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Rickets and associated micronutrient deficiency among mother-child pair in rural communities of Kuje area council, federal capital territory Abuja, Nigeria

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Rickets/osteomalacia in rural communities have been unnoticed, thus have not attracted attention for appropriate intervention in Nigeria. This study assessed the proportion of underfive children with rickets and women with osteomalacia/rickets and associated micronutrient (Vitamin D, Calcium, Alkaline Phosphates and Phosphorus) status of the underfive children – mother pair. A cross-sectional survey method was used and multi stage sampling techniques was used in selecting the populations that were studied. Probability proportion by size was applied in choosing 30 clusters for the survey using ENA for SMART software 2011 version. Validated questionnaires were used to obtain information from the population and trained personnel collected the blood sample and all parameters were analysed using standard methods. The data was also subjected to statistical analysis using statistical package for social sciences version 20. Biochemical result showed that 11.8% of the children were suspected to have rickets from clinical assessment, 36.4% were deficient in Vitamin D, 10.7%, 9.1% were deficient and above normal respectively in Alkaline Phosphates, 1.7% were deficient in Phosphorus, and 59.5% were deficient in Calcium. The biochemical result of the mothers showed that 5.7% of the mothers were suspected to have rickets, 30.4% were deficient in Vitamin D, 93.8% had above normal Alkaline Phosphates levels, 41.3% were deficient in Phosphorus, and 52.2% were deficient in Calcium. Rickets and associated micronutrient deficiency in Kuje was high in this study.

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