

## DISTRIBUTION AND SPATIAL PATTERN ANALYSIS ON MALNUTRITION CASES: A CASE STUDY IN PONTIANAK CITY

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## ABSTRACT (upto 300 words)

Based on the Basic Health Research (Riskesdas) in 2018, malnutrition cases in West Kalimantan reached 23.8 percent. In 2015, Pontianak City documented 27 cases of malnutrition. Then, the cases increased in 2016 and 2017 as many as 29 and 41 cases. The utilization of Geographic Information System (GIS) is required as a method for public health surveillance and monitoring. This study aims to analyze the distribution of malnutrition cases based on several clinical and non-clinical factors using GIS between 2016 to 2017. The dependent variable was malnutrition cases and the independent variables included household income level, parent's educational level, comorbidities factors, and distance to the primary health care service. A total of 65 cases of malnutrition in Pontianak City were collected from six sub-districts in Pontianak City. This research was a cross-sectional study. The results showed that of 65 cases of malnutrition occurred on under 5-year-old children in Pontianak in 2016-2017, malnutrition cases taking place in East Pontianak sub-district were 29 cases (44.6%). In addition, malnutrition with clinical symptoms was reported 63 cases (96.9%), while the distance from home to primary health care less than 1 km was 32 cases (49.23%). The study also revealed that malnutrition with comorbidities were 78,5%. Finally, household income levels with malnutrition were below Pontianak regional minimum wage (Rp 2,515,000/month or \$176,88). The mapping of malnutrition cases using Geographic Information Systems can facilitate the nutrition programmer in Pontianak City Health Office and Public Health Centre in intervening the social determinant of health to overcome malnutrition.

## **BIOGRAPHY (upto 200 words)**

Agus Fitriangga was born on the 26th of August 1979. He is a researcher, lecturer and the head of department of Community Medicine in the Faculty of Medicine, Tanjungpura University in West Kalimantan Province, Indonesia. He graduated from the University of Indonesia with a Bachelor of Public Health, and a Master in Epidemiology degree. Currently, he is pursuing a PhD program in Epidemiology at the Faculty of Medicine, Unit Prince of Songkla University, Thailand.



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