

## **Prevalensi dan Faktor Risiko Asma pada Anak Usia 6-7 Tahun dan 13-14 Tahun di Semarang**

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**Latar Belakang:** Asma merupakan penyakit tidak menular kronis yang sering dijumpai pada anak, dipengaruhi oleh interaksi faktor perinatal, genetik, dan lingkungan. Identifikasi faktor risiko diperlukan sebagai upaya pengendalian asma pada anak.

**Tujuan:** Menganalisis prevalensi dan faktor risiko asma pada anak usia 6-7 tahun dan 13-14 tahun di Semarang.

**Metode:** Penelitian *cross sectional* melibatkan 1.329 anak usia 6–7 tahun dan 13–14 tahun di Semarang. Faktor risiko dan kejadian asma dievaluasi menggunakan kuesioner *International Study of Asthma and Allergies in Childhood (ISAAC)*. Analisis statistik menggunakan SPSS versi 29 dengan tingkat signifikansi  $p < 0,05$ .

**Hasil:** Prevalensi asma sebesar 5,3%, dengan kejadian asma dalam 12 bulan terakhir sebesar 3%. Persalinan *sectio caesarea* (PR 2,39; CI95% 1,30–4,40;  $p = 0,004$ ), riwayat atopi maternal (PR 5,23; CI95% 2,77–9,85;  $p < 0,001$ ), riwayat infeksi saluran napas (PR 3,20; CI95% 1,74–5,89;  $p < 0,001$ ), area urban (PR 2,07; CI95% 1,04–4,10;  $p = 0,033$ ), sering konsumsi MSG (PR 2,31; CI95% 1,14–4,69;  $p = 0,016$ ), konsumsi makanan cepat saji (PR 2,24; CI95% 1,20–4,19;  $p = 0,009$ ), indeks massa tubuh, dan tingkat aktivitas fisik meningkatkan risiko asma, dengan riwayat atopi anak merupakan faktor risiko terkuat. Analisis multivariat menunjukkan bahwa riwayat atopi anak, riwayat infeksi saluran napas, domisili urban, dan aktivitas fisik intens meningkatkan risiko asma.

**Kesimpulan:** Prevalensi asma pada anak usia 6-7 tahun dan 13-14 tahun di Semarang sebesar 5,3%, dengan riwayat atopi anak menjadi faktor risiko terkuat disertai riwayat atopi maternal, cara persalinan, pola konsumsi makanan, riwayat infeksi saluran napas, aktivitas anak, dan status gizi.

**Kata kunci:** asma anak, faktor risiko asma, prevalensi asma, *International Study of Asthma and Allergies in Childhood (ISAAC)*

## Prevalence and Risk Factors of Asthma among Children Aged 6-7 Years and 13-14 Years in Semarang

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**Background:** Asthma is a chronic non-communicable disease commonly found in children and is influenced by interactions among perinatal, genetic, and environmental factors. Identification of risk factors is essential as a basis for asthma control strategies in children.

**Objective:** To analyze the prevalence and risk factors of asthma among children aged 6–7 years and 13–14 years in Semarang.

**Methods:** This cross-sectional study involved 1,329 children aged 6–7 years and 13–14 years in Semarang. Asthma occurrence and associated risk factors were assessed using the International Study of Asthma and Allergies in Childhood (ISAAC) questionnaire. Statistical analysis was performed using SPSS version 29 with a significance level of  $p < 0.05$ .

**Results:** The prevalence of asthma was 5.3%, with asthma occurrence in the past 12 months of 3%. Caesarean delivery (PR 2.39; 95% CI 1.30–4.40;  $p = 0.004$ ), maternal atopy (PR 5.23; 95% CI 2.77–9.85;  $p < 0.001$ ), history of respiratory tract infections (PR 3.20; 95% CI 1.74–5.89;  $p < 0.001$ ), urban area (PR 2.07; 95% CI 1.04–4.10;  $p = 0.033$ ), frequent MSG consumption (PR 2.31; 95% CI 1.14–4.69;  $p = 0.016$ ), fast-food consumption (PR 2.24; 95% CI 1.20–4.19;  $p = 0.009$ ), body mass index, and physical activity level were associated with an increased risk of asthma, with childhood atopy being the strongest risk factor. Multivariate analysis showed that childhood atopy, history of respiratory tract infections, urban residence, and high-intensity physical activity increased the risk of asthma.

**Conclusion:** The prevalence of asthma among children aged 6–7 years and 13–14 years in Semarang was 5.3%. Childhood atopy was the strongest risk factor, accompanied by maternal atopy, mode of delivery, dietary patterns, history of respiratory tract infections, physical activity, and nutritional status.

**Keywords:** childhood asthma, asthma risk factors, asthma prevalence, International Study of Asthma and Allergies in Childhood (ISAAC)