

## SUMMARY

### **Effect of Stimulation By Mother on Development of Children Aged 0-3 years with SDIDTK Reference in the Working Area of Puskesmas Oebobo Kupang**

Underfives' brain has more plasticity than adult's brains. On positive side, underfives brain is more receptive to learning. On negative side, the underfives brain is very sensitive to unsupportive environment, such as a lack of stimulation. The age of under five years is a very sensitive period, of short duration and cannot be repeated, called as the golden period, window of opportunity, and critical period. At this time children need serious attention from the parents because child's development is determined by the interaction between child and parents. The development of a child will be optimal if it is supported by social interaction that suits the need and stages of their development.

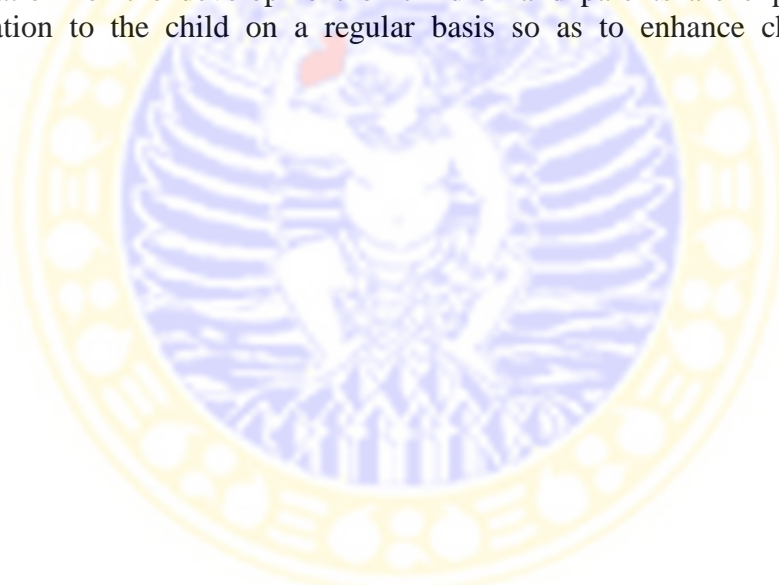
A child who is always receiving directed and regular stimulation will grow faster than a child who is not stimulated. A supportive environment leads to good physical and mental development of the children, while less supportive environment leads impaired child development. In the effort to maximize child potential, parents must provide early stimulation. Provision of continuous, varied and full-of-compassion stimulation will stimulate multiple intelligences of children, the logico-mathematical intelligence, emotions, communication, language (linguistic), musical intelligence, movement (kinesthetic), visuo-spatial, visual arts, and others. The provision of early stimulation by parents may affect synapse formation (synaptogenetic process ) of brain cells, forming ganglioside with sialic acid, which is important for learning and memory speed. Besides, stimulation can improve dendritic branches that are important for a child's cognitive performance.

The problem of child development is increasingly rising. Screening of child development in 30 provinces in Indonesia reported that 45.12% of infants have developmental disorders. The coverage of SDIDTK East Nusa Tenggara Province was still low at 40% of the target of 60%. The coverage of SDIDTK in Kupang district was also very low at 16.35% of the strategic plan target of 45%. Child development problems in Puskesmas Oebobo, Kupang, in 2014 revealed questionable child development rate as much as 7.86%. The government has made various efforts to address the problem of child development. One of the government programs to support these efforts is the publication of Guidelines for the Implementation Stimulation, Detection and Early Intervention in Developmental (Pedoman Pelaksanaan Stimulasi, Deteksi dan Intervensi Dini Tumbuh Kembang, SDIDTK) at the level of primary health care.

General objective of this study was to analyze the effect of stimulation by the mother on the development of children aged 0-3 years with reference to SDIDTK. The specific objective was to analyze the development of children 0-3 years old with good development in group receiving good stimulation and less stimulation and comparing the development of children aged 0-3 years with good development between the group receiving good stimulation and less stimulation. This type of study was observational analytic. This study was a quantitative study with prospective cohort approach. The study was conducted at the Posyandu, Puskesmas Oebobo, Kupang, in April-June 2015. The population in this study were all mothers with children aged 0-3 years. All children aged 0-3 years enrolled in the Posyandu were many as 988 individuals. Samples were mothers with children aged 0-3 years as many as 66 respondents, divided into two groups: children with good development receiving good stimulatoin as many as 33 children and groups of children with good

developmental receiving less stimulation as many as 33 children. Data were analyzed using chi-square test.

Results showed that there was a significant correlation between children's nutritional status and KPSP end result with cotigency coefficient 0.286, indicating that children's nutritional status has strong correlation with KPSP end result, 0.40 or 40% and RR : 0.342. This means that children with good nutritional status have three-times higher possibility to develop appropriate with their age than children with less nutritional status, and there was a significant correlation between maternal education and KPSP end result,  $p < 0.05$ , Fisher's exact test: 0,040, with contingency coefficient 0,339. This means that the mother's education has a strong correlation with KPSP end result, 0.48 or 48%, and there was significant correlation between stimulation and KPSP end result,  $p < 0.005$  chi-square test: 0.000, contingency coefficient of 0.640. This means that the stimulation has a very strong correlation with KPSP end result 0.91 or 91%. RR value of 0.182 means that the children who received good stimulation ( $\geq 3$  hours) had the possibility of obtaining good development as much as 5.5 times that of children who received less stimulation ( $< 3$  hours). In other words, children who lack of stimulation ( $< 3$  hours) has the possibility of having 5.5 times as much developmental disorders of children who received good stimulation. In conclusion, there is correlation between maternal education and stimulation with KPSP end result. It is recommended to health workers to provide health education to parents about the importance of early stimulation for the development of children and parents are expected to always provide stimulation to the child on a regular basis so as to enhance children's optimal development.



**ABSTRACT****Effect of Stimulation By Mother on Development of Children Aged 0-3 years with SDIDTK Reference in the Working Area of Puskesmas Oebobo Kupang**

Mental stimulation can optimize the development of a child. Continuously receiving directed and regular stimulation will make a child grow faster. The study objective was to analyze the development of 0-3 year-old children with good development in groups receiving good and less stimulation and compare the development of the children in both groups. This was a quantitative study with prospective cohort approach, conducted in April-June 2015. Population in this study comprised all mothers with children aged 0-3 years and all children aged 0-3 years enrolled in Posyandu were 988 individuals. Sample comprised 66 mothers who had children aged 0-3 years. They were divided into two groups: children with good development receiving good stimulation comprising 33 children, and children with good development receiving less stimulation comprising 33 children. Data were analyzed using chi-square test. Results showed significant correlation between children's nutritional status with KPSP final results with  $p = 0,026 < 0,05$  Fisher's Exact Test, cotigency coefficient of 0.286, indicating that children's nutritional status has strong correlation with KPSP end result, 0.40 or 40% and RR value of 0.342. This shows significant correlation between maternal education with KPSP final results with  $p = 0.040 < 0.05$  Fisher's Exact Test, contingency coefficient of 0.339. This shows significant correlation between stimulation with KPSP final results with  $p = 0.000 < 0.05$  chi-square test and contingency coefficient 0.640, indicating very strong correlation with RR value of 0.832. This means that children who received good stimulation have the possibility to experience good development was 5.5 times higher than children who received less stimulation. It can be concluded that there is correlation between maternal education and stimulation on KPSP end result. It is recommended that parents always give stimulation to the child in order to obtain optimal child development.

**Keywords:** stimulation, child development, SDIDTK