PREVALENCY OF ANEMIA AMONG PREGNANT WOMEN A TENDING ANTENATAL CLINIC DURING MCH HOLWADAG MOGADISHO

Libaan Mohamed Hashi, Hassan Ahmed Yusuf, Naimo Mohamed Ibrahim
FACULTY OF MEDICINE & HEALTH SCIENCES
Jamhuriya University of Science & Technology, Mogadishu- Somalia
Dr.abdullahi2013@gmail.com Hassanyu60@gmail.com aamusane282@gmail.com
nimcomohamed590@gmail.com

Abstract

Background: Anemia in pregnancy is a common problem in most developing countries and a major cause of morbidity and mortality. In pregnancy, anemia has a significant impact on the health of the fetus as well as that of the mother. 20% of maternal deaths in Africa have been attributed to anemia. Objective: To assess the prevalence of anemia and its associated factors among pregnant women attending antenatal clinic at Cariif MCH, Holwadag District, in Mogadishu, Somalia 2018.Methodology: Facility based cross-sectional study was conducted at Cariif MCH, Holwadag District, in Mogadishu, Somalia 2018, from April to May 2018.

Data were collected using pretested questionnaires. A total of 60 pregnant women were included in the study. Data were entered and analyzed using STATA version 20. Result: In the study the prevalence of anemia was 51.7% percent among pregnant women (31 out of 60). The study has shown that age of the pregnant women and family size were found to be significant. Pregnant women at age of 15--25 were less likely to be anemic compared to those pregnant women at the age of 26-37. Conclusion and Recommendation: In this study the prevalence of anemia is 51.7% among pregnant women. Comparing the national prevalence of anemia in pregnancy (45.5%) it is higher, needs high effort by other researchers. the Sensitization of pregnant women by health providers to encourage early ANC visit and to continue supplements of iron and foliate throughout pregnancy. the Provision of health education on anemia and importance of visits at least four times during pregnancy.

Key words: *Anemia, prevalence of anemia, pregnant women, antenatal care, multigravidae, Primigravidae.*

1.0 Background

Anemia describes a situation in which there is a reduction of hemoglobin concentration in the blood of pregnant women to a level below 11g/dl. Anemia is one of the most common nutritional deficiency diseases observed globally and affect more than a quarter of the world's population (WHO/CDC, 2008). Globally, anemia affects 1.62 billion people (25%), among which 56 million are pregnant women (Balarajan, 2011; WHO/CDC, 2008). It is estimated that 41.8% of pregnant women worldwide are anemic. At least half of this anemia burden is assumed to be due to iron deficiency. Iron deficiency anemia (IDA) is the most common nutritional disorder in the world affecting 2 billion people worldwide with pregnant women particularly at risk (WHO guideline, 2012). In developing countries, the prevalence of anemia during pregnancy is 60.0% and about 7.0% of the women are severely anemic (Agan*et al*., 2010). In Africa 57.1% of pregnant women are anemic (de Benoist *et al.,* 2008). Sub-Saharan Africa is the most affected region, with prevalence of anemia estimated to be 17.2 million among pregnant women. This constitutes to approximately 30% of total global cases (WHO, 2008). In Kenya the prevalence of anemia among pregnant women is 55.1% and among non-pregnant women is 46.4% (Ministry of Health, 2013). Anemia during pregnancy is considered severe when hemoglobin concentration is less than 7.0 g/dl, moderate when the hemoglobin concentration is 7.0 to 9.9 g/dl, and mild when hemoglobin concentration is 10.0 to 10.9 g/dl (Balarajan*et al*., 2011; Salhan*et al.,* 2012; Esmat*et al*., 2010). When the prevalence of anemia among pregnant women is 40.0% or more, it is considered as a severe public health problem (McLean *et al*., 2008).

Anemia during pregnancy is a major cause of morbidity and mortality in pregnant women and infants in developing countries (Akhtar and Hassan, 2012). In 2013, an estimated 289,000 women died worldwide. Developing countries account for 99% (286 000) of the global maternal deaths with sub- Saharan Africa region alone accounting for 62% (179 000). About 800 women a day are still dying from complications in pregnancy and childbirth globally (WHOa, 2015). Anemia contributes to 20% of all maternal deaths (WHOb, 2015). Anemia in pregnancy causes low birth weight (Banhidy*et al*., 2011), fetal impairment and infant deaths (Kalaivani, 2009). Iron deficiency anemia affects the development of the nation by decreasing the cognitive and motor development of children and productivity of adults (Balarajan*et al.,* 2011; Vivek*et al*., 2012). Deficiency of folic acid during pregnancy can result in developing neural tube defect that develops in embryos during the first few weeks of pregnancy leading to malformations of the spine, skull, and brain (Wolff *et al*., 2009).

Iron and foliate requirements increase during pregnancy, therefore, the likelihood of developing iron and foliate deficiency is high if there is no supplementation during pregnancy (Marti-Carvaja*et al*., 2002). It is therefore recommended that all pregnant women should start taking iron and folic acid supplementation as early as possible to avoid the complications of iron and folic acid deficiency during pregnancy. Supplementation with folic acid has also been shown to reduce the risk of congenital heart defects, cleft lips, limb defects, and urinary tract anomalies (Wilcox, *et al*., 2007 and Goh and Koren, 2008). IFAS is a major strategy to reduce iron deficiency anemia in pregnancy as well as risk of congenital malformations on the newborn.

The specific objectives of this study was

1. Determine the prevalence of anemia among pregnant Women.
2. Determine the factors that affect the iron status of pregnant women

2.0 METHOLOGY

2.1 RESEARCH DESIGN

The researchers used a quantitative method of research designs, this study was used cores-sectional descriptive study design.

2.2 STUDY AREA &TARGET POPULATION

Target population was pregnant woman attending in antenatal care clinic at Cariif MCH in Holewadag District.

2.3 SAMPLE SIZE AND INSTRUMENT FOR DATA COLLECTION

The sample size of this study was 60 respondents the whole population of the study was being all pregnant women with anemia at April to May 2018 in MCH.
The sampling technique of this study was being non-probability sampling procedure.

2.4 DATA ANALYSIS

Data were analyzed using SPSS 20 (statistical package for the social science) were used. the researchers used descriptive statistics to describe the variables in this study.

2.5 ETHICAL CONSIDERATION

First in considering the research ethics the researchers received obtained letter from Faculty of Medicine and Health sciences of Jamhuriya University for science and technology. The request letters were signed by the head of Cariif MCH in Holewadag District. During study names were not mentioned in the questionnaire to keep the privacy, confidentiality and the secrecy of respondents, to maintain ethical issue the researchers. All data kept confidential and safe.

3.0 RESULT

The result of study was present using frequency table and figure.

3.1 identify number of your children

No. of children	Frequency	Percent
1	5	8.3
2	26	43.3
3	19	31.7
4 and above	10	16.7
Total	**60**	**100.0**

Table 3.1 identify number of your children

The above table shows the number children of Respondents the majority percentage was 2 children at 43.3%, second part was 3 children at 31.7% the third part was 4 and above children at 16.7% while 1 child was at 8.3%.

3.2. Spacing between children

Spacing between children	**Frequency**	**Percent**
1	8	13.3
2	51	85.0
3 and above	1	1.7
Total	**60**	**100.0**

Table 3.2 Spacing between children

This shows the child spacing level 13.3% one year, while 85% was two year also the majority of child spacing level and 1.7% was 3 and above.

3.3 Age at first birth

Age at first birth	Frequency	Percent
15-20	41	68.3
20-25	17	28.3
25-30	2	3.3
Total	60	100.0

Table 3.3 ages at first birth

This table shows the age at first birth 68.3% between 15-20 years, while 28.3% between 21-26, and 3.3% between 27-31.

3.5 What age does you breastfeed?

Till what age does you breastfeed	Frequency	Percent
6 months	52	86.7
up to 1 year	7	11.7
2 year	1	1.7
Total	**60**	**100.0**

Table 3.5 what age does you breastfeed?

This shows the age do you breastfeeding of the majority 86.7% 6 months, while 11.7% 1 year and 1.7% 2years.

3.9 How many times have you measured your HB level?

how many times have you measured your hb level	Frequency	Percent
1time	16	26.7
2 time	17	28.3
3 and above	5	8.3
No	22	36.7
Total	**60**	**100.**

Table 3.9 how many times you have measured your hb level?

This Table 4.13 shows how many times you have measured your hb level No at 36.7% also majority group, while 2 time at 28.3% second group, 1time at 26.7% third group, 3 and above at 8.3% fourth group also least group.

3.12 Are you taking iron tablets?

are you taking iron tablets	Frequency	Percent
Yes	40	66.7
No	20	33.3
Total	**60**	**100.0**

Table 3.12 Are you taking iron tablets?

This table shows Respondents by taking iron tablets and not taking Respondents was two groups, group one Yes at 66.7%, and while second groups No at 38.3.

Table 3.13 Have you taken iron tablets before?

This shows Respondents by taking iron tablets and others with percentage, the majority yes at 66.7 %, while at 33.3 % no

3.14 are you taking multivitamin tablets?

Are you taking multivitamin tablets	Frequency	Percent
Yes	13	21.7
No	47	78.3
Total	**60**	**100**

Table 3.14 Are you taking multivitamin tablets?

This shows Respondents by taking multivitamin tablets and others with percentage, the majority No at 78.3 %, while at 21.7% Yes

3.15 do you suffer from any pregnancy illness?

do you suffer from any pregnancy illness	Frequency	Percent
Yes	43	71.7
No	17	28.3
Total	**60**	**100**

Table 3.15 do you suffer from any pregnancy illness?

This show Respondents by suffer from any pregnancy illness and not suffer from any pregnancy illness with percentage, the majority No at 71.7 %, while at 28.3% Yes

3.16 What is the level of pregnancy?

what is the level of pregnancy	Frequency	Percent
First	19	31.7
Second	23	38.3
Third	18	30.0
Total	**60**	**100**

Table 3.16 what is the level of pregnancy

The level of pregnancy first at 31.7%, while Second 38.3% and Third 30%

3.0 DISCUSSION

4.1 Introductions

Socioeconomic and Demographic Characteristics

In this study 60 of the required sample pregnant women attending antenatal care were participated in the study. The mean age of the respondents was 2.02 (±.504) years. Around 75% of respondent were in age group of 26-37 years and about 13.3 % were in age group of 38-49, while 11.7% were in age group of 15-25. About 56.7% of the respondents were Illiterate, 25% had primary school level and 18.3 % had secondary School level. Regarding occupation majority of the respondents were house wives 60% while 40% was self-employee.

Our study used three different tools URIT, Sahli and Colorimeter Method, the study shows the difference between tools and its effectiveness the most effective one is Colorimeter Method,
We prefer our study Prevalence of Anemia and its severity were 51.7% among pregnant women (31 out of 60).

About 23 (38.3%) of the mothers were in their second trimester, 19 (31.7%) Were in the first trimester, and the remaining 18 (30%) were in the third trimester. The study shows that parity and age of current pregnancy (trimester) were important Variables, which have shown a significant association with anemia in the current study. The Risk of developing anemia increases with the age of pregnancy (trimester). The risk of Developing anemia was higher in second and first trimester when compared with those in third the trimester.

This finding is consistent with a study done in Saudi Arabia, which found that the prevalence of anemia is higher in the third trimester in comparison with first trimester (Haidar, 2010), and another study conducted in India, which also indicated that the prevalence of anemia was higher in pregnant women in the third and second trimesters (Vivak etal, 2012). Additionally, studies conducted in Malaysia, Vietnam, and Nepal found that increased gestational age is significantly associated with the risk of developing anemia (Makhoul etal, 2012). This could be due to the fact that when the gestational age increases the mother becomes weak and the iron in the blood is shared with the fetus in the womb therefore decreasing the iron binding capacity of the mother's blood.

4.0 Conclusions

The present study revealed that the prevalence of anemia among pregnant women was 51.7% which is a severe public health problem. The foregoing discussion has indicated that anemia during pregnancy is a result of many factors, including late pregnancy, lack of formal employment and economic autonomy, poor nutritional status and late ANC booking and not taking IFAS during the current pregnancy. All these factors lead to poor health condition of the pregnant women thus by the time such mothers attend for ANC, they are already in anemic state.

In Somalia, the current strategy for reducing anemia during pregnancy includes the provision of iron and folic acid tablets, advice on dietary intake, diagnosis and treatment of malaria and hookworms. IFAS is the most common and cost-effective strategy used to control anemia in the developing countries including Somalia and is used as both a preventive measure and a treatment option. However, in spite of the WHO and Somalia national guidelines recommendations, the study revealed that ANC booking and starting to take IFAS was too late. This late ANC booking is probably due to the fact that women with low socioeconomic situation have lack of access to education and understanding about health-related issues which can contribute to delays in seeking antenatal care and makes them prone to different health problems like anemia.

To reduce this high prevalence of anemia during pregnancy, therefore, interventions for prevention and control of anemia should be strengthened by encouraging early ANC booking. Early ANC booking provides opportunities for early detection and treatment of any health problem that can arise during pregnancy and initiation of IFAS as recommended. There is need, therefore, for the government of Somalia, through the relevant ministries, to address these risk factors by encouraging female education and enhance their autonomy through economic empowerment.

REFERENCES

Addis Alene, K., & Mohamed Dohe, A. (2014). Prevalence of anemia and associated factors among pregnant women in an urban area of eastern Ethiopia. *Anemia*, *2014*.

Agan, T. U., Ekabua, J. E., Udoh, A. E., Ekanem, E. I., Efiok, E. E., & Mgbekem, M. A. (2010). Prevalence of anemia in women with asymptomatic malaria parasitemia at first antenatal care visit at the University of Akhtar, M., & Hassan, I. (2012). Severe anaemia during late pregnancy. *Case reports in obstetrics and gynecology*, *2012*.

Anorlu, R. I., Oluwole, A. A., & Abudu, O. O. (2006). Sociodemographic factors in anaemia in pregnancy at booking in Lagos, Nigeria. *Journal of Obstetrics and Gynaecology*, *26*(8), 773-776.

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.

Baker, S. J., & DeMaeyer, E. M. (1979). Nutritional anemia: its understanding and control with special reference to the work of the World Health Organization. *The American journal of clinical nutrition*, *32*(2), 368-417.

Balarajan, Y., Ramakrishnan, U., Özaltin, E., Shankar, A. H., & Subramanian, S. V. (2011). Anaemia in low-income and middle-income countries. *The Lancet*, *378*(9809), 2123-2135.

Calabar Teaching Hospital, Calabar, Nigeria. *International journal of women's health*, *2*, 229.

Haidar, J. (2010). Prevalence of anaemia, deficiencies of iron and folic acid and their determinants in Ethiopian women. *Journal of health, population, and nutrition*, *28*(4), 359.

Hoque, A. M., Kader, S. B., Hoque, E., & Mugero, C. (2006). Prevalence of anaemia in pregnancy at Greytown, South Africa. *Tropical Journal of Obstetrics and Gynaecology*, *23*(1), 3-7.

Hoque, M., Kader, S. B., & Hoque, E. (2007). Prevalence of anaemia in pregnancy in the Uthungulu health district of KwaZulu-Natal, Soutsh Africa. *South African Family Practice*, *49*(6), 16-16d.

Makhoul, Z., Taren, D., Duncan, B., Pandey, P., Thomson, C., Winzerling, J., ... & Shrestha, R. (2012). Risk factors associated with anemia, iron deficiency and iron deficiency anemia in rural Nepali pregnant women. *Southeast Asian Journal of Tropical Medicine and Public Health*, *43*(3), 735.