

Effect of Umbilical Cord Clamping Time on Nutrition Status of Infants, Randomized Control Trial in County Referral Hospital in South Rift Valley, Kenya

Background: Although the benefits of delayed umbilical cord clamping are globally including by the World Health Organization (WHO) Kenya among many Sub-Saharan African Countries continue to record variation in the clamping time in its private and public health facilities.

Objective: This study sought to establish the effects of umbilical cord clamping time on infant nutritional status at 6 months at Longisa County Referral Hospital

Methods: The study was a randomized controlled trial design. Mother-infant pairs were randomized into the experimental and control groups. A sample size of $n=204$ of mother-infant pair was enrolled in both study arms. Recruitment of the study participants took place at onset of labour pains for all eligible mothers admitted to labour and delivery ward. The experimental group involved clamping the umbilical cord between 3-5 minutes after delivery while the control group involved clamping of umbilical cord as per the standard routine practice soon after delivery in the health facility. Infant weight, length and haemoglobin was assessed at baseline, 6 weeks and at 6 months. Comparison of effect of umbilical cord clamping time on length, height and haemoglobin at 6 weeks and at 6 months was done using unpaired student t-test at 95% CI, significance set at $P<0.05$. Two-sample t-test, the results for weight, length and haemoglobin was determined. **Results:** The mean weight at six (6) months of life for the control group of the study was 7.41 ± 0.65 kgs while for the experiment group the mean weight is 8.51 ± 0.60 kgs ($p<0.05$). The mean length at 6 months for the control group was 56.91 ± 14.36 cm and the experiment group were 58.18 ± 16.72 cm ($p<0.05$).

Conclusion: Delayed clamping is beneficial for the infant's nutrition status.

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