

## Original Research Article

# Comparative analysis of pregnancy complications: primigravida versus multigravida

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## ABSTRACT

**Background:** The study aimed to compare the outcome of pregnancies in a primigravida with multigravida.

**Methods:** This retrospective study was conducted in Skims Medical College, Srinagar between May 2017 to December 2018 in which hospital records of 135 patients who delivered during the study period were analysed.

**Results:** Majority of primigravida mothers falls in 21-30 years of age group 34 (54.83%), whereas 46 (65.75%) of multigravida were in 31-40 years. Incidence rate of gestational hypertension, gestational diabetes, post-partum haemorrhage, placenta previa, oligohydramnios, pre term labour, intrauterine growth retardation (IUGR) was higher in primigravida when compared to multigravida.

**Conclusions:** Despite the fact that primigravida had the majority of the issues, both groups experienced considerable issues. Therefore, in order to promote maternal health, women should get information about appropriate medical care as well as counselling. It will help to prevent unfavourable pregnancy outcomes.

**Keywords:** Primigravida, Multigravida, Obstetric complication

## INTRODUCTION

The physiological transformation that occurs during pregnancy causes a woman's body to undergo tremendous alteration. Although it is a natural occurrence, there are still difficulties and potential complications. The health of the mother and the growing fetus depends on an understanding of these issues and effective treatment. The woman's gravidity status, namely whether she is a primigravida (having her first pregnancy) or a multigravida (having had numerous pregnancies), is a significant factor that affects the likelihood of pregnancy problems.<sup>1,2</sup> The goal of this study is to compare pregnancy problems in primigravida and multigravida women. To gain a better knowledge of how gravidity status may affect the dangers and difficulties of pregnancy, we will look into and compare the incidence of different issues in these two categories. This study is significant

because it can help pregnant women make decisions and set expectations for the prenatal period. It is also significant because it can help the medical professionals who treat pregnant women.

Pregnancy is complicated by a number of conditions, each with a unique occurrence rate. About 0.64% of Asian pregnancies have placenta previa, 3–7% have intrauterine growth restriction (IUGR), 4.45% have oligohydramnios, and 6–8% of all pregnancies are complicated by hypertension disease. Pregnancies with anemia affect 14% of developed nations and 51% of developing nations, with 65–75% of them occurring in India alone.<sup>3-7</sup> The main causes of these complications are; a lack of education, particularly in the area of health education; a lack of access to health services; a lack of knowledge regarding the significance of prenatal care; and a lack of an effective

referral system, which leads to improper patient management during the prenatal and postnatal periods.

## METHODS

This retrospective study was conducted in Skims Medical College, Srinagar between May 2017 to December 2018 in which hospital records of 135 patients who delivered during the study period were analysed. Among the demographic factors were age, socioeconomic level, and education. Parity status, mother health before to and throughout pregnancy, noteworthy clinical events in the previous pregnancy, and specific information regarding complications occurring intrapartum or postpartum were all included in the obstetric history. In addition, the way of birth, if anemia occurred, whether postpartum hemorrhage occurred, and whether maternal death occurred were all noted. Intra uterine growth retardation and other neonatal outcomes were also recorded.

### Statistical analysis

Comparison of baseline characteristics and pregnancy outcomes between the two groups were analysed using t-test and Chi-square test for continuous and categorical

data, respectively. A p value <0.05 was considered significant. Statistical analysis was performed using statistical package for the social sciences (SPSS) software (IBM Corp. Released 2012; IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp).

## RESULTS

Majority of primigravida mothers falls in 21-30 years of age group 34 (54.83%), whereas 46 (65.75%) of multigravida were in 31-40 years and 20 (27.39%) were in 21-30 years. The majority of patients belonged to middle socioeconomic status and was in equal proportions in both the groups (64.51% in primigravida and 64.38% in multigravida). Literacy percentage was almost similar between the two groups (Table 1). Incidence rate of anaemia, gestational hypertension, gestational diabetes, ectopic pregnancy, post-partum haemorrhage, placenta previa, oligohydramnios, pre term labour, intrauterine growth retardation (IUGR) were higher in primigravida when compared to multigravida although significant differences were observed in the case of gestational hypertension, gestational diabetes, pre term labour and intrauterine growth retardation (Table 2). No maternal death was recorded in any of the two groups.

**Table 1: Demographic characteristics compared between primigravida and multigravida.**

Parameters	Primigravida (N=62)	Multigravida (N=73)
<b>Age (years)</b>		
21-30	34 (54.83)	20 (27.39)
31-40	24 (38.70)	46 (65.75)
>40	4 (6.45)	7 (9.58)
<b>Socioeconomic status</b>		
Low	13 (20.96)	15 (20.54)
Middle	40 (64.51)	47 (64.38)
High	9 (14.51)	11 (15.06)
<b>Education</b>		
Literate	39 (62.90)	46 (63.01)
Illiterate	23 (37.09)	27 (36.98)

**Table 2: Obstetric complications compared between primigravida and multigravida.**

Variables	Primigravida (N=62)	Multigravida (N=73)	P value
<b>Anaemia</b>	23 (37.09)	21 (28.76)	0.1457
<b>Gestational hypertension</b>	16 (25.80)	9 (12.32)	0.001
<b>Gestational diabetes</b>	14 (22.58)	7 (9.58)	0.001
<b>Ectopic pregnancy</b>	2 (3.22)	3 (4.10)	0.2378
<b>Post-partum haemorrhage</b>	4 (6.45)	3 (4.10)	0.2567
<b>Placenta previa</b>	1 (1.61)	1 (1.36)	0.5376
<b>Oligohydramnios</b>	5 (8.06)	3 (4.10)	0.2023
<b>Pre term labour</b>	7 (11.29)	2 (2.73)	0.001
<b>IUGR</b>	4 (6.45)	1 (1.36)	0.001

## DISCUSSION

The comparison of pregnancy complications in primigravida and multigravida women sheds light on the

particular dangers and difficulties that come with each of these different gravidity statuses. The purpose of this discussion is to place the findings within the context of the existing literature and to infer implications for clinical use

and further study. In our study, majority of primiparous (54.83%) were in 21-30 age group. Young age of primiparous group along with lack of awareness regarding importance of antenatal care and lack of education especially health education might have withdrawn them from taking antenatal care at an early gestational age or till the development of obstetric complication. Women that are less than 30 years old and are less educated are more likely to register late.<sup>8</sup>

The results of this study showed significant differences between primigravida and multigravida women in the frequency of pregnancy problems. According to earlier research finding, primigravida women had a higher prevalence of gestational hypertension, gestational diabetes, pre term labour, IUGR than multigravida, which is consistent with the findings of this study.<sup>9-13</sup> This might be explained by the physiological changes multigravida women go through as a result of previous pregnancies, which might have a degree of protective impact against specific problems. The differential risk profile identified in this study emphasizes the importance of antenatal care for primigravida and multigravida women. Healthcare providers should be attentive to the unique needs and potential complications associated with each gravidity status. Early identification and intervention strategies can play a pivotal role in mitigating the impact of these complications on maternal and fetal outcomes. Despite the useful insights discovered, a number of restrictions need to be taken into account. The results could vary depending on the different study populations, study methods, and definitions of pregnancy problems used. Additionally, it's possible that the studied studies did not consistently take into consideration the potential impact of confounding variables including maternal age, socioeconomic position, and pre-existing medical disorders. Prospective, carefully designed studies that investigate these variables in-depth and take into account how they may affect the observed disparities in pregnancy problems between primigravida and multigravida women should be the main focus of future study.

## CONCLUSION

The results of this study showed that the majority of patients reported obstetric issues, such as gestational hypertension, gestational diabetes, preterm labor, and intrauterine growth retardation, more frequently in primigravida than in multigravida. Despite the fact that all groups experienced the majority of the complications equally. Women should therefore get education and counselling regarding appropriate medical treatment in order to improve maternal health. It will assist in preventing unfavourable pregnancy outcomes.

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