

## The Relationship Between Specific Nutrient Intake with Prevalence of Stunting Among Schoolchildren, in Padang, West-Sumatera, Indonesia

Delmi Sulastru

Andalas University

### ABSTRACT

**BACKGROUND:** Stunting is a nutritional problem and most commonly found in children in Indonesia. Deficiencies of specific nutrients such as protein, calcium, phosphorus, vitamin C and magnesium are thought to be related to stunting. **OBJECTIVE:** The objective of this study was to look the relationship between Specific Nutrient Intake with Prevalence of Stunting Among Schoolchildren, in Padang, West Sumatera, Indonesia. **METHODS:** A cross-sectional survey was conducted among 232 children (6-7 years) randomly selected from eight primary schools in Padang City. The data were collected by measuring the height of children using microtois, stunting determined by TB / age and make use of diagrams WHO-NCHS, and to assess specific nutrient intake using food frequency questionnaire (FFQ) and nutrisurvey programme. The data was processed using a computer and analysed using T-Test and Mann-Whitney U. **RESULTS:** This study shows that average protein intake, calcium, phosphor, vitamin C, Magnesium and zinc in normal children are 86.58±34.82g/day, 524,25±37, 74.25mg/day, 1366.00±704.29mg/day, 86.07±50.19mg/hr, 285.19±110.25mg/hr, Zinc are 8,18±2,22mg/day and in stunting children are 80.24±24.87g/day, 361±57.85mg/day, 1228.74±81.50mg/day, 98.76±45.91mg/day, 284.91±85.21mg/day, zinc 7.87±2.88mg/day. There was a significant mean difference of intake proteins and zinc between normal children and stunting children (p=0.04), but not with other nutrient intakes (p>0.05). **CONCLUSION:** This study showed that intake proteins and zinc are related to the incidence of stunting Among School children, in Padang, West Sumatera, Indonesia.

**KEYWORDS:** nutritional problem, stunting, specific nutrients, schoolchildren

## The Rise of Public Health 2.0: An Infodemiological Study of Stroke Using Google Trends Search Queries in Malaysia

Kurubaran Ganasegeran, Alan Ch'ng Swee Hock, Irene Looi

Clinical Research Center Seberang Jaya Hospital, Ministry of Health Malaysia, Penang, Malaysia, Medical Department, Seberang Jaya Hospital, Penang, Malaysia

### ABSTRACT

**INTRODUCTION:** The dawn of “infodemiology” facilitates real time information seeking behavior to be available through data-mining within health Web 2.0. This investigation aimed to explore real time virtual health seeking information behaviors through geospatial-temporal patterns of search volumes in user-specified terms. **METHODS:** Fifteen-year retrospective web-based infodemiological data using Google Trends with filters ‘Malaysia,’ ‘Health,’ and ‘Web’ from January 2004-March 2019. Principal and related terms of “stroke” were included. Trends and geo-mapping of health seeking behaviors with autocorrelations, partial autocorrelations were computed through R and Wessa Time Series Function (95%CI: set as white noise). Pearson correlation was calculated using SPSS version 23.0. Statistical significance was set at p<0.05. **RESULTS:** Analysis yielded 6282 validated hits to conceptualize Malaysia’s “STROKE 2.0.” Search volume showed cyclical trend with irregular patterns. Autocorrelation reported statistically significant scores. Stroke-related search terms included “stroke and brain” (r=0.25; p=0.001), “stroke and signs” (r=0.16; p=0.034), “stroke and family history” (r=0.41; p<0.001). Geo-mapping with highest regions of flux volumes included Kelantan (100), Perlis (67), Negeri Sembilan (63), Kuala Lumpur (55) and Terengganu (54). Top five flux volumes across cities included Kota Bharu (100), Batu Caves (67), Seremban (56), Kuala Terengganu (50) and Sungai Petani (48). Query volumes were normalized. **DISCUSSION:** “STROKE 2.0” connotes health seeking behaviors focused on disease characteristics rather than treatment/preventions. Flux behaviors were dense in low socio-economic regions compared to metropolitans. We fostered new epidemiological approach, complementing classical epidemiology to provide contexts realities data on stroke. This accelerates policy drafting for preventive measures.

**KEYWORDS:** Infodemiology, Google Trends, Digital Epidemiology, Stroke 2.0, Malaysia