

# Effect of overweight/obesity on the degree of asthma control in children:A propensity score analysis

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## Abstract

**OBJECTIVE:** To retrospectively analyze the clinical characteristics of overweight/obese children with asthma and their influence on the degree of asthma control in outpatient clinics of Children's Hospital of Chongqing Medical University. **METHODS:** Outpatient medical records of children with bronchial asthma attending the outpatient clinic of the Children's Hospital of Chongqing Medical University from January 2021 to October 2022 were collected, and the clinical characteristics of overweight/obese children with asthma and their influence on the degree of asthma control were analyzed by the propensity score method. **Results:** A total of 496 children with bronchial asthma were included. 130 of the 496 children were overweight/obese, 302 of the total population were male (60.9%), and the ratio of male to female children was approximately 1.5:1. All children were from the southwest region of China. The mean age of the children in the total population was  $6.10 \pm 0.20$  years. The risk of poor asthma control was 1.30 times higher in the overweight/obese population compared to the non-obese/overweight population using traditional logistic regression, with a 95% CI of 0.82-2.05. Logistic regression models were constructed using propensity score methods to balance confounding factors, i.e. propensity score weighting and propensity score matching methods, all of which consistently concluded that overweight/obesity was positively associated with asthma control. Obesity was positively associated with asthma control, with the propensity score weighting method yielding an OR=1.2, 95% CI=0.92-1.57 and the propensity score matching method yielding an OR of 1.09, 95% CI=0.61-1.97. **Conclusion:** Being overweight/obese has an impact on the degree of control in children with asthma, and overweight/obese children are at higher risk of poor asthma control.

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