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Effect of Lipid-based Nutrient Supplement - Medium Quantity on Reduction of Stunting in Children 6–23 Months of Age in Sindh, Pakistan: A Cluster Randomized Controlled Trial (OR25-06-19)

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Objectives: We evaluated the effectiveness of a locally produced lipid-based nutrient supplement - medium-quantity (LNS-MQ) known as Wawamum to prevent stunting in children 6–23 months of age in Thatta and Sujawal districts of Sindh province, Pakistan.

Methods: A cluster randomized controlled trial was conducted and a total of 870 children between 6–18 months old were enrolled. Children in the intervention group received 50 grams/day of Wawamum for 6 months, while children in the control group received standard government health services, not including Wawamum. The primary outcome was stunting risk reduction among children 6–23 months of age.

Results: Children who received Wawamum were found to have a significantly reduced risk of stunting (RR = 0.91, 95% CI; 0.88–0.94, $P < 0.001$) and wasting (RR = 0.78, 95% CI; 0.67–0.92, p-

0.004) as compared to children who received the standard government health services. A non-significant impact was observed on underweight (RR = 0.94, 95% CI; 0.85–1.04, $p=0.241$) in the intervention group compared to the control group. Statistically significant reduction in anaemia in the intervention group was also found as compared to the control group (RR = 0.97, 95% CI; 0.94–0.99, $p=0.008$). The reduction in risk of severe anaemia was even more evident (RR = 0.45, 95% CI; 0.28–0.99, $p=0.002$) in the intervention group than in the control group. The mean compliance of Wawamum was 60.3% among children.

Conclusions: The study confirmed the plausibility of achieving nutrition gains in the short-term with a locally produced LNS-MQ, known as Wawamum, through the primary health care system. The risk of stunting and wasting was reduced by 9% and 22%, respectively. The statistically significant reduction in risk of stunting, wasting and anaemia among children 6–23 months of age showed that an immediate improvement in these nutrition indicators is indeed possible. This approach can be scaled up in similar settings to achieve positive outcomes for nutrition and health.

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