 64.3%. Pregnancy related hypertensive disorders (18%) were greater in this study when matched against studies by Munium (15.4%), Saadia (14.3%) and Karim (14.3%). Toohey study represented that 28% of the grand multipara were suffering from antepartum haemorrhage and abruptio placenta was more frequent contrary to our study where previa placenta was more frequent. Abu-Heija was indifferent in relation to placenta abruptio or previa. Aslam M [9] has concluded that ante partum haemorrhage has considerably augmented in grand multiparas as compared to non-grand multipara subjects. Henson found that 21% of women required obstructed labor and no connection was found between antepartum haemorrhages and placenta pervia [11]. The findings of Saadia were different where only 4.34% of grand multipara women required obstructed labor. The women required obstructed labor in the study were brought to hospital after a labor trail outside. In this study, 19 % of subjects were having antepartum haemorrhage and same was confirmed by the studies carried out by Saadia and Munium. Caesarean section cases were reported in our study but Munium and other did not find any difference among caesarean sections and normal deliveries procedure for grand multipara and non-grand multipara. However, in three other studies led by Evaldson, Ozumba, and Irvine caesarean section rate was high among women having 5th or more delivery which supports the findings of our study. Hysterectomy was done in 04 patients due to uterus complications. Four mothers died during the procedure because of haemorrhage and damaged uterus. However, studies led by Munium and Saadia were from better social class and did not involve any maternal death. This

shows that the risk of mortality among grand multipara women can be overcome if the subjects are provided with antenatal care, proper follow up visits during their pregnancy and postnatal care. The live fetal result was 73%, 8% infants died at the time of birth. The overall mortality rate was 35%. The fetal deaths in our study are higher when compared with other studies. This is due to the fact that the grand multipara women in the study under discussion arrived late and were having labor trials outside the hospital leading to increase the infants' mortality.

CONCLUSION:

The risk associated with grand multiparity and pregnancy is often very high. The reasons are complicated, interlinked and multifold but yet can be stopped or minimized. Such pregnancies have got all the potential to affect the maternal and fetal health with unwanted outcomes. To overcome the complications in such cases regular evaluation, antenatal care and post natal follow up visits are recommended for the health of both.

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