	Original Research Article

A Cross-Sectional Study of Anaemia among Pregnant Women Visiting ANC Clinic in a Tertiary Care Centre

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Abstract

Background- Anaemia is one of the common health issues that pregnant women and children in developing countries face. Anaemia in pregnancy is related to poor fetal and maternal outcomes contributing to significant morbidity and mortality. Anaemia is a treatable and preventable condition. *Aim -* to determine the prevalence of anaemia among pregnant women visiting the ANC clinic in a tertiary care centre. *Materials and methods-* Total 100 pregnant women visiting the ANC clinic in a tertiary care centre were included in the study during the period of 5 months (December 2023 to April 2024) at VVP rural hospital, Loni. The World Health Organization's diagnostic criteria for anaemia was applied for determining hemoglobin levels. Demographic details and hemoglobin levels were collected. Data collected was analyzed using Microsoft Excel 2013 and pspp version 1.0.1. *Results-* Out of total 100 participants, 51 were anaemic. Out of them, 30 (58.8%) women had mild anaemia, 19 (37.3%) women had moderate anaemia and 2 (3.9%) women had severe anaemia. Mean age of women with Anaemia was 23.3 years as opposed to mean age of women without anaemia which was 26.7 years. Out of 51 cases, 10 (19.6%) women were primigravida, 32 (62.7%) women had birth spacing of less than 2 years, 9 (17.7%) women had birth spacing of 2 years or more. *Conclusion-* Prevalence of anaemia in our study was comparable to NFHS-5 data. There is need of antenatal and pre-conceptional health awareness about implications of anaemia, preventive measures and spacing between births which will reduce prevalence of anaemia, thus maternal and fetal morbidity and mortality.

Keywords: Anaemia, pregnancy, birth spacing.

INTRODUCTION

Anaemia in pregnancy defined as a hemoglobin level of less than 11 g/dL, as per the existing WHO definition of anaemia [1]. According to NFHS 5, 52.2% pregnant women India were anaemic [2]. Anaemia is a global health issue affecting pregnant women and is a leading cause of maternal morbidity and mortality [3,4]. According to WHO, hemoglobin level 10 – 10.9mg/dl is considered mild anaemia, hemoglobin level 7- 9.9mg/dl is moderate anaemia and hemoglobin level < 7mg/dl is considered severe anaemia [5]. Furthermore, for diagnosis of anaemia during the second trimester of pregnancy, the hemoglobin cut-off reduces to 10.5 [6]. Pregnancy demands higher input to meet the needs of the growing foetus and supporting tissue. This discrepancy between resources and need adds to nutritional deficiencies in mothers. It is not very unlikely that the mother had a scarcity of resources before conception [7]. Anaemia in pregnant women remains unacceptably high in developing countries as compared to developed countries. There is an 80% contribution to maternal deaths due to anaemia in South Asian countries, which constitutes half of the global maternal deaths [8]. Treating anaemia has significant health implications in pregnancy and would go a long way in improving the maternal and foetal outcome. As shown in a recent meta-analysis, the risk of maternal mortality decreases by 20% for every 1 g/dl increase in the hemoglobin concentration [9]. Hence this study was undertaken for better understanding of prevalence of anaemia in pregnant women visiting ANC clinic of a tertiary care centre.

MATERIALS AND METHODS

The cross-sectional study was conducted on 100 pregnant women visiting ANC clinic at BVP RMC Loni, Maharashtra. The study duration was of 5 months

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(December 2023 to April 2024). Considering prevalence of 52.2% [NFHS-5] sample size was calculated to be 96, rounded off at 100. Pregnant women with a history of blood transfusion, anaemia of chronic disease like CKD, history of recurrent bleeding, and referral cases from other centres were excluded from the study. After taking written informed consent, sociodemographic details and hemoglobin levels were collected. Participants were categorized as no anaemia, mild anaemia, moderate anaemia and severe anaemia. Microsoft Excel 2013 and pspp version 1.0.1 were used for the analysis of the gathered data.

RESULTS

Table No. 1: Distribution of socio demographic variables among participants(n=100)

Sociodemographic variable	Frequency (n=100) and percentage
Religion	
Hindu	81
Muslim	13
others	6
Education	
Primary	11
Secondary	51
Graduate	34
Post-graduate	4
Occupation	
Housewives	75
Skilled workers	11
Semi-professional	14
Socioeconomic class	
Upper class	7
Upper middle	10
Middle class	26
Lower middle class	49
Lower class	8
Total	**100**

Out of 100 participants, 51 had anaemia. Thus prevalence of anaemia was found to be 51%.

Out of them, 30 (58.8%) women had mild anaemia, 19 (37.3%) women had moderate anaemia and (3.9%) women had severe anaemia.
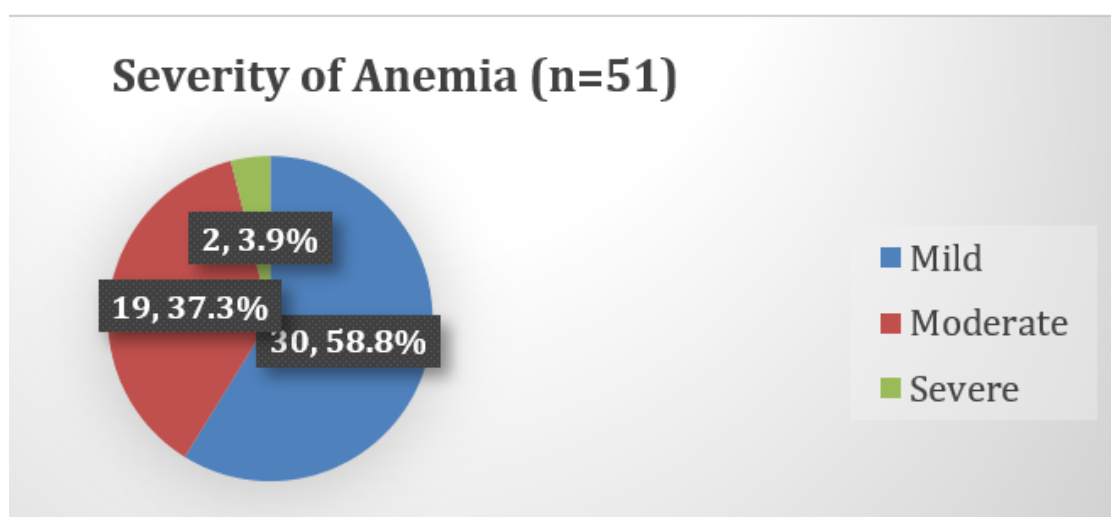

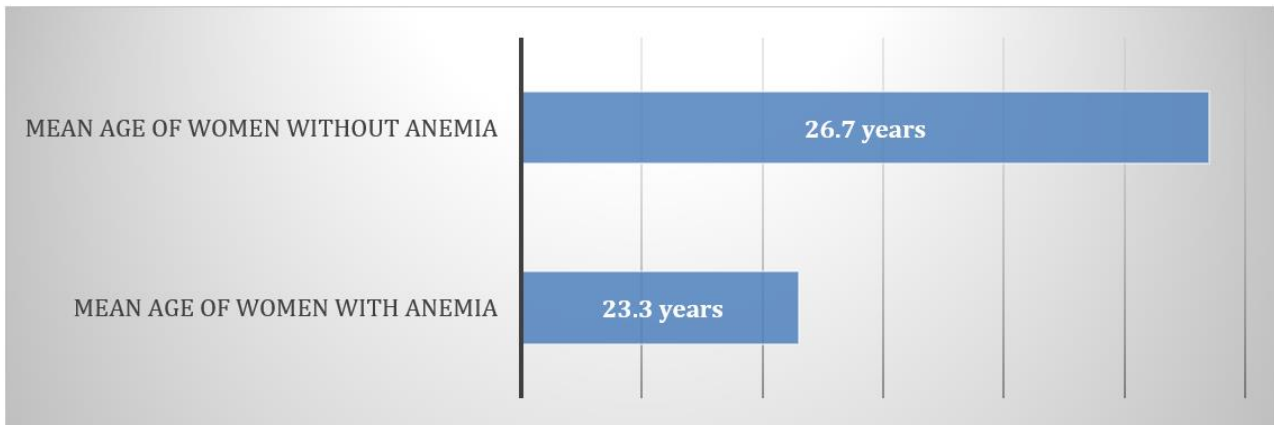**Figure No. 1: Prevalence and severity of Anaemia in participants**

Figure No. 2: Age distribution

Mean age of pregnant women with anaemia was 22.3 years whereas of those without anaemia was 26.7 years
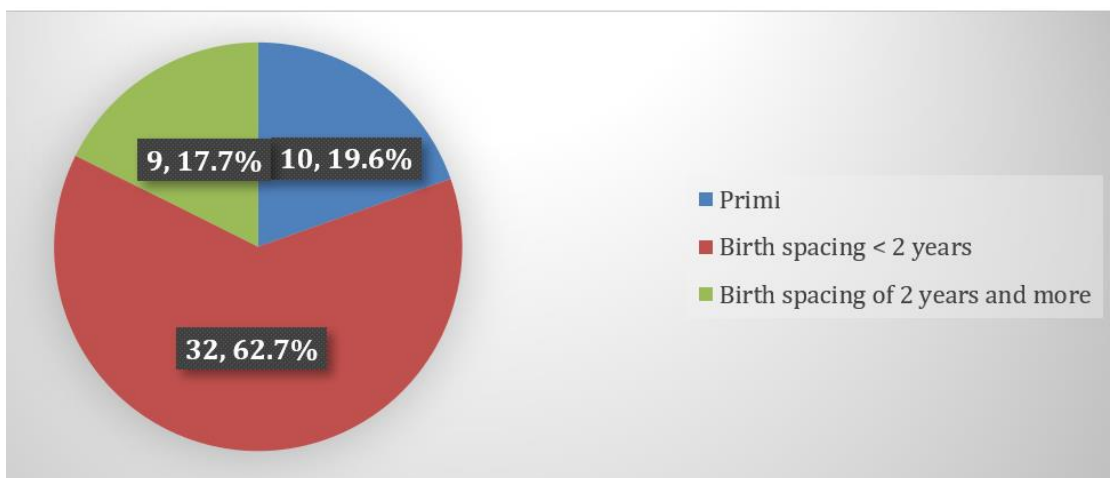

Figure No. 3: Spacing of births among pregnant women with anaemia (n=51)

In these cases, 10 (19%) women were primigravida, 32 (63%) women had birth spacing of less than 2 years, 9 (18%) women had birth spacing of 2 years or more.

DISCUSSION

Table No. 1 depicts that majority i.e 81% participants belonged to Hindu religion, 51% and 34% had completed secondary and graduate level education respectively, 75% were housewives, 38% belonged to middle class, 49% and 26% belonged to lower middle and middle class respectively.

In current study, the prevalence of anaemia was found to be 51%. This was comparable to NFHS-5 data (52.2%). In a similar study done by Arora k *et al.,* [10], the prevalence of anaemia was found to be 37.09% whereas in another study by V. S. Gopalan *et al.,* [11] it was found to be 62%.

Figure No. 1 depicts that Out of them, 30 (58.8%) women had mild anaemia, 19 (37.3%) women had moderate anaemia and (3.9%) women had severe anaemia. In a similar study by V. S. Gopalan *et al.,* [11],

40% were mildly anaemic, 55% were moderately anaemic and 5% were severely anaemic.

Figure No. 2 depicts that mean age of pregnant women with anaemia was 22.3 years whereas of those without anaemia was 26.7 years. In a similar study done by Arora k *et al.,* [10], overall prevalence of anaemia was maximum in 26–30-year age group.

Figure No. 3 depicts that out of 51 cases, 10 (19.6%) women were primigravida, 32 (62.7%) women had birth spacing of less than 2 years, 9 (17.7%) women had birth spacing of 2 years or more.

CONCLUSION

Anaemia is still pressing problem in rural areas in spite of Government's efforts, improved access to healthcare. There is need of antenatal and pre-conceptional health awareness about implications of anaemia, preventive measures and spacing between births which will reduce prevalence of anaemia, thus maternal and fetal morbidity and mortality.

REFERENCES

1. https://apps.who.int/iris/bitstream/handle/10665/85839/WHO_NMH_NHD_MNM_11.1_eng.pdf

2. http://rchiips.org/nfhs/NFHS-5_FCTS/India.pdf

3. Baig-Ansari, N., Badruddin, S. H., Karmaliani, R., Harris, H., Jehan, I., Pasha, O., ... & Goldenberg, R. L. (2008). Anemia prevalence and risk factors in pregnant women in an urban area of Pakistan. *Food and nutrition bulletin*, *29*(2), 132-139.

4. Lone, F. W., Qureshi, R. N., & Emanuel, F. (2004). Maternal anaemia and its impact on perinatal outcome. *Tropical medicine & international health*, *9*(4), 486-490.

5. Tandon, R., Jain, A., & Malhotra, P. (2018). Management of iron deficiency anemia in pregnancy in India. *Indian Journal of Hematology and Blood Transfusion*, *34*, 204-215.

6. World Health Organization. (2011). *Haemoglobin concentrations for the diagnosis of anaemia and assessment of severity* (No. WHO/NMH/NHD/MNM/11.1). World Health Organization.

7. Arora, K., Bahadur, A., Mishra, D., & Mundhra, R. (2022). Assessment of anaemia and nutritional status of antenatal women attending a tertiary care hospital. *Journal of Family Medicine and Primary Care*, *11*(6), 3238-3244.

8. Bivalkar, N. Y., Wingkar, K. C., Joshi, A. G., & Swati, J. (2014). Assessment of severity & types of anemia during pregnancy in rural population in western Maharashtra. *Indian Journal of Basic and Applied Medical Research*, *4*(1), 160-163.

9. Stoltzfus, R. J., Mullany, L., & Black, R. E. (2004). Iron deficiency anaemia. *Comparative quantification of health risks: global and regional burden of disease attributable to selected major risk factors*, *1*, 163-209.

10. Arora, K., Bahadur, A., Mishra, D., & Mundhra, R. (2022). Assessment of anaemia and nutritional status of antenatal women attending a tertiary care hospital. *Journal of Family Medicine and Primary Care*, *11*(6), 3238-3244.

11. Sarala, V., & Gopalan, U. (2020). A study on prevalence of anemia in pregnancy in South India. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, *9*(1), 34-38.