Thesis Title Multi-Level Anlysis of Factors Affecting Nutritional Status of Children Aged 0-48 months, Ubon Ratchathani and Sri Sa Ket Provinces

Name Wanphen Russameesopaphorn

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Thesis Supervisory Committee Thavatchai Vorapongsathorn, Ph.D.
Pattanee Winichagoon, Ph.D.
Supachai Sangrattanagul, M.Sc.

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ABSTRACT

Protein-energy malnutrition has been a major nutritional problem in Thailand. To improve this situation, the nutritional status of Thai children in particular, research on factors infuencing must be carried out. This study aims to compare the analysis results of the factors affecting nutritional status considering weight for age from the multiple regression analysis and the multilevel analysis. Data from communication of behavior change radio vs video van were used. The samples in this study were 2,398 youngest children in the family with age 0-48 months from 46 villages in Ubon Ratchathani and Si Sa Ket provinces in 1983. The stepwise multiple regression was used in data analysis. All variables were in the same level. It was found that the significant factors influencing the nutritional status ($p < .05$), were the child's age, the birth order, the mother's education, the village's socio-economic status, and the village receiving communication intervention. However, when using multilevel analysis, the results showed that the mother's age and the child's age influenced the child's nutrition status in the micro-level of the OLS approach. In the macro-level the village's

socio-economic status and the village receiving communication intervention had no influence on the intercept and the regression coefficients of both mother's and child's age. The results from the HLM approach corresponded with the OLS approach at both levels, but the standard error of the regression coefficient using the HLM approach with the Bayesian procedure was closer to the norm. Furthermore, where the data contains two or more levels, the multilevel analysis is recommended because the results are more accurate and reliable than the multiple regression analysis. In addition, the HLM approach produces more consistent results and is more convenient than the OLS approach.