

Factors Associated with Stunting among 2-5-years-old Urban Poor Children Living in Low-Cost Flats at Kuala Lumpur

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INTRODUCTION

- Stunting remains a public health concern.
- There are increasing concerns that low-income families in urban are particularly vulnerable to stunting.
- However, there is limited study examining stunting and its associated factors among urban poor children under five of age in Malaysia.
- Most of the local studies on stunting focused on school-aged children and Orang Asli children.

OBJECTIVE

To determine factors associated with stunting among urban poor children aged 2 to 5 years old living in low-cost flats at Kuala Lumpur.

METHODOLOGY

Study Design: Cross-sectional study
Study Location: Low-cost flats in Kuala Lumpur
Respondents: Children aged 2-5 years old (n=52; male: 48.1%, female: 51.9%)
Sampling: Convenience sampling

RESEARCH INSTRUMENTS

Sociodemographic factors

Self developed questionnaire

Breastfeeding practice

Breastfeeding questionnaire from NHMS 2016

Food insecurity

The U.S. Household Food Security Survey Module: Six-Item Short Form (Blumberg et al., 1999)

Second-hand smoke exposure

Adapted questions from Braithwaite et al. (2015) and Mattheus et al. (2017)

Anthropometry data

Self-reported anthropometry data

CONCLUSION

- Stunting prevalence in urban poor children aged 2 to 5 years old were 28.8%.
- Female, short mother's stature, fathers who smoked and children who exposed to second-hand smoke showed higher risk of becoming stunted.
- Nutrition and lifestyle should be a key component of a response plan to such a pandemic, specifically for the vulnerable populations
- Household member who is smoker should be encouraged to stop smoking in order to maintain a smoke-free home environment, that is beneficial to the nutritional and health status of children.

RESULTS

Figure 1: Association of gender and stunting $p=0.020$

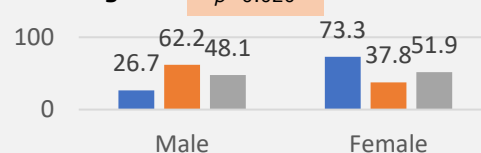


Figure 2: Association of mother's height and stunting $p=0.023$

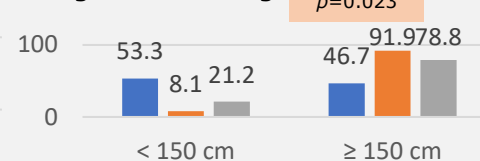


Figure 3: Association of breastfeeding duration and stunting $p=0.971$

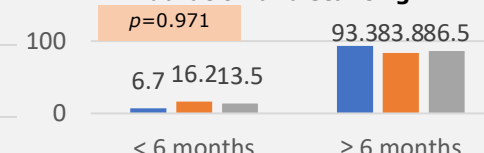


Figure 4: Association of food security and stunting $p=0.747$

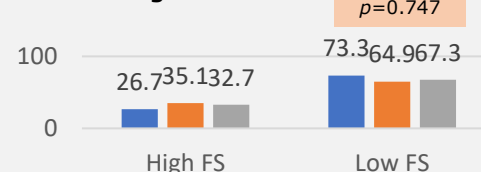


Figure 5: Association of paternal smoking and stunting $p=0.025$

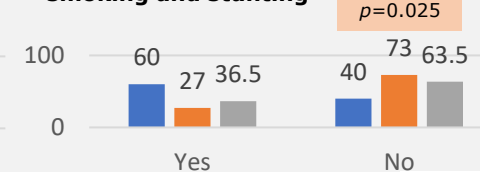
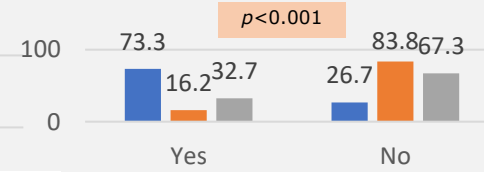


Figure 6: Association of secondhand smoke exposure and stunting $p<0.001$



DISCUSSION

- Prevalence of stunting in this study was 28.8%.
- Females showed higher prevalence of stunting compared to males (Fig. 1), which is inconsistent with previous findings (Thurstans et al., 2020).
- Children with mothers with <150 cm were more likely to become stunted compared to mothers ≥150 cm (Fig. 2). This finding is consistent with a recent study (Nuraisyah & Erdi, 2021). They explained that stunting is passed down through the generations, with shorter women producing stunted children who grow up to be short mothers with stunted children.
- No significant associations between breastfeeding duration (Fig. 3) and food security (Fig. 4) with stunting.
- Higher proportion of stunted children had fathers who smoked (Fig. 5) and were exposed to second-hand smoke (Fig. 6) compared to non-stunted children.
- Children whose fathers smoked were likely to have a lower reported proportion of food expenditure in the households lead to poor nutritional status in children (Wijaya-Erhardt, 2019).
- Indoor air pollution can cause respiratory infection, which can contribute to malnutrition in children. Nicotine can reduce 30–40% oxygen supply and disturb the absorption of nutrients such as calcium, minerals, and vitamin C that are important for the height growth of children (Ramadani et al., 2019). Therefore, it is crucial that active smokers, specifically those who live together with children, are made aware of the potential effects of second-hand smoke exposure on non-smokers (Nadhiroh et al., 2020).

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