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Epidemiological determinants of folate deficiency among pregnant women of district Dehradun

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Folate deficiency has been found to be associated with congenital birth defects like spina bifida, anencephaly, etc. Pregnant women have an increased need for folic acid (600mg/day) to support the growth of the placenta and fetus and prevent birth defects. Present study was conducted to assess deficiency of serum folate among pregnant women and its epidemiological determinants. A cross-sectional study was conducted in the Doiwala block of Uttarakhand state, a hilly state of the country, and a total of 95 pregnant women participated. Pregnant women were randomly selected from antenatal clinics organized at sub-centers and primary health centers. Blood samples were analyzed for serum folate by competitive immunoassay using direct chemiluminescent technology. Fully automated ADVIA Centaur XP Immunoassay system was used for analysis. Analysis of data showed that mean serum folate level among pregnant women was 10.1–5.9ng/ml (95% confidence interval 8.9–11.2). As per World Health Organization cut-off levels, a total of 28 (29.4%), 95% CI (20.2–38.5), women were having folate deficiency (≤5.9ng/ml), and out of them 3 were having folate levels below 3ng/ml (severe folate deficiency). 9(9.4%) women had elevated levels (>20ng/ml). 57 (60%) women were in the normal range (6–20ng/ml). Out of various biosocial determinants considered, education and economic status have shown significant association with folate deficiency. A significant difference was observed in the mean serum folate level among pregnant women living in joint and nuclear type of family. Mean serum folate levels showed a slight negative correlation with body mass index (Spearman's rho =0.22, p=0.03900) and gestational age (correlation coefficient: r=0.26, p=0.009). Study findings reveal that high level of folate deficiency (29.4%) is prevalent among pregnant women. Education, type of family, economic status and BMI came out to be important determinants of folate deficiency. These identified determinants could be considered while planning comprehensive strategy for reduction of folate deficiency.

Biography

Vartika Saxena is A graduate of GSVM, Kanpur and MD Community Medicine from KGMC Lucknow. Started career as Nutrition consultant, UNICEF. She is Presently working as Professor, Community and Family Medicine AIIMS, Rishikesh. She has wide ranging professional experience of more than 17 years in the field of Public Health especially in the area of Nutrition, Adolescent Health, MCH (Maternal &Child Health) &. Implemented large scale developmental projects in Uttar Pradesh & Uttarakhand, in collaboration with various national and International agencies viz.- World bank, USAID, Futures group International, Micronutrient Initiatives, Population Foundation of India. World Food Programme.etc. Carried out more than 25 research projects with intramural and extramural funding. Presented papers in national and International conferences. 40, Published papers in peer reviewed National & International journals, Developed health educational tools, manuals, booklets on the subjects' like- Nutrition, adolescent health, maternal and child health, etc.

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