Lactating women have significantly lower hemoglobin concentration than their family members, a comparative cross sectional study.

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Abstract

Introduction: World health organization estimates that around 1.62 million people are anemic in the world and 50% of the anemia was iron deficiency. The consequences of anemia were severe in children and child bearing age women. The anemia intervention was among the neglected condition by policy makers and health personnel. The aim of this study was to estimate and compare the hemoglobin concentration of lactating mothers with their family members and identify the predictors of anemia in lactating mothers.

Methods and materials: Community based Comparative cross sectional study was conducted. Lactating mothers and their household members in Mecha district was included in this study. Epi-info software was used for sample size calculation and 6531 study participants estimated to be included. Simple random sampling technique was used to select the lactating mothers and their household members. Data were collected using interview technique, collecting blood and stool samples. Descriptive statistics were used to describe the profile of the study participants. Multiple linear regressions were used to identify the predictors of anemia.

Results: A total of 6418 study participants were included giving for the response rate of 98.26 %. The mean hemoglobin concentration of lactating mothers was 11.18 g/dl (SD ± 1.02 g/dl). The prevalence of anemia among lactating mothers was 44.76 % (95 % CI: 42.33 % -47.20 %). The mean hemoglobin concentration of breastfeeding children was 15.68 g/dl (SD ±1.35). Only 10% of children have iron deficiency anemia. The mean hemoglobin concentration of children between 2 - 11 years was 12.31 g/dl (SD±1.98), 14.8 % of children in this age group were anemia (95% CI: 12%-17.57 %). The mean hemoglobin concentration of individual whose age was greater than 12 years was 11.78 g/dl (SD±1.48), 17.4 % of study participants in this age

group were anemic (95% CI: 15.96 % - 18.83 %). The hemoglobin concentration of lactating mothers was affected by age B (beta coefficient) -0.13 [95 % CI: -0.14 - -0.12], parity B -0.19 [95% CI: -0.21- -0.17], availability of latrine B 0.28 [95 % CI: 0.231 - 0.333], frequency of breast feeding B -0.09 [95% CI: -0.10 - -0.07], dietary diversification score B 0.15 [95% CI: 0.12 - 0.17], MUAC B 0.04 [95% CI: 0.03 - 0.05], educational status B 0.01 [95 % CI: 0.06 - 0.14], income B 0.13 [95% CI: 0.09 - 0.16], hookworm B -0.11[95% CI: -0.17 - -0.05], overcrowding B -0.07 [95% CI: -0.1 - -0.04].

Recommendation: Lactating mothers should be supplied with additional iron supplementation during their lactation periods.