

KNOWLEDGE AND PRACTICE OF ANAEMIA AMONG PREGNANT WOMEN IN RURAL SETTINGSGitanjali Kapoor¹, Dinesh Kumar²¹Assistant Surgeon, J & K Health Services, CHC Marh, Jammu.²Senior Resident, Department of Obstetrics and Gynaecology, SMGSH, GMC, Jammu.**ABSTRACT****BACKGROUND**

Objectives- To study the knowledge and practice of anaemia among pregnant women in rural settings.

MATERIALS AND METHODS

It was a hospital-based cross-sectional study. The present study was undertaken among the 184 newly registered pregnant women attending the hospital in Marh block of Jammu district. A pre-designed, pre-tested and structured questionnaire was used in the study. The data collection technique was a personal interview of the study subjects.

RESULTS

The study found that there was significant association between women's education and knowledge regarding cause of anaemia, signs and symptoms of anaemia, proper diet to prevent anaemia, prevention and treatment of anaemia ($p < 0.001$).

CONCLUSION

The need of the hour is to aware women masses regarding anaemia, cheap and easy available iron rich foods and restriction of defecation in open fields.

KEYWORDS

Knowledge, Practice, Anaemia, Pregnant Women.

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BACKGROUND

Anaemia in pregnancy is defined by World Health Organisation (WHO) as a haemoglobin concentration below 11 g/dL. According to WHO, anaemia is classified as mild degree (Hb 9.0 - 10.9 g/dL), moderate (7.0 - 8.9 g/dL) and less than 7 g/dL for severe anaemia.^(1,2)

Anaemia begins in childhood, worsens during adolescence in girls and gets aggravated during pregnancy. Studies carried out in India and elsewhere have shown that iron deficiency is the major cause of anaemia followed by folate deficiency. Moreover, the contribution of B12 deficiency has been highlighted.^(3,4) Anaemia during pregnancy is a major public health problem in our country as 87% of the Indian pregnant women are anaemic.^(5,6) Foetuses of anaemic mothers are at risk of preterm deliveries, low birth weights, morbidity and perinatal mortality due to the impairment of oxygen delivery to placenta and foetus.^(7,8) Iron deficiency anaemia is one of the commonest forms of anaemia, whose prevalence is high among reproductive age women. The main reason is excessive loss of iron or demand of iron associated with menstruation, child birth, hookworm infestation, etc. It is one of the main cause of morbidity, mortality and key factor to low birth weight. Due to poverty, inadequate diet, pregnancy, lactation, poor educational level and poor access to health services women become an easy prey for anaemia.⁽⁹⁾

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Very few researches have been done in India regarding knowledge and practice of anaemia in pregnant women. That is why we came up with this study to test the knowledge of pregnant women in rural settings, so as to help us in formulating the policy to tackle this menace.

MATERIALS AND METHODS

A cross-sectional, hospital-based descriptive study was undertaken with 184 pregnant women who attended the Antenatal Clinic (ANC) of Community Health Centre, Marh. The study was carried out from September 2016 to December 2016. The sampling frame was the newly registered pregnant women attending the ANC OPD on the three days of the week.

A systematic random samplings method was employed to select the subjects, wherein every alternate newly registered pregnant woman attending the ANC OPD was selected for the study. Only pregnant women were included in the study, pregnancy being defined as history of amenorrhoea coupled with a positive urine HCG test and/or ultrasonologically confirmed pregnancy or history of amenorrhoea coupled with a clinically confirmed pregnancy.

A pre-tested and pre-structured questionnaire was used to collect information on the causes, sign and symptoms, prevention and treatment of anaemia. Verbal consent was taken before filling the questionnaire. Strict confidentiality of the data and privacy of the patients was maintained. Datas were entered in Microsoft Excel and analysed using open Epi Info for Windows.

The chi square test for proportions was used as the test of significance. Two-tailed p value of less than 0.05 was considered significant.

RESULTS

In the present study, majority 98 (53.26%) women were in the age group 20 - 24 yrs. followed by 69 (37.5%) in the age

group 25 - 29 yrs., 10 (5.43%) in the age group of 30 - 34 yrs. and 7 (3.8%) in the 15 - 19 yrs. Majority 50 (27.17%) of the women had primary level of education followed by illiterate 44 (23.91%), secondary level 42 (22.83%), higher secondary level 32 (17.39%) and graduate 16 (8.70%). Maximum number of 112 (60.87%) were Hindus, 62 (33.70%) were Muslim and 10 (5.43) were Sikh. Out of 184 women, 124 (67.39%) respondents were living in joint family and 60 (32.61%) were in nuclear family. Most of the 154 (83.70%)

respondents were housewives and 30 (16.3%) were working (Table No. 1). Majority of respondents in our study 63 (34.23%) had family income more than Rs. 15,000 followed by 62 (33.70%) with family income between Rs. 10,000 - 15,000, 28 (15.21%) between Rs. 5,000 - 10,000 and 31 (16.84%) with less than Rs. 5000. The study found that there was significant association regarding knowledge about cause of anaemia, sign and symptoms, prevention and treatment with women's education (Table No. 2, 3, 4, 5).

	Variables	No.	Percentage (%)
Age in Years	15 - 19	7	3.8
	20 - 24	98	53.26
	25 - 29	69	37.5
	30 - 34	10	5.43
Literacy Status	Illiterate	44	23.91
	Primary	50	27.17
	Secondary	42	22.83
	Higher Secondary	32	17.39
	Graduate	16	8.7
Religion	Hindu	112	60.87
	Muslim	62	33.70
	Sikh	10	5.43
Types of Family	Nuclear	60	32.61
	Joint	124	67.39
Occupation	Housewife	154	83.70
	Working	30	16.3

Table 1. Distribution of Socio-Demographic Variables of Respondents (n = 184)

	Women's Education	Correct		Incorrect		Total	
		No.	%	No.	%	No.	%
Lack of Iron in Diet	Illiterate	1	2.27	43	97.73	44	23.91
	Primary	18	36	32	64	50	27.17
	Secondary	22	52.38	20	47.62	42	22.83
	Higher Secondary	22	68.75	10	31.25	32	17.39
	Graduate	16	100	0	0	16	8.7
	$\chi^2 = 62.17$, Df = 4, p < 0.001						
Lack of Protein in Diet	Illiterate	0	0	44	100	44	23.91
	Primary	8	16	42	84	50	27.17
	Secondary	17	40.48	25	59.52	42	22.83
	Higher Secondary	10	31.25	22	68.75	32	17.39
	Graduate	14	87.5	2	12.5	16	8.7
	$\chi^2 = 53.67$, Df = 4, p < 0.001						
Malaria is a Cause of Anaemia	Illiterate	0	0	44	100	44	23.91
	Primary	0	0	50	100	50	27.17
	Secondary	0	0	42	100	42	22.83
	Higher Secondary	0	0	32	100	32	17.39
	Graduate	10	62.5	6	37.5	16	8.7
	$\chi^2 = 111$, Df = 4, p < 0.001						
Worm Infestation Lead to Anaemia	Illiterate	4	9.09	40	90.91	44	23.91
	Primary	2	4	48	96	50	27.17
	Secondary	5	11.90	37	88.1	42	22.83
	Higher Secondary	13	40.63	19	59.38	32	17.39
	Graduate	10	62.5	6	37.5	16	8.7
	$\chi^2 = 41.74$, Df = 4, p < 0.001						

Table 2. Association between Knowledge regarding cause of Anaemia and Women's Education

	Women's Education	Correct		Incorrect		Total	
		No.	%	No.	%	No.	%
Tiredness and Weakness are Symptoms of Anaemia	Illiterate	20	45.45	24	54.55	44	23.91
	Primary	29	58	21	42	50	27.17
	Secondary	36	85.71	6	14.29	42	22.83
	Higher Secondary	28	87.5	4	12.5	32	17.39
	Graduate	16	100	0	0	16	8.7
$\chi^2 = 32.58$, Df = 4, $p < 0.001$							
Pallor of Face is a Sign of Anaemia	Illiterate	7	15.91	37	84.09	44	23.91
	Primary	23	46	27	54	50	27.17
	Secondary	26	61.90	16	38.1	42	22.83
	Higher Secondary	27	84.38	5	15.62	32	17.39
	Graduate	16	100	0	0	16	8.7
$\chi^2 = 53.53$, Df = 4, $p < 0.001$							
Pallor of Eyes and Tongue is a Sign of Anaemia	Illiterate	0	0	44	100	44	23.91
	Primary	5	10	45	90	50	27.17
	Secondary	10	23.81	32	76.19	42	22.83
	Higher Secondary	21	65.69	11	34.37	32	17.39
	Graduate	14	87.5	2	12.5	16	8.7
$\chi^2 = 77.44$, Df = 4, $p < 0.001$							
Pallor of Nails is a Sign of Anaemia	Illiterate	0	0	44	100	44	23.91
	Primary	5	10	45	90	50	27.17
	Secondary	11	26.19	31	73.81	42	22.83
	Higher Secondary	20	62.5	12	37.5	32	17.39
	Graduate	13	81.25	3	18.75	16	8.7
$\chi^2 = 68.55$, Df = 4, $p < 0.001$							
Palpitation and Breathing Difficulty are Signs of Anaemia	Illiterate	5	11.36	39	88.64	44	23.91
	Primary	7	14	43	86	50	27.17
	Secondary	10	23.81	32	76.19	42	22.83
	Higher Secondary	22	68.75	10	31.25	32	17.39
	Graduate	16	100	0	0	16	8.7
$\chi^2 = 70.48$, Df = 4, $p < 0.001$							
Table 3. Association between Knowledge regarding Signs and Symptoms of Anaemia and Women's Education							

	Women's Education	Correct		Incorrect		Total	
		No.	%	No.	%	No.	%
Green Leafy Vegetables and Sprouted Grains are Rich in Iron	Illiterate	29	65.91	15	34.09	44	23.91
	Primary	40	80	10	20	50	27.17
	Secondary	38	90.48	4	9.52	42	22.83
	Higher Secondary	30	93.75	2	6.25	32	17.39
	Graduate	16	100	0	0	16	8.7
$\chi^2 = 17.11$, Df = 4, $p < 0.001$							
Ragi and Jaggery are Rich Source of Iron	Illiterate	2	4.55	42	95.45	44	23.91
	Primary	11	22	39	78	50	27.17
	Secondary	19	45.24	23	54.76	42	22.83
	Higher Secondary	16	50	16	50	32	17.39
	Graduate	15	93.75	1	6.25	16	8.7
$\chi^2 = 51.51$, Df = 4, $p < 0.001$							
Meat and Liver is Rich Source of Iron	Illiterate	3	6.82	41	93.18	44	23.91
	Primary	8	16	42	84	50	27.17
	Secondary	23	54.76	19	45.24	42	22.83
	Higher Secondary	17	53.13	15	46.87	32	17.39
	Graduate	16	100	0	0	16	8.7
$\chi^2 = 63.55$, Df = 4, $p < 0.001$							
Table 4. Association regarding Knowledge regarding proper Diet to prevent Anaemia and Women's Education							

	Women's Education	Correct		Incorrect		Total	
		No.	%	No.	%	No.	%
Regular Medical Checkup is necessary during Pregnancy	Illiterate	11	25	33	75	44	23.91
	Primary	21	42	29	58	50	27.17
	Secondary	33	78.57	9	21.43	42	22.83
	Higher Secondary	26	81.25	6	18.75	32	17.39
	Graduate	16	100	0	0	16	8.7
	$\chi^2 = 50.96, Df = 4, p < 0.001$						
High Protein Diet is Necessary	Illiterate	0	0	44	100	44	23.91
	Primary	6	12	44	88	50	27.17
	Secondary	18	42.86	24	57.14	42	22.83
	Higher Secondary	17	53.13	15	46.87	32	17.39
	Graduate	13	81.25	3	18.75	16	8.7
	$\chi^2 = 58.74, Df = 4, p < 0.001$						
Adequate Treatment is Necessary to Treat Hookworm Infestation	Illiterate	0	0	44	100	44	23.91
	Primary	0	0	50	100	50	27.17
	Secondary	2	4.76	40	95.24	42	22.83
	Higher Secondary	8	25	24	75	32	17.39
	Graduate	10	62.5	6	37.5	16	8.7
	$\chi^2 = 47.54, Df = 1, p < 0.001$						
Table 5. Association regarding Knowledge about Prevention and Treatment of Anaemia and Women's Education							

DISCUSSION

In the present study, majority 98 (53.26%) women were in the age group 20 - 24 yrs. followed by 69 (37.5%) in the age group 25 - 29 yrs., 10 (5.43%) in the age group of 30 - 34 yrs. and 7 (3.8%) in the 15 - 19 yrs. This is similar to study by Yadav RK et al (10), who found majority women in the age group 20 - 24 yrs. Majority 50 (27.17%) of the women had primary level of education followed by illiterate 44 (23.91%), secondary level 42 (22.83%), higher secondary level 32 (17.39%) and graduate 16 (8.70%). Similar finding of more women (40.83%) in primary level of education followed by secondary level 24.16% was found in study by Panigrahi A et al⁽¹⁰⁾ whereas Ghimire N et al⁽¹¹⁾ found 56.1% women with secondary education followed by 25.8% with primary education. Maximum number of 112 (60.87%) were Hindus, 62 (33.70%) were Muslim and 10 (5.43) were Sikh. This is similar to study by Yadav RK et al⁽¹²⁾ who found maximum no. of respondents being Hindus (74.30%) followed by Muslim 25.30%. In the Present study, 124 (67.39%) respondents were living in joint family and 60 (32.61%) were in nuclear family. This is similar to studies by Yadav RK et al⁽¹²⁾ and Panigrahi A et al⁽¹⁰⁾ who found 67.70%, 77.08% and 18.30%, 22.92% in joint and nuclear families respectively. In this study, most of the 154 (83.70%) respondents were housewives. This is similar to study by Yadav RK et al⁽¹²⁾ who found 86.50% as housewives, whereas ElHameed HAS et al⁽¹³⁾ found 58% as housewives. Majority of respondents in our study 63 (34.23%) had family income of more than Rs. 15,000 followed by 62 (33.70%) with family income between Rs. 10,000 - 15,000. This is in contrast to study by Yadav RK et al⁽¹²⁾ who found maximum no. of respondents 34.80% with family income between 5,000 - 10,000. Majority of correct answers regarding cause of anaemia was given by women who were educated up to graduate. There was significant association between knowledge regarding cause of anaemia and women's education ($p < 0.001$). This is similar to study by Yadav RK et al⁽¹²⁾ who also found significant increase of knowledge regarding cause of anaemia with increasing level of women's education. Majority of correct answers regarding signs and symptoms of anaemia was given by women who were educated up to graduate. There was

significant association between knowledge regarding signs and symptoms of anaemia and women's education ($p < 0.001$). This is similar to study by Yadav RK et al⁽¹²⁾ who also found significant increase of knowledge regarding signs and symptoms of anaemia with increasing level of women's education. Regarding knowledge about proper diet to prevent anaemia, green leafy vegetables and sprouted grains were known to most of the women with any level of education, but other sources were known to mostly women with higher secondary or above level of education ($p < 0.001$). Yadav RK et al⁽¹²⁾ also found similar association regarding treatment of anaemia, most of the women necessitated regular medical checkup, but role of protein diet and treatment of hookworm infestation were known to mostly with higher level of education ($p < 0.001$). Yadav RK et al⁽¹²⁾ also found similar association.

CONCLUSION

The study results showed that knowledge regarding anaemia in rural population is very poor. Right from the causes to prevention, the knowledge is limited to only higher educated women. The need of the hour is to aware women masses regarding anaemia, cheap and easy available iron rich sources foods and restriction of defecation in open fields.

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