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Prevalence and contributing factors of anemia among the antenatal mothers attending antenatal clinics: An exploratory study

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Abstract
Anemia is the most common nutritional deficiency disorder in the world. As per world Health Organization estimation, prevalence of anaemia in pregnant women is as high as 14% in developed and 51% in developing Countries. It is also observed that prevalence of anemia stand to be still higher among Indians that is 65-75%. Although anemia has been recognized as major problem for many years. Little progress has been reported and the global prevalence of anemia remains unacceptably high. An exploratory research study was used to explore the prevalence and contributing factors for anemia among antenatal mothers and 20 antenatal mothers were selected by convenient sampling method. The study result showed that Majority of samples 16 (80%) were aged between 19-21 years and remaining 04 (20%) were aged less than 24 years.

55% of mother's had mild anemia and 45% of mother's were moderately anemic. The association was calculated with help of chi-square test. The calculated chi-square value for all the variable was less than table value. Hence research hypothesis was rejected. The association between prevalence and contributing factors. The calculated x^2 (chi squire) value for all the variables. Hence it was concluded that association existing only between prevalence and duration between present and last pregnancy ($x^2=4.8995$, $p>0.05$).

Keywords: Prevalence, antenatal, mothers, contributing factors

Introduction
Women often become anemic during pregnancy because the demand for Iron and other vitamins is increased. The mother must increase her production of Red Blood Cells and in addition, the Foetus and Placenta need their own supply of Iron, which can only be obtained from the mother. In order to have enough red blood cells for the foetus. The body starts to produce more red blood cells and plasma. It has been calculated that the blood volume increase approximately 50% during the pregnancy. Although the plasma amount is disproportionately greater this cause dilution of the blood making the hemoglobin concentration to fall [2]. Inadequate dietary iron, folate intake due to low vegetable consumption, low B12 intake and poor availability of dietary iron from the fibre, phytate rich Indian diets are the major factors responsible for high prevalence of anemia. In India anemia is directly or indirectly responsible for 40% of maternal deaths.

Material & Methods
An exploratory research design was used. Total 20 antenatal mothers were selected convenient sampling technique.

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Results

Table 1: Description of demographic characteristics of antenatal mothers by frequency and percentage. N=20

S. No.	Demography		Frequency	Percentage
1	Age	19-21 yrs	16	80%
		22-24 yrs	04	20%
2	Education	No formal education	4	20%
		Primary Education	10	50%
		Secondary Education	5	25%
		PUC	1	5%
3	Occupation	House wife	20	100%
		Government	-	-
4	Type of Family	Joint Family	9	45%
		Nuclear Family	11	55%
5	Religion	Hindu	20	100%
		Christian	-	-
		Muslim	-	-

Table 2: Description of contributing Factors of antenatal mother by frequency and percentage, N=20

Contributing factors		Mild anemia		Moderate anemia		Frequency	Percentage
Parity	Primi	7	35%	1	5%	18	40%
	Multi	4	20%	8	40%	12	60%
Gestational age	6 month	0	-	1	5%	1	5%
	9 month	11	55%	8	40%	19	95%
Duration between present and last pregnancy	71yrs	8	40%	3	15%	11	55%
	1-2 yrs	2	10%	4	20%	6	30%
	2-3 yrs	-	-	-	-	-	-
	<3 yrs	1	5%	2	10%	3	15%
Type of meal	vegetarian	7	30%	6	30%	13	65%
	non vegetarian	2	10%	3	15%	5	25%
	egg	2	10%	-	-	2	10%
No. of meals per day	1	-	-	-	-	1	5%
	2	1	5%			19	95%
	3	10	50%	9	45%		
	>3	-	-				
Bleeding during menstruation	Heavy	2	10%	2	10%	4	20%
	Moderate	3	15%	4	20%	8	40%
	Low	6	30%	3	15%	4	40%
Habits	Smoking						
	Chewing tobacco						
	Alcohol						
	Nothing	11	55%	9	45%	20%	100%
Antenatal check up	Time	1	5%	-	-	1	5%
	Time	1	5%	1	5%	12	10%
	Time	9	45%	8	40%	7	85%
Did you suffer with fever during present pregnancy	Yes	3	15%	2	10%	5	25%
	No	8	40%	7	35%	15	75%

Table 3: Distribution of severity of anemia, N=20

Severity of Anemia		Number	Percentage
No anemia	11 g/m more	_	-
Mild anemia	9-11 g/m	11	55%
Moderate anemia	7-9 g/m	9	45%
Severe anemia	>7 g/m	_	_

The data presented in the table No:3 shows that 55% of mother's had mild anemia and 45% of mother's were moderately anemic.

Table 4: Data showing finding related to association between prevalence and demographic variables, N=20

Sl. No.	Demographic variables		<9	>9	X^2	inference
1	Age	Primi	5	11	1.64	NS
		Multi	4	0		
2	Education	Formal	2	2	0.11	NS
		Non Formal	7	9		
3	Types Of Family	Nuclear Family	5	4	0.16	NS
		Joint Family	4	7		

$(X^2) = 3.841$ NS=Nonsingnificant

The association was calculated with help of chi-square test. The calculated chi-square value for all the variable was less than table value. Hence research hypothesis was rejected.

Table 5: Data showing findings related to association between prevalence & contributing factors. N=20

Sl. No.	Contributing factor		<9	>9	X^2	Inference
1	Parity	Primi	3	8	1.98	NS
		Multi	6	3		
2	Gestational age	6 month	9	0	0.010	NS
		9 month	8	11		
3	Duration between present and last pregnancy	>1yrs & 1-2 yrs	3	8	4.8995	Significant
		<3 yrs	6	3		
4	Type of meal	Vegetarian	6	7	0.108	NS
		Non vegetarian	3	4		
5	No. of meals perday	1 or 2	0	0	1.010	NS
		3 & >3	9	11		
6	Bleeding during menstruation	Heavy	2	1	0.035	NS
		Moderate & low	7	10		
7	Antenatal check up	1 time or 2.time	0	1	3.838	Significant
		3.time	9	10		
8	Did you suffer with fever during present pregnancy	Yes	2	3	0.272	NS
		No	7	8		

The data presented in the above table shows the association between prevalence and contributing factors. The calculated x^2 (chi squire) value for all the variables. Hence it was concluded that association existing only between prevalence and duration between present and last pregnancy (x^2=4.8995, p>0.05).

Conclusion
The purpose of the study was to assess the prevalence and contributing factors of anemia among the antenatal mothers. The study was conducted at Shri J.G,Co-operative Hospital, Ghataprabha. The samples were selected by convenient sampling technique. Explorative research design was selected to assess the prevalence and contributing factors of anemia among the antenatal mother. The antenatal mothers' blood hemoglobin level was assessed and demographic data and contributing factors were explored.

Conflict of Interest
Not available.

Financial Support
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