

Risk factors for stunting among infant & young children: a case control study in Kuantan District, Pahang

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Introduction: Stunting is the most prevalent form of malnutrition among the infant and young children population, both globally and locally. It refers to low height-for-age children and is primarily caused by chronic under-nutrition.

Aim: to explore the risk factors for stunting among infants and young children in the district of Kuantan, Pahang.

METHODOLOGY

✓ CASE-CONTROL STUDY

✓ **Ratio:** 1 case: 3 control

✓ **Case:** 40 children aged 6 to 59 months diagnosed with stunting

✓ **Control:** 120 children with normal height-for-age

✓ **Where:** 7 purposely selected government health clinics in Kuantan, Pahang

✓ **When:** August to October 2021

✓ **How:** using interviewer-guided questionnaire; which consists of a socio-demographic and validated IMCI (Integrated Management of Childhood Illness) feeding assessment checklist.

RESULTS



11.0% reduction in risk of child becoming stunted (OR: 0.89 [95% CI 0.82-0.98], p-value: 0.016) with increase of one centimetre in **MATERNAL HEIGHT**



80.0% reduction in risk of child becoming stunted (OR: 0.2 [95% CI 0.1-0.7], p-value: 0.009) with increase of one kilogram in **BIRTH WEIGHT**



40.0% reduction in risk of child becoming stunted (OR: 0.6 [95% CI 0.4-0.9], p-value: 0.035) with increase of one week in **DELIVERY WEEK**



Children with **FEEDING PROBLEM** have four-time significantly higher risk of becoming stunted (OR: 4.2 [95% CI 1.4-12.8], p-value: 0.011) as compared to children with no feeding problem

Key points:

1. Lower birth weight, delivery week, and maternal height, as well as the presence of feeding problems, are the independent risk factors for childhood stunting in this population.

2. Identifying these risks and providing early intervention from the antenatal period might prevent stunting in infants and young children.

3. Feeding problem among under 5 children is the most modifiable risk factor for stunting.

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ABSTRACT:

Introduction: Stunting is the most prevalent form of malnutrition among the infant and young children population, both globally and locally. It refers to low height-for-age children and is primarily caused by chronic undernutrition. This study aims to explore the risk factors for stunting among infants and young children in the district of Kuantan, Pahang.

Methodology: This case-control study was conducted at seven purposely selected government health clinics in Kuantan, Pahang from August to October 2021. A total of 40 children aged 6 to 59 months diagnosed with stunting and 120 children with normal height-for-age were included in the study with a ratio of 1 case: 3 control. Data were collected using an interviewer-guided questionnaire; which consists of a sociodemographic and validated IMCI (Integrated Management of Childhood Illness) feeding assessment checklist, as well as the anthropometry examination of the participant.

Results: Children with a feeding problem, particularly the feeding practice which did not follow the recommendation by IMCI standard, have more than four-time significantly higher risk of becoming stunted (OR: 4.2 [95% CI 1.4-12.8], p-value: 0.011) as compared to children with no feeding problem. Additionally, with an increase of one week in delivery week, one kilogram in birth weight and one centimetre in maternal height, there is a respectively significant 40.0% (OR: 0.6 [95% CI 0.4-0.9], p-value: 0.035), 80.0% (OR: 0.2 [95% CI 0.1-0.7], p-value: 0.009) and 11.0% (OR: 0.89 [95% CI 0.82-0.98], p-value: 0.016) reduction in the risk of become stunted among participants. A child's gender, race, immunization status, caregivers' level of education, household income, occupation and other socio-demographic factors were found to be not significant risk factors for stunting among this population.

Discussion: This study revealed that lower birth weight, delivery week, and maternal height, as well as the presence of feeding problems, is the independent risk factor for childhood stunting. Therefore, identifying these risks and providing early intervention from the antenatal period might prevent stunting in infants and young children.

KEYWORDS: