



ABSTRACT

Relationship between iron intake and iron status to stunted in children aged 24-35 during the Covid-19 pandemic in JakartaAkbar Husaini Angkat¹, Dian Novita Chandra¹, Novi Silvia Hardiany²

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Background: Covid 19 pandemic has caused changes in the socioeconomic conditions, affects parents' ability to sustain their children nutritious food. If nutrients are insufficient for a longterm is causing growth to be stunted.

Objectives: The aim of this study was to assess the differences in iron intake and status between stunted and non-stunted children aged 24-35 months during the Covid-19 pandemic in Jakarta.

Methods: A comparative cross-sectional study using secondary data was done towards 77 children aged 24-35 months from September to October 2020 at Kampung Melayu Health Center in East Jakarta. Structured questionnaire was used to collect data on the subjects' characteristics. Data on iron, calorie and protein intake were taken using the semi-quantitative FFQ method. Anthropometric measurements were done for the weight and height. Laboratory examinations were performed for hemoglobin, ferritin and hs-CRP levels. Independent sample t-test was used to determine the relationship between Hb levels and stunted and Mann-Whitney was used to determine the relationship between iron intake and ferritin levels and stunted, using a significance limit of $p < 0.05$.

Results: There was a significant difference in Hb levels (9.91 ± 1.93 g/dL in the stunted group and 12.18 ± 1.20 g/dL in the non-stunted group, $p < 0.001$) and ferritin levels (4.9 ($1.5 - 67.4$) $\mu\text{g/L}$ in the stunted group and 26.8 ($1.6 - 91.1$) $\mu\text{g/L}$ in the non-stunted group, $p < 0.001$) There was no significant difference in iron intake between the two groups (8.85 ($1.5 - 74$) mg in the stunted group and 11.1 ($1.9 - 118.6$) mg in the non-stunted group, $p = 0.676$).

Conclusion: The study's findings revealed a relationship between Hb and ferritin levels and stunted status, but not between iron intake and stunted.

Keywords: stunted, iron, ferritin, hemoglobin, covid-19 pandemi

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