

## FULL ABSTRACT

Effect of Food Supplementation and Psychosocial Stimulation Manjulai based on Local Culture Approach on Growth and Development of Infants 6 to 9 Months of Age in West Sumatera Province.

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Malnutrition among Indonesian children in their early life period can be said into global and national concerns. This is mostly due to inadequate nutrition consumption and poor in child care. Therefore, the objective of the study is to investigate the effect of nutritional supplementation and psychosocial stimulation based on local culture on children's growth and development.

The research deals with quasi experimental study which is designed based on Cluster Randomized Control Trial (CRCT). It was conducted in January until December 2013 at Tanah Datar Agency, West Sumatera Province Indonesia. There are 355 infants aged 6 to 9 months assessed at the beginning of the study. The infants are divided into 4 groups: Food Supplementation group (FS group), Psychosocial Stimulation group (PS group), Food and Psychosocial Stimulation group (FS+PS group), and Control group (C group). The FS group receives daily food supplementation MP-ASI with local product about 250 to 300 kcal and 6 to 8 grams of protein for 6 months. The PS group receives weekly psychosocial stimulation Manjulai based on local culture approach for 6 months.

The result of study shows, that there is a significant difference on the children's average length improvement in FS group that is  $6.86 + 2.08$ . Such an increase is also found in FS+PP group, that is  $6.66 + 2.41$ . In this context, the difference is very significant ( $p=0.006$ ). Similarly the nutritional status based on Z-Score weight for height shows a significant difference, that is  $0.57 + 1.15$  SD with strong effect size ( $d=0.6$ ). In addition, there is average difference on score improvement in cognitive children's development, that is  $21,38$  point  $+ 12.24$  with medium effect size ( $d=0.5$ ). It is also found in score improvement of children's motoric development, that is  $20.65$  point  $+ 16.41$ ) with medium effect size ( $d=0.5$ ). This happens in combined intervention groups showing more significant difference ( $p=0.003$ ).

In conclusion, combination of two interventions food supplementation and psychosocial stimulation has stronger effect on children's nutritional status, growth, and development when compared to one type of intervention only. Therefore, the increase of food supplementation and psychosocial stimulation based on Minangkabau culture approach Manjulai, should be applied consistently, regularly, and supported by many sides to obtain children's optimal growth and development.

Keywords: Food Supplementation, Psychosocial Stimulation, Nutritional Status, Children's Growth and Development