Predictors of optimum antenatal iron-folate supplementation in a low resource rural set-up in Eastern Kenya

Abstract

There is depressed prevalence of the optimum iron-folate supplementation in Kenya and in other sub-Saharan Africa countries. The study was motivated by the paucity of area-specific data on predictors of optimum iron-folate supplementation. The aim of the study was to assess the maternal, knowledge and institutional factors that predict 90+ days (optimum) iron-folate supplementation among pregnant women in a rural set-up in Eastern Kenya. A descriptive cross-sectional study to collect quantitative data from 352 mothers of under-five years old children attending 7 health facilities in Kalama Division of Machakos constituency within Machakos County in lower Eastern Kenya. Using a standard questionnaire, mothers recalled the number of days they had ingested iron-folate supplements in their latest pregnancies. The overall prevalence of optimum supplementation (90+ days) during latest pregnancies was 18.3% and on average the study mothers were supplemented for ~38 days during the antenatal period. Mothers who visited antenatal care (ANC) for ≥4days (odd ratio [OR]: 2.756, 95% confidence interval [CI]: 1.396-5.445) were more likely to take iron-folate supplements for 90+ days and be supplemented for more days (45.8) than <4 days visitors (26.2 days), p=0.017. Earlier ANC visit was associated with the mean days of supplementation (p=0.006), but not with optimum supplementation (OR: 0.412, 95% CI: 0.236-0.719). Knowledge on supplementation for a minimum of 90 days predicted optimum supplementation (OR: 5.872, 95% CI: 2.945 -11.709). Knowledge on when to start supplementation and importance of supplementation only predicted higher days of supplementation (p<0.05), but not the optimum supplementation. Pregnant women who used tablet form were more likely to be supplemented optimally (OR: 1.007, 95% CI: 1.004-1.116). Those who were supplemented with a combined form of supplement were more likely to have more days of supplementation (p=0.004), but not optimum (OR: 1.125, 95% CI: 0.419-3.021) compared to those who used single iron and folate supplement. To increase the proportion of pregnant mothers taking iron-folate supplements for 90+ days in low resource rural set-ups, there should be intensified counselling/education on ANC attendance ≥ 4 times and on minimum number of days for optimum iron-folate supplementation. Use of tablets as opposed to syrup increases the likelihood for antenatal ingestion of iron-folate supplements for 90+ days in rural low-resource set-up.

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