



Research Article

TO ASSESS THE PREVALENCE OF ANAEMIA AND IT'S ASSOCIATED FACTORS AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINIC AT DHIRAJ HOSPITAL, PIPARIA, WAGHODIA, VADODARA

Dipika Chaudhari¹, Ankita Gamit², Alpesh Christian³ and Ekta Patel*⁴

^{1,2,3}Sumandeep Nursing College, Sumandeep Vidyapeeth University, Vadodara, Gujarat, India

⁴Department of Community Health Nursing, Sumandeep Nursing College, Sumandeep Vidyapeeth University, Vadodara, Gujarat

ARTICLE INFO

Article History:

Received 13th April, 2019

Received in revised form 11th May, 2019

Accepted 8th June, 2019

Published online 28th July, 2019

Key words:

Anaemia, Prevalence, associated factors, pregnant women, antenatal clinic

ABSTRACT

Background of the Study: Even if anaemia is a worldwide public health problem affecting numerous people in all age groups, particularly the burden of the problem is higher among pregnant women. This study is aimed to assess prevalence of anaemia and its associated factors among pregnant women attending antenatal clinic at Dhiraj Hospital Piparia, Waghodia, Vadodara.

Objective of the Study

1. To assess the prevalence of anaemia among pregnant women attending antenatal clinic at Dhiraj Hospital Piparia, Waghodia, Vadodara.
2. To identify associated factors of anaemia among pregnant women attending antenatal clinic at Dhiraj Hospital Piparia, Waghodia, Vadodara.
3. To associate the Prevalence of anaemia with selected Demographic variables among pregnant women attending antenatal clinic at Dhiraj Hospital Piparia, Waghodia, Vadodara.

Material and Method: The study is based on quantitative approach it consist of 4 steps: Identifying the objective of study, expanding the mean of attaining the objectives, collecting of data and analysing data. In this research study a descriptive survey design was used. The study conducted at Dhiraj Hospital, Piparia, Waghodia, Vadodara. The sample of the study was selected by using of Non-probability consecutive sampling technique. The sample size 150 pregnant women of Dhiraj Hospital Piparia, Waghodia, Vadodara. Data was analysed by using Descriptive statistics to analyse the study variables and sample demographics (Frequency, percentage). Chi square used to associate presence of anaemia with demographic variable Multiple Regression (AOR) used to identify risk factors of anaemia.

Result: In this study overall prevalence of anaemia using a cut off level of haemoglobin <11gm/dl among pregnant women was 73.98%. Out of 111 anaemic pregnant women, 22.66% were having Mild anaemia, 48.66% were having Moderate anaemia and 2.66% were having severely anaemia. Multiple logistic regression analysis revealed that the risk of anaemia is a highest among pregnant women with multigravida with (AOR=1.332, df=95%, CI=0.328-5.407), Number of gravidity ≥ 5 (AOR=0.88, df=95%, CI=0.512-1.785), Birth interval of 1 year (AOR=0.747, df=95%, CI=0.732-1.251), 2nd Trimester (AOR=0.854, df=95%, CI=0.137-1.906), Lack of Follow up (AOR=1.234, df=95%, CI=0.422-3.609), Chronic illness (AOR=1.110, df=95%, CI=0.344-3.583), lack of knowledge about anaemia (AOR=0.931, df=95%, CI=0.394-2.200), Contraceptives methods copper-T (AOR=2.953, df=95%, CI=0.308-4.870), Lack of Iron supplements (AOR=3.008, df=95%, CI=1.281-7.063), Excessive menstrual bleeding (AOR=0.211, df=95%, CI=0.072-0.615), History of malaria attack (AOR=0.777, df=95%, CI=0.132-4.571), History of abortion (AOR=0.973, df=95%, CI=0.305-3.103), Vegetarian (AOR=0.502, df=95%, CI=0.167-1.509), Not taking Fruit and Vegetables (AOR=0.613, df=95%, CI=0.154-2.433), consumption of tea/coffee before/after meal (AOR=6.540, df=95%, CI=0.041-1.198), eat Non Nutritive substance (AOR=0.676, df=95%, CI=0.148-3.080), Chatting while eating (AOR=0.181, df=95%, CI=0.055-0.597), Watching TV while eating (AOR=0.092, df=95%, CI=0.027-0.312).

Discussion and Conclusion: Anaemia continues to be a major problem in developing countries with poor maternal and neonatal outcome. Knowledge about prevalence and associate factors can improve both maternal and neonatal outcome.

Copyright©2019 Ekta Patel et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

According to WHO Estimates, India is one of the countries in the world that has highest prevalence of Anaemia.¹ The World Health Organization there Are two billion people with anaemia. In the world and half of the anaemia is due to Iron deficiency. The estimated Prevalence of anaemia In developing countries is 39% in children <5 years, 48% in children 5-14years, 42% in women 15-59years, 30% in men 15-59years and 45% in adults >60years.²

*Corresponding author: Ekta Patel

Department of Community Health Nursing, Sumandeep Nursing College, Sumandeep Vidyapeeth University, Vadodara, Gujarat

Iron deficiency and consequent anaemia during pregnancy could be associated with severe complications like increased risks of maternal mortality and morbidity, premature delivery, and low birth weight. Thus, routine screening tests for anaemia are recommended in pregnant women. Iron deficiency anaemia (IDA) is the most common and primary cause of anaemia. IDA prevalence indicates the nutritional status of a community. Considering the effects of IDA on maternal and Foetal mortalities, physical function and child growth and development, it is regarded as one of the main health indicators. On the other hand, the World Health Organization (WHO) has reported the prevalence of anaemia in pregnant women of Eastern Mediterranean countries to be 44.2%. Iron deficiency anaemia during pregnancy was reported 80% in

India where 16% of maternal mortalities have been related to anaemia.³

Prevalence is defined as all current cases existing at given point of time in a given Population. According to a WHO report, the global prevalence of anaemia among pregnant women is 41.8%.⁸ In India, the prevalence of anaemia among pregnant women ranges from 58.7% to 87%.⁹ The prevalence of anaemia at national level or state level cannot be generalised.⁴

Anaemia's complication are in pregnancy: The following complications are likely to increase: pre-eclampsia may be related to malnutrition and Hypoproteinaemia, inter current infection not only does anaemia diminish resistance to infection, but also any pre-existing lesion, if present, will flare up, it should be noted that the infection It Self impairs erythropoiesis by bone marrow depression, Heart failure at 30-32 weeks of pregnancy preterm labour. During labour: uterine inertia is not a common associate on the contrary the labour is short because of a small baby and multi parity. Postpartum haemorrhage is a real threat patient tolerates badly even a minimal amount of blood loss, shock-even a minor traumatic delivery without bleeding may produce shock or a minor hypoxia during anaesthesia which may be lethal. In puerperium there is increased chance of puerperal sepsis, sub involution, failing lactation, puerperal venous thrombosis, pulmonary embolism.⁵

According to global data 2018 In India Anaemia rate is 42% in women and 39.86% is in Antenatal mother and in Gujarat anaemia rate is 54.9% in women and 51.3% in antenatal mother. Normal level of anaemia in women is 11 -16gm/dl, mild anaemia is 10-10.9 gm/dl, moderate anaemia is 7-9.9 gm/dl, Severe anaemia is ≤ 7 gm/dl.⁶

REVIEW OF LITERATURE

Mwanaisha M. Ali, Agatha F. Ngowi, Nyasiro S. Gibore (2019) has conducted study with the aimed to establish prevalence and obstetric factors associated with anaemia among pregnant women attending antenatal care visits in Unguja Island, Tanzania. This is cross sectional survey used systemic random sampling in three hospitals of Unguja Island to select 388 pregnant women. Result of the study the overall prevalence of anaemia among pregnant women was 80.8%, where by 68.64% of respondents had mild anaemia, 11.24% had moderate anaemia and 0.89% had severe anaemia. The factors associated with anaemia in pregnancy were gravidity, (AOR= 1.185, 95% CI= 0.317- 4.338, $p < 0.001$), irregular taking of iron tablets (AOR=0.228, 95% CI= 0.149- 0.556, $p < 0.001$) and age of the child < 2 years, (AOR .635, 95% CI= 1.103- 11.882, $p < 0.034$).⁷

DesalegnGetanesh (2018) has conducted study with the aims to assess the prevalence of anaemia and associated factors among pregnant women at Bahir Dar city. This is A cross sectional study was carried out from May to July 2014 on 480 pregnant women. The socio demographic obstetrics, medical history & Nutrition related data was collected using a pretested structured questionnaire. Result of the study the overall prevalence of anaemia in this study population was 18.3% fifty one anaemic cases(10.6%) showed mid type 10of anaemia followed by moderate anaemia 33(6.9%) and the remaining 4 (0.8%) were having severe anaemia. Gravidity (AOR= 2.1, 95% CI: 1.1-4.1), Trimester of pregnancy (AOR =2.9, 95% CI: 1.1-7.7), History of abortion (AOR= 4.9, CI: 2.4-10.2) and

history of ante partum haemorrhage (AOR= 2.6, 95% CI: 1.1-6.6) had Statistically Significant association with anaemia in pregnant women.⁸

Dr.Shreedevi (2018) has conducted study with Objective of the present study was to evaluate the prevalence of anaemia among pregnant women attending antenatal check up in a rural teaching hospital in Telangana. It is a hospital based cross sectional observational study conducted in the department of obstetrics and Gynecology at maheshwara Medical college and Hospital, Telangana for duration of two years from March 2016 to April 2018. A total of 600 cases were studied and screened. The result of this study was prevalence of anaemia in pregnancy in rural Telangana was about 20%. Age -wise, majority (58.3%) of the patients were between 21 to 25 years. Gravida more than 2 were more 66.6% (400/600) when compared to lower parity. Among 600 cases, 140 pregnant women (23.3%) suffered with mild anaemia, 340 cases (56.6%) with Moderate anaemia and 20% with severe anaemia morphologically, microcytic hypochromic anaemia. Based on haemoglobin values anaemia was classified in to mild, moderate and severe anaemia.⁹

MATERIAL AND METHODS

Research approach: This study applied on quantitative approach

Research design: Descriptive survey design selected.

Setting of the study: The study conducted at Dhiraj hospital, Piparia, Vadodara.

Sampling techniques: The sample in this study will be selected by Non probability-consecutive sampling method

Sample size: The samples size 150 pregnant women attending antenatal clinic of Dhiraj Hospital, Piparia, Waghodia, Vadodara.

Inclusion criteria: Who are willing to participate in study.

Exclusion Criteria: Antenatal Mother who is severely ill and do not able to Co-operate.

Tool for data collection: It was composed of three sections.

Section 1: Socio demographic Characteristics

Section 2: Clinical & reproductive Characteristics

Section 3: Nutritional habits.

Analysis

Data Analysis

Data analysis is performed to reduce organize and give meaning to the data that has been collected. 48 The raw data for the study was transferred to an excel Spread sheet. By using the statistician was consulted to assist with analysing the data SPSS software.

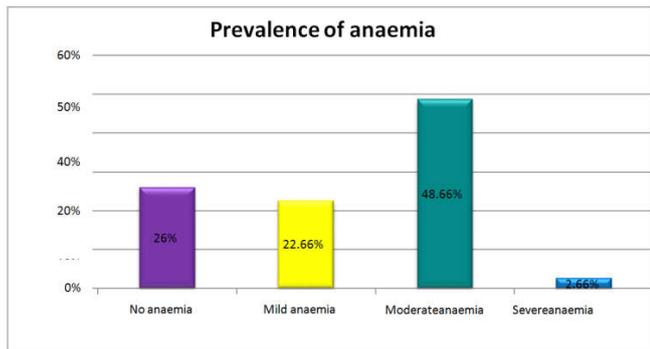
Descriptive statistics were used to analyse the study variables and sample demographics (Frequency, percentage). Chi square used to associate presence of anaemia with demographic variable. Multiple logistic Regression (AOR) used to identify risk factors of anaemia.

Prevalence of anaemia

Table 1 Frequency and Percentage Distribution of Anaemia

Sr.no	Classification of Anaemia	Hb level	Frequency	Percentage
1	No anaemia	≥ 11	39	26%
2	Mild anaemia	10-10.9	34	22.66%
3	Moderate anaemia	7-9.9	73	48.66%
4	Severe anaemia	≤ 7	4	2.66%

According to WHO classification of anaemia among pregnant women 26% (39) having no anaemia, 22.66 % (34) were having Mild anaemia, 48.66 % (73) were having Moderate anaemia and 2.66 % (4) were having Severe anaemia



Column diagram showing percentage distribution of respondents by classification of anaemia.

Identification of Riskfactors of Anaemia

Table 2 Riskfactors Related to Clinical & Reproductive Characteristics

[n=150]

Sr.no	Variables	Category	Anaemia		AOR
			Yes	No	
1.	Gravidity	Primi gravida	49(44.4%)	20(51.28%)	1
		Secondary Gravida	41(36.93%)	14(35.8%)	1.120
		Multi gravida	21(18.9%)	05(12.82%)	1.332
		3	14(66.6%)	3(60%)	1
		4	3(14.28%)	1(20%)	0.66
		≥5	4(19.04%)	1(20%)	0.88
		1 year	16(25.39%)	4(23.52%)	0.747
		2 year	24(38.09%)	5(29.41%)	0.6
		3 year	11(17.46%)	2(11.76%)	0.3
		≥4 year	12(19.04%)	6(35.29%)	1
		1st Trimester	20(18.01%)	5(12.81%)	0.510
		2nd Trimester	50(45%)	16(41%)	0.854
		3rd trimester	41(36.93%)	18(46.15%)	1
		Yes	83(75.45%)	33(82.5%)	1
		No	27(24.54%)	7(17.5%)	1.234
		Yes	16(14.4%)	6(58.38%)	1.110
		No	95(85.58%)	33(84.61%)	1
		Yes	40(36.36%)	14(35%)	1
		No	70(63.63%)	26(65%)	0.931
		Copper T	2(1.80%)	2(5.12%)	2.953
		Condom	23(20.72%)	15(38.4%)	1.973
		No any	86(77.4%)	22(56.4%)	1
		Yes	50(50.9%)	27(69.2%)	1
		No	61(54.95%)	12(30.7%)	3.008
		Yes	44(39.63%)	5(12.82%)	0.211
		No	67(60.36%)	34(87.1%)	1
		Yes	8(7.20%)	2(5.12%)	0.777
		No	103(92.79%)	37(94.87)	1
Yes	22(19.81%)	8(20.51%)	0.973		
No	89(80.1%)	31(79.48%)	1		

Table 3 Risk Factors Related to Nutritional Patterns

[n=150]

Sr No	Variables	Category	Anaemia		Aor
			Yes	No	
1	Food Habit	Vegetarian	72(64.8%)	23(58.97%)	0.502
		Non vegetarian	39(35.13%)	16(41.02%)	1
2	Fruit & vegetables	At Once per day	72(64.8%)	23(58.97%)	1
		Twice per day	39(35.13%)	16(41.02%)	0.613
3	Take tea/coffee after/before meal	Not taking	0(0%)	0(0%)	1.725
		At Once per day	21(18.91%)	4(10.25%)	0.221
4	Eat non- nutritive Substance	Twice per day	7(6.30%)	0(0%)	6.549
		Not taking	83(74.7%)	35(89.64%)	1
5	Chatting while Eating	Yes	28(25.22%)	3(6.69%)	0.676
		No	83(74.77%)	36(92.30%)	1
6	Watching TV while Eating	Yes	97(87.38%)	14(35.89%)	0.181
		No	14(12.61%)	25(64.10%)	1
6	Watching TV while Eating	Yes	95(84.82%)	9(23.68%)	0.092
		No	17(15.17%)	29(74.35%)	1

Table 4 Association of Prevalence of Anaemia with Significant Demographical Variable

[n=150, p=0.05]

Sr No	Variable	ANAEMIAz				Degree Of Freedom	Chi Square value	Significance	
		No anaemia	Mild anaemia	Moderate anaemia	Severe anaemia				
1	Age	18-24 year	24	28	58	02	3	2.582	7.82
		25-30 year	15	6	15	02			
2	Religion	Hindu	33	30	71	03	3	2.994	7.82
		Muslim	06	04	02	01			
3	Types of family	Nuclear	09	07	20	0	3	1.350	7.82
		Joint	30	27	53	4			
4	Educational status	Illiterate	01	10	37	01	9	5.854	NS
		Secondary	31	08	12	01			
5	Occupation	High secondary	05	09	08	01	6	5.52	12.59
		Graduate	02	07	16	01			
6	Family monthly income	Housewife	34	17	52	01	3	1.165	NS
		Job	03	09	14	01			
6	Family monthly income	Labourer	02	08	07	02	3	1.165	NS
		Below 5000Rs	33	26	61	02			
6	Family monthly income	5000-10000Rs	06	08	12	02	3	1.165	NS
		10000Rs	06	08	12	02			

DISCUSION

This final chapter deals with discussion of result summary of the study and conclusion of the study. Furthermore, the limitation of the study, recommendation for further studies will be discussed.

CONCLUSION

Anaemia continues to be a major problem in developing countries with poor maternal and neonatal outcome. Knowledge about prevalence and associate factors can improve both maternal and neonatal outcome.

Recommendation

- The Similar study can be conducted on large sample.
- A conducted study can be Performed in urban and rural area.
- A similar study can be performed in community setting.

References

1. Parvathy Joshi "Health and Medicine" Published by Health and Medicine, April 8th 2014.
2. WHO, UNICEF, & UNU, Iron deficiency anaemia: Assessment, Prevention and control, WHO, UNICEF, UNU, Geneva, Switzerland, 2001.
3. 12. Noran M. Abu-Ouf, MBChB, MSc, Mohammed M. Jan, MBChB, FRCPC. The impact of maternal iron deficiency and iron deficiency anemia on child's health. 2015; volume-36(2):146-149
4. Balgir R, Panda J. Panda A, Ray M. A Cross sectional study of anaemia in Pregnant women of Eastern coast of Odisha. Tribal Health Bull. 2011.
5. D.C. Datta "A text book of Obstetrics" 6th edition, New Central book agency (p) LTD
6. De Benoist *et al.* eds "Epidemiology & market size database." world wide prevalence of anaemia 2008
7. Mwanaisha M. Ali, Agatha F. Ngowi, Nyasiro S. Gibore. Prevalence and obstetric factors associated with anaemia among pregnant women, attending antenatal care in Unguja island, Tanzania. *International journal of community medicine and public health*, 15 January 2019; volume- 6(3): 950-957.
8. Desalegn Getaneh¹, Abera Bayeh², Bezabih Belay¹, Tewabe Tsehaye¹. Assessment of the Prevalence of Anemia and Its Associated Factors among Pregnant Women in Bahir Dar City Administration, North-West Ethiopia, *Journal of pregnancy and child health*, Mar 22, 2018; volume- 5(2)
9. Dr. Shridevi. Study of prevalence of anaemia among pregnant women attending antenatal checkup in a rural teaching hospital in Telangana, India. *International journal of Reproduction, contraception, Obstetrics and Gynecology*, 04 June 2018; Volume 7(7): 2612-2616.

How to cite this article:

Ekta Patel *et al* (2019) 'To Assess The Prevalence of Anaemia And It's Associated Factors Among Pregnant Women attending Antenatal clinic At Dhiraj Hospital, Piparia, Waghodia, Vadodara', *International Journal of Current Advanced Research*, 08(07), pp.19424-19427. DOI: <http://dx.doi.org/10.24327/ijcar.2019.19427.3746>
