

## PREVALENCE OF ANEMIA AMONG PREGNANT WOMEN - A CROSS-SECTIONAL STUDY

Dr Mukesh Lekhala<sup>1</sup>, Dr Rekha Acharya<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Preventive and Social Medicine, Saradar Patel Medical College, Bikaner

<sup>2</sup>Senior Professor, Department of Preventive and Social Medicine, Saradar Patel Medical College, Bikaner

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**Corresponding author:** Mukesh Lekhala

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### Abstract

**Background:** Anemia in pregnancy is a worldwide problem, but it is most prevalent in the developing world. Anemia during pregnancy affects both mother's and her child's health. Globally, the prevalence of anemia is 74% among pregnant women, and in India, it ranges from 19% to 61%. Anemia during pregnancy will lead to consequences such as fetal anemia, low birth weight, preterm delivery, intrauterine growth restriction, and perinatal mortality. Anemia during pregnancy and its consequences can be prevented and treated if diagnosed on time.

**Methods:** A cross-sectional study was conducted at maternity wards of P B M hospital, attached to S P Medical College, Bikaner. The study was conducted for a period of 2 months. Women aged 15-49 yrs. Who had undergone delivery and having ANC record were include in the study after taking informed consent for participation in the study. The data were collected using semi-structured questionnaire.

**Results:** Out of 1090 women 91.3% women were anemic. Prevalence of anemia was higher(95.3%) in women with less than 3 ANC visit as compare to women with 3 or more ANC visit.

**Conclusion:** The prevalence of anemia among pregnant women was high in our study and also seen is various studies in different parts of the country. This continuing high burden of anemia could be mainly due to lack of utilization of the services provided by the government

**Keywords:** Anemia; Hemoglobin Status; Pregnant Women

### Introduction

Anemia is a global health problem affecting both developed and developing countries. Around 1.62 billion people suffer from anemia in the world which corresponds to 24.8% of the population and the prevalence of anemia in pregnancy is around 74%. According to the National Family Health Survey (NFHS-4) data, the prevalence of anemia in India is 50.3%, and in Karnataka, it is 45.4%. Almost 50% of the population is anemic with the overall burden more in rural areas compared to urban areas.<sup>1-2</sup>

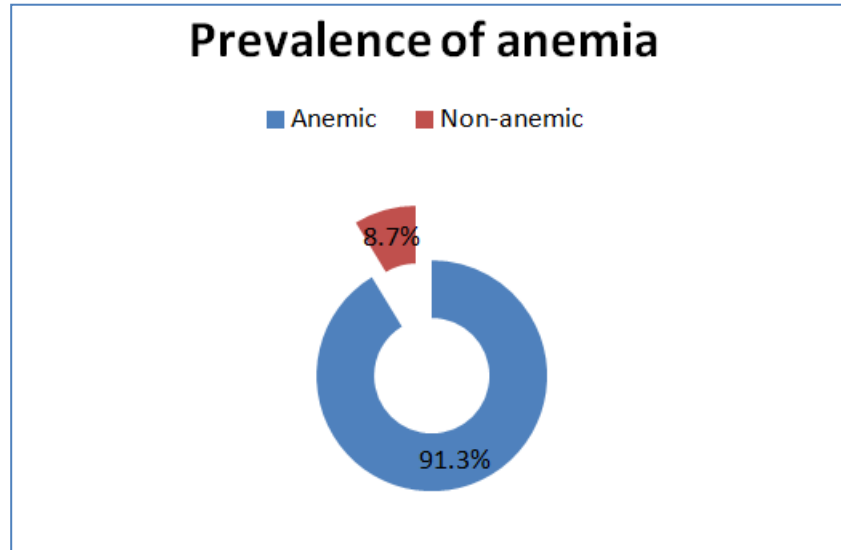
Anemia during pregnancy not only affects the health of the mother such as maternal mortality and morbidity but also the health of the baby, leading to low birth weight, premature delivery, and underdevelopment of brain, leading to increase mortality and morbidity.<sup>3</sup> Of many causes of anemia such as multiple pregnancy, lack of spacing between pregnancies, and multiple pregnancies, nutritional deficiency is the most common cause of anemia and iron deficiency anemia is the most common type of anemia.<sup>4,5</sup>

### Materials and Methods

A cross-sectional study was conducted at maternity wards of P B M hospital, attached to S P Medical College, Bikaner. The study was conducted for a period of 2 months. Women aged 15-49 yrs. Who had undergone delivery and having ANC record were include in the study after taking informed consent for participation in the study. The data were collected using semi-structured questionnaire. The questionnaire consisted of data regarding sociodemographic data, antenatal visits, and weight gain during pregnancy and hemoglobin status. Sociodemographic details were collected by interviewing the mothers and other details including hemoglobin status were collected from the records.

**Data analysis-** The data were analyzed for frequencies and Chi-square test was applied for the determination of association between variables and hemoglobin status using Statistical Package for the Social Sciences 22.0 version. For determination of association,  $P < 0.05$  was considered statistically significant.

### Results



Out of 1090 women 91.3% women were anemic.

**Table 1: Association between number of ANC visit and anemia in third trimester**

Number of ANC visit	Anemia status		p-value
	Anemic	Non-anemic	
<3	404(95.3%)	20(4.7%)	0.01
≥3	591(88.7%)	75(11.3%)	
Total	995(91.3%)	95(8.7%)	

Prevalence of anemia was higher(95.3%) in women with less than 3 ANC visit as compare to women with 3 or more ANC visit.

**Table 2: Association between number of iron folic acid supplementation and anemia in third trimester**

Iron folic acid supplementation	Anemia status		p-value
	Anemic	Non-anemic	
Adequate	518 (90.9%)	52(9.1%)	0.02
Inadequate	204 (87.2%)	30 (12.8%)	
Not taken	273(95.5%)	13(4.5%)	
Total	995(91.3%)	95(8.7%)	

A significant association was seen between number of iron folic acid supplementation and anemia in third trimester

## Discussion

Anemia is a known public health problem affecting mainly the developing countries than the developed countries, especially anemia in pregnancy affects not only the health of the mother but also the outcome of the pregnancy, health of the baby, leading to intergenerational cycle of anemia, malnutrition, etc., and other comorbidities.

A study by Mangla M et al. in rural area of Haryana consisted of maximum number of pregnant women in the age group of 20–29 years and more than 70% of them were literates. The age group and literacy status of pregnant women were similar to the findings of our study. Around 45% them had age of 19–24 years when they conceived for the 1st time, but in our study, around 80%

of them belonged to 19–24 years of during their first pregnancy.<sup>7</sup>

A survey by the Indian Council of Medical Research has shown, more than 50% of adolescents, children, and pregnant women are anemic. Suryanarayana et al. conducted a study in Kolar district and showed prevalence of 63% among pregnant women. The prevalence of anemia in our study (68.6%) was similar to that in Kolar. A study in rural area of Mysore, 64.2% of pregnant women were anemic and there was a significant association between anemia and factors such as age at first pregnancy, sociodemographic characteristics, and parity. Similar findings were observed in our study, but significant association was seen with hemoglobin status and spacing between pregnancy and utilization of ICDS services.<sup>8-10</sup>

### Conclusion

The prevalence of anemia among pregnant women was high in our study and also seen in various studies in different parts of the country. This continuing high burden of anemia could be mainly due to lack of utilization of the services provided by the government.

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