



# The effects of parental perception of children's weight on children's weight change: a systematic review and meta-analysis of longitudinal studies

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Childhood obesity has been a public health concern worldwide<sup>(1)</sup>. Parents are a crucial part of the weight monitoring of children<sup>(2)</sup>. But effects of parental perception of children's weight on children's weight change remain inconclusive. This systematic review and meta-analysis aimed to evaluate the effects. A systematic search of six databases was conducted from inception to March 2023 based on Cochrane guidelines. Longitudinal studies were included. Data were synthesised using a semi-quantitative approach and meta-analysis. Finally, nine studies with a total of 25,475 respondents were included in the systematic review and meta-analysis. The pooled results showed that compared to children perceived as normal weight, children who were perceived as overweight or obese by their parents had a statistically significantly greater weight gain (pooled coefficient  $\beta = 0.43$ , 95% confidence interval (CI): 0.1, 0.76,  $p < 0.05$ ) during follow-up. Conversely, children perceived as underweight presented less weight gain ( $\beta = -0.16$ , 95%CI:  $-0.3, -0.02$ ,  $p < 0.05$ ) during follow-up compared to children perceived as normal weight. However, parental misperception of their children's weight was not statistically significantly associated with children's weight change (underestimation:  $\beta = 0.04$ , 95% CI:  $-0.37, 0.44$ ,  $p > 0.05$ ; overestimation:  $\beta = -0.09$ , 95% CI:  $-0.06, 0.23$ ,  $p > 0.05$ ). We found that parental perception of children's weight, not parental misperception, might influence children's subsequent weight change. Longitudinal and intervention studies using validated measurements and including potential confounders and mediators are needed to confirm the causalities.

**Keywords:** children; parents; weight perception; weight change

## Ethics Declaration

Yes

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## References

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