Original Research Article

Sociodemographic correlates of anemia in antenatal women: A cross sectional study from rural Andhra Pradesh

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Abstract

Background: Anemia continues to be a biggest problem not only in rural developing India but also in urban community. It continues to be an underlying cause of maternal and perinatal mortality in India and even after delivery in puerperium. **Objective:** To assess the burden of anemia in terms of certain socio demographic correlates. **Methodology:** Cross sectional study conducted by involving 253 pregnant women from Urban field practice area diagnosed of anemia by Sahli's method and interviewed for certain socio demographic factors. **Results:** Out of 253 women, majority were from 20-24 years age group i.e. 37.5%. 66.4% women were studied upto secondary standard. Majority of women i.e. 46.6% were having single parity. 60.1% had birth interval 1-2 years as compared to 100% of the women from 25-30 years age ($p<0.05$). There is association between education and age of anemic women. **Conclusion:** Anemia among antenatal women has association with educational level, parity and age.

Key Words: Anemia, antenatal women, Rural

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Received Date: 05/08/2018 Revised Date: 17/09/2018 Accepted Date: 10/10/2018
DOI: https://doi.org/10.26611/1011812

Access this article online	
Quick Response Code:	Website: www.medpulse.in
	Accessed Date: 12 October 2018

INTRODUCTION

Pallor is a noteworthy general medical issue influencing both the developed and developing nations. As indicated by World Health Organization, predominance of iron deficiency among pregnant women in developed nations is about 14%, though it is still as high as 51% in the developing world. [1] The condition is more disastrous in Southeast Asia out of which India adds to 80%.[2] Anemia has been known to be in charge of various maternal and fetal mortality and complications. like low birth weight, premature delivery, risk of birth asphyxia, intra uterine growth retardation and thus increased perinatal mortality[3-6]. Mild, anemia may not have any effect on pregnancy and labour except that the mother will have low iron stores and may become moderately to- severely anemic in subsequent pregnancies. Moderate anemia may cause increased weakness, lack of energy, fatigue and poor work performance. Severe anemia, however, is associated with poor outcome. The woman may have palpitations, tachycardia, breathlessness, increased cardiac output leading on to cardiac stress which can cause de-compensation and cardiac failure which may be fatal. Increased incidence of pre-term labour (28.2%), pre-eclampsia (31.2%) and sepsis have been associated with anemia.[7] So with this objective of assessment of anemia with sociodemographic correlates the present study was undertaken in rural area of Nandyal and also to provide necessary recommendation to our hospital authority

How to cite this article: Arnab Chakraborty, M A Mushtaq Pasha, Afsar Fatima, Isaac Ebenezer. Sociodemographic correlates of anemia in antenatal women: a cross sectional study from rural Andhra Pradesh. *MedPulse International Journal of Community Medicine.* October 2018; 8(1): 04-06. https://www.medpulse.in/

MATERIAL AND METHODS

The present cross sectional observational study was conducted among antenatal women attending OPD at Urban Health Centre of Santhiram Medical College, which is under direct administration of Department of Community Medicine. After consent of antenatal mothers irrespective of her gestational age were interviewed with respect to age, education, occupation, socioeconomic status and their hemoglobin estimation was done by using Sahli's method. 253 women were considered for study purpose during the period of six months from August 2017 to January 2018.

Inclusion Criteria: All Antenatal mothers who are anemic and who are willing to give written consent for the study are included in the study.

Exclusion Criteria: All antenatal mothers who are on haematenics before conception are excluded from the study. All antenatal mothers who are not willing for the study are excluded.

Statistical Analysis: The data thus collected was analysed by using SPSS software 23.0 version and association between two qualitative variables was seen by using Chi square test.

RESULTS

Table 1: Distribution according to sociodemographic profile

		Frequency	Percentage
Age group in years	15-19	62	24.5
	20-24	95	37.5
	25-29	86	34
	>30	10	4
		Frequency	Percentage
Educational status	Primary	35	13.8
	Secondary	168	66.4
	Graduate/ Post graduate	50	19.8
		Frequency	Percentage
Parity	1	118	46.6
	2	95	37.5
	≥3	40	15.8
		Frequency	Percentage
Birth interval	< 1 Yr	115	45.5
	1 – 2 Yrs	133	52.6
	>2 Yrs	5	1.9

Out of 253 women, majority were from 20-24 years age group followed by 62 i.e. 24.5% were from 15-24 years. 66.8% women were studied up to secondary and only 19.8% were graduated and above. Majority of women i.e. 46.6% were having single parity and 15.8% were having parity of 3 or more. Majority of cases birth interval was less than one years (45.5%)

Table 2: Distribution according to age and parity:

Age	<1 YEAR	1-2 YEARS	>2 YEARS	Total
15-19	45	5	0	50
	90.00%	10.00%	0.00%	100.00%
19-24	70	113	5	188
	37.20%	60.10%	2.70%	100.00%
25-30	0	15	0	15
	0.00%	100.00%	0.00%	100.00%
Total	**115**	**133**	**5**	**253**

Chi square test- 58.85, df-4, p-0.01, Significant

Most of the women i.e. 90% from 15-19 years age had birth interval less than one year. From 19-24 years age majority of the women i.e. 60.1% had birth interval 1-2 years as compared to 100% of the women from 25-30 years age. So there is proved statistical association between parity and age in anemia and is one of the important factor ($p<0.05$).

Table 3: Distribution according to age and education amongst anemic women:

Age	Upto primary	Upto secondary	Graduate or post graduate	Total
15-19	0	50	0	50
	0.00%	100.00%	0.00%	100.00%
19-24	35	108	45	188
	18.60%	57.40%	23.90%	100.00%
25-30	0	10	5	15
	0.00%	66.70%	33.30%	100.00%
> 30	35	168	50	253
	13.80%	66.40%	19.80%	100.00%

Chi square test- 35.8, df-4, p-0.001, Significant

Proportion of anemic who studied up to secondary in 15-19 years age were 100% as compared to 57.4% from 19-24 years age and 66.7% from 25-30 years age group. This was found to be significant (<0.05).

DISCUSSION

Table 1 states that Out of 253 women, majority were from 20-24 years age group followed by 62 i.e. 24.5% were from 15-24 years. 66.8% women were studied upto secondary and only 19.8% were graduated and above. Majority of women i.e. 46.6% were having single parity and 15.8% were having parity of 3 or more. Majority of cases birth interval was less than one years (45.5%). Neeraj Raj[8] observed that In his study, out of total 150 pregnant women, majority 94 (62.7%) were in 20-30 years age group followed by 37 (24.6%) above 30 years age group while only 19 (12.7%) were below 20 years of age which indicate adolescent pregnancy. Neeraj Raj[8] revealed that majority of women (27.3%) were educated up to middle school While only (5.3%) women did graduation and above and 18.7% were illiterate. whereas proportions of pregnant women suffering from anaemia were 89.3 %, 82.4% and 80.5% among illiterates, those educated up to primary and middle school respectively.

The association of anaemia with educational status was found to be statistically highly significant. Table 2 stated that there is proved statistical association between parity and age in anemia and is one of the important factor ($p<0.05$). Neeraj Raj[8] observed that the prevalence of anaemia was also higher (90.2%) among multiparous women than (71.6%) and (64.28%) in Primiparous and nulliparous women respectively. So it was obvious that as the parity increased, the prevalence of anaemia also increased. The association of anaemia with parity was found to be statistically significant. Similar findings were put forth by other authors [9,10] Table 3 stated that proportion of anemic who studied upto secondary in 15-19 years age were 100% as compared to 57.4% from 19-24 years age and 66.7% from 25-30 years age group. This was found to be significant (<0.05) Neeraj Raj[8] in his study found that anaemia had a significant inverse association with educational attainment of the women. Other authors from various parts of india found similar significant association. Lokare PO[11] *et al* in Aurangabad city and Ansuman Panigrahi *et al*[12] in Bhubaneswar. On the contrary Kumar V et a[11] did not found any significant association between anaemia and educational status of the women. But in contrast with our study Mihiretie H *et al*[13] reported significantly higher prevalence of anaemia among literates women than illiterates.

CONCLUSION

High prevalence of anemia in our study amongst less educated pregnant women and in multiparous was found to be significant. More number of cases were having less spacing in consecutive births.

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Source of Support: None Declared
Conflict of Interest: None Declared