

Risk Factors of Undernutrition Among Children Under 5 Years Old in Jerantut, Pahang: A Case-Control Study

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ABSTRACT

INTRODUCTION: There are nearly 815 million people who are chronically undernourished, which contributes to an estimated 3.1 million deaths annually. The National Health and Morbidity Survey (NHMS) 2015 reported that 8% of children suffer from undernutrition. In Jerantut, the prevalence of under-nutrition among children below the age of 5 was 5.67%. This study aims to determine the risk factors associated with undernutrition among children below 5 years old in Jerantut, Pahang. **METHODS:** A case-control study design was conducted in March 2019. The case dealt with a child suffering from moderate to severe undernutrition with a z-score < -2SD from the median baseline recommended by World Health Organization (WHO) in 2017. The control patient in this case study was a child without undernutrition, with z-score above -2SD. Secondary data from the antenatal book and children's health records were used. Multivariate logistic regression analysis was conducted using SPSS 25.0 for Windows. **RESULTS:** A total of 226 respondents amounting to 113 cases and 113 controls were selected. It was found that risk of undernutrition was significantly associated with low household income (aOR: 6.52, 95%CI: 1.81, 23.53), low birth weight (aOR: 6.25, 95%CI: 1.17, 33.30), recurrent illness for acute gastroenteritis (AGE) (aOR: 3.32, 95%CI: 1.07, 10.27) and for upper respiratory tract infection (URTI) (aOR: 6.05, 95%CI: 3.06, 11.94). The daily consumption of fruits or vegetables is a protective factor for undernutrition (aOR: 0.48, 95%CI: 0.25, 0.92). **CONCLUSION:** Low birth weight, low household income, recurrent AGE and URTI were noted as significant risk factors associated with undernutrition. Daily consumption of fruits or vegetables is a protective factor for undernutrition.

KEYWORDS: Undernutrition, PPKZM, Risk Factors, Jerantut

Sarawak Pregnant Women re Iodine Deficient Despite Adequate Iodine Intake Among School-Age Children

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ABSTRACT

INTRODUCTION: The universal salt iodisation (USI) has been implemented to control the iodine deficiency disorders (IDD) in many countries. However, several studies conducted among school-age children (SAC) and pregnant women (PW) found that adequate iodine status in SAC may not reflect adequate iodine status in PW. The aim of this study was to assess the current iodine status among SAC and PW after 10 years of USI in Sarawak. **METHODS:** This cross-sectional survey among SAC and PW was conducted between July 2018 and October 2018. A proportion to population size sampling technique was used to select 30 schools and 30 maternal and child healthcare clinics. A total of 1200 SAC and 750 PW were randomly selected to participate in the study. Thyroid size and urinary iodine concentration (UIC) level was classified according to the WHO/UNICEF/ICCIDD assessment criteria. **RESULTS:** A total of 988 SAC and 677 PW participated in the study with response rates of 82.3% and 90.2%, respectively. The total goitre rate (TGR) was found to be 0.1% in SAC and 1.0% in PW. The overall median UIC level among the SAC was 126.0µg/L (IQR: 71.0, 200.9µg/L), classified as adequate iodine intake, while the median UIC among PW was 123.9µg/L (IQR: 56.5, 192.1µg/L), classified as insufficient. **CONCLUSION:** The present findings indicate that despite adequate iodine intake in SAC, the majority of PW still showed insufficient iodine intake. Thus, a comprehensive monitoring of the IDD among PW and appropriate nutrition education is warranted.

KEYWORDS: universal salt iodisation, school-age children, pregnant women, Sarawak