



Nutritional status and associated factors among pregnant women in Boricha Woreda, Sidama Zone, Southern Ethiopia, 2013G.C

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Abstract

Introduction Malnutrition is a serious public health problem globally. This research was conducted with the aim of assessing nutritional status of pregnant women in Boricha wereda which is one of the woredas in Sidama zone, SNNPR

Method community based cross sectional study design was used. Data were collected from December 10-25, 2012G.C on 417 pregnant women. Data were collected by questionnaire, mid upper arm circumference (MUAC) measuring tape and HemoCue® Blood Hemoglobin Photometer. Factors associated with the outcomes were determined using multivariate logistic regression.

Result The prevalence of anemia was 20.9 %. Living in rural areas (AOR [95% CI] = 3.2 [1.32, 7.55]), antenatal care follower (AOR [95% CI] = 1.4 [1.34, 2.85]), those who were consumed iron (AOR [95% CI] = 2.5 [1.37, 4.44]) and those who were diseased by malaria (AOR [95% CI] = 9.3 [5.23, 16.74]) had significant association with anemia. The prevalence rate of pregnant women, whose MUAC measurement below 21.0cm, was 35.5%. Residence of the women (AOR [95% CI] = 3.2 [1.32, 7.55]), high income (AOR [95% CI] = 0.6 [0.16-0.82]), prolonged vomiting (AOR [95% CI] = 2.8 [1.713, 4.879]); meal timing of women (AOR [95% CI] = 1.2 [1.12-1.95]) had significant association with low MUAC status.

Conclusion the prevalence of malnourished pregnant women in hemoglobin level and mid upper arm circumference measurement was high. Hence, maternal nutrition interventions should be integrated in a stronger manner into maternity services.

Introduction

Eliminating hunger and malnutrition is one of the most fundamental challenges facing humanity. According to WHO, in developing countries, the prevalence of anemia among pregnant women is 56% but in India is 60 -70% which is the 2nd most common cause of maternal deaths accounting for 19% of total maternal deaths. The magnitude of iron deficiency anemia in Ethiopia ranges 18.7% to 30.4%.

Objective

The aim of the research was to assess the nutritional status of pregnant women in Boricha wereda which is one of the woredas in Sidama zone, SNNPR

Method

Community based cross sectional study design was used from December 10-25, 2012G.C on 417 pregnant women from randomly selected of six rural and one urban kebeles of Boricha wereda, Sidama zone. Data were collected by using structured interviewer administered questionnaire, mid upper arm circumference (MUAC) measuring tape, HemoCue® Blood Hemoglobin Photometer. Hemoglobin levels were categorized as “anemic” and “non-anemic,” according to World Health Organization’s accepted values to define anemia along with the adjustments provided by the CDC to determine anemia during pregnancy. Data were also analyzed by using SPSS version 16 and p value was set at 5%. Bivariate and multivariate analyses were done to see the association.

Result

The prevalence of anemia was 20.9 %. Living in rural areas (AOR [95% CI] = 3.2 [1.32, 7.55]), antenatal care follower (AOR [95% CI] = 1.4 [1.34, 2.85]), those who were consumed iron (AOR [95% CI] = 2.5 [1.37, 4.44]) and those who were diseased by malaria (AOR [95% CI] = 9.3 [5.23, 16.74]) had significant association with anemia. The prevalence rate of pregnant women, whose MUAC measurement below 21.0cm, was 35.5%. Residence of the women (AOR [95% CI] = 3.2 [1.32, 7.55]), high income (AOR [95% CI] = 0.6 [0.16-0.82]), prolonged vomiting (AOR [95% CI] = 2.8 [1.713, 4.879]); meal timing of women (AOR [95% CI] = 1.2 [1.12-1.95]) had significant association with low MUAC status.

Table 1 Association of hemoglobin level of the study population with deferent variables, Boricha woreda, SNNPR Ethiopia Jan,2013

Explanatory variable	Anemia status		Crude OR(95%CI)	Adjusted OR (95% CI)
	Non anemic	Anemic		
Residence				
Rural	260	80	3.07 (1.360,6.961)*	2.2 (1.933, 5.476)*
urban	70	7	1.0	1.0
Age				
<20	49	14	1	
21-25	134	26	0.7 (0.328-1.406)	
26-30	118	34	1.0 (0.498-2.043)	
>30	29	13	1.6 (0.648-3.796)	
Mother education				
Primary	312	86	1	1.00
secondary	13	1	0.28 (0.036-2.163)	
tertiary	5	0	0.00	
Husband education				
Primary	292	79	1	1.0
secondary	27	7	0.95 (0.402-2.282)	
tertiary	11	1	0.34 (0.043-2.642)	
Income				
Low	246	74	1	
Middle	53	10	0.7 (0.390-1.347)	
High	31	3	0.3 (0.096-1.087)	
Age at 1st pregnancy				
<20	172	50	1	1.0
21-35	158	37	0.806 (0.5-1.298)	
Gestational age				
1 st trimester	6	2	1	1.0
2 nd trimester	205	51	0.75 (0.146-0.807)*	0.8 (0.119-5.464)
3 rd trimester	119	34	0.85 (0.165-0.441)*	1.1 (1.161-2.240)*
Gravidity				
Primi gravid	72	14	1	1.0
Multi gravid	238	67	1.4 (0.768-2.728)	
Grand multi gravida	20	6	1.5 (0.525-4.530)	
Parity				
Primi para	81	19	1	1.0
Multi para	212	57	1.4 (0.642-2.045)	
Grand multi para	37	11	1.5 (0.548-4.530)	
ANC follow up				
Yes	231	49	1	1.0
No	99	38	1.8 (1.114-2.938)*	1.4 (1.340, 2.854)*
Iron				
Yes	172	39	1	1.0
No	158	48	2.3 (1.411-3.857)*	2.5 (1.377, 4.448)*
Malaria				
Yes	25	12	9.2 (5.297-16.013)*	9.3 (5.235, 16.744)*
No	305	75	1.0	1.0

Conclusion

The prevalence of anemia was 20.9 % ± 3.9 (17, 24). Living in rural areas, antenatal care follower, consuming iron and diseased by malaria had significant association with the occurrence of anemia.

The present study also identified that the mid upper arm circumference (MUAC) measurement of pregnant women below 21.0cm was 35.5% ± 4.5 (30, 39). Residence, income, prolonged vomiting and meal time had significant association with low MUAC status of pregnant women. Therefore, the concerned governmental and the existing non governmental bodies should strength their coordinated effort which focus on integration of those activities that enhances the nutritional status of pregnant women into maternity services.

Table 2 Association of nutritional status of the study population with MUAC with different variables . Boricha woreda, SNNPR Ethiopia Jan, 2013

Explanatory variable	Nutritional Status		Crude OR(95%CI)	Adjusted OR (95% CI)	OR
	Normal	Mal nourished			
Residence					
Rural	207	133	2.6 (1.451, 4.861)*	3.2 (1.322, 7.550)*	(1.322, 7.550)*
urban	62	15	1	1.0	
Age					
<20	48	15	1		
21-25	101	59	0.7 (0.328-1.406)		
26-30	88	64	1.0 (0.498-2.043)		
>30	32	10	1.5 (0.648-3.796)		
Mother education					
Primary	256	142	1	1.0	
secondary	8	6	1.3 (0.460-3.974)		
tertiary	5	0	0.000		
Husband education					
Primary	239	132	1	1.0	
Secondary	20	14	1.3 (0.620-2.592)		
Tertiary	10	2	0.4 (0.078-1.677)		
Income					
Low	200	120	1	1.0	
Middle	41	22	0.8 (0.487-1.351)	1.1 (0.567-2.087)	
High	28	6	0.3 (0.140-0.866)*	0.6 (0.166-0.826)*	(0.166-0.826)*
Age at pregnancy					
<20	147	75	1	1.0	
21-35	122	73	1.2 (0.785-1.753)		
Gestational age					
1 st trimester	4	4	1	1.0	
2 nd trimester	172	84	0.5 (0.119-2.001)		
3 rd trimester	93	60	0.6 (0.155-2.678)		
Gravidity					
Primi gravid	58	28	1	1.0	
Multi gravid	194	111	1.2 (0.713-1.969)		
Grand multi gravid	17	9	1.5 (0.435-2.766)		
Parity					
Primi para	66	34	1	1.0	
Multi para	169	100	1.1 (0.709-1.860)		
Grand multi para	34	14	1.6 (0.379-1.688)		
ANC follow up					
Yes	184	96	1	1.0	
No	85	52	0.2 (0.767-1.792)		
Prolonged vomiting					
yes	180	125	2.7 (1.610, 4.484)*	2.8 (1.713, 4.879)*	(1.713, 4.879)*
No	89	23	1.0	1.0	
Meal time					
With husband	129	53	1	1.0	
After husband	24	12	1.3 (0.625-2.782)	0.8 (0.369-2.022)	
After husband and children	116	82	1.7 (1.123-2.637)*	1.2 (1.124-1.958)*	(1.124-1.958)*
Small food prepared					
Equally shared	186	38	1	1.0	
For children	29	39	6.6 (11.921)*	5.8 (3.635-10.772)*	(3.146-11.921)*
For husband	54	71	6.4 (3.915-10.579)*	5.6 (3.339-9.584)*	(3.339-9.584)*
Source of food					
Farming	67	46	1		
Purchasing	46	13	0.4 (0.200-0.847)*	0.4 (0.174-0.922)	
Both	156	89	0.8 (0.526-1.312)	0.7 (0.423-1.200)	
Farm land					
Yes	241	138	1		
No	28	10	0.6 (0.294-1.323)		

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