

Effect of Dietary Diversity on Maternal Dietary Diversity of Anemia of the Mother during Pregnancy and Prenatal Outcomes: Prospective Cohort Study in Rural Central Ethiopia

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Abstract : Background: Maternal and child under-nutrition is the underlying cause of 3•5 million annual deaths, globally. Anemia during pregnancy is among the leading nutritional disorders with serious short and long term consequences to both the mother and fetus. Objective: Examine the effect of dietary diversity on maternal anemia, nutritional status and key pregnancy outcomes of pregnancy. Methods: A prospective cohort study design, involving a total of 432 eligible pregnant women, in their second antenatal care visit was conducted between August 2014 to March, 2015. The individual dietary diversity status of mothers was used as the exposure variable to select, enroll and follow the mothers. All mothers were enrolled during second antenatal care visit and followed until delivery. Epi-data, SPSS and STATA software are used to enter and analyze the data. Chi-square test, independent 't'-test, and GLM are used to calculate risk, association and differences between key variables at $P < 0.05$. Results: Study participants did not differ in many of the basic characteristics ($p < 0.05$). The incidence of maternal anemia increased significantly from 28.6% to 32.1% between baseline and term. Pregnant mothers with inadequate dietary diversity groups had more (56% at baseline and 68% at term) risk of anemia than the comparison (adequate) groups, (RR, 1.56 and 1.68; 95% CI, 1.24 - 1.83 and 1.39 - 2.04). The overall incidence of still birth, low birth weight and pre-term birth was 4.5%, 9.1% and 13.6%, respectively. The variation of these outcomes was significant across study groups ($P < 0.05$). Conclusion and recommendations: Dietary diversity status of pregnant mothers has significant effect on the incidence of anemia and key pregnancy outcomes in resource limited settings, like rural Ethiopia. Therefore, apart from the ongoing routine IFA supplementation, special emphasis should be given to dietary diversity of mothers to improve related outcomes of pregnancy and maternal health.

Keywords : anemia, birth weight, dietary diversity, pregnancy, pregnancy outcome

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