

# SCHOOL-RELATED SOCIAL SUPPORT DOES NOT MODERATE THE ASSOCIATION BETWEEN BODY MASS INDEX AND HEALTH-RELATED QUALITY OF LIFE

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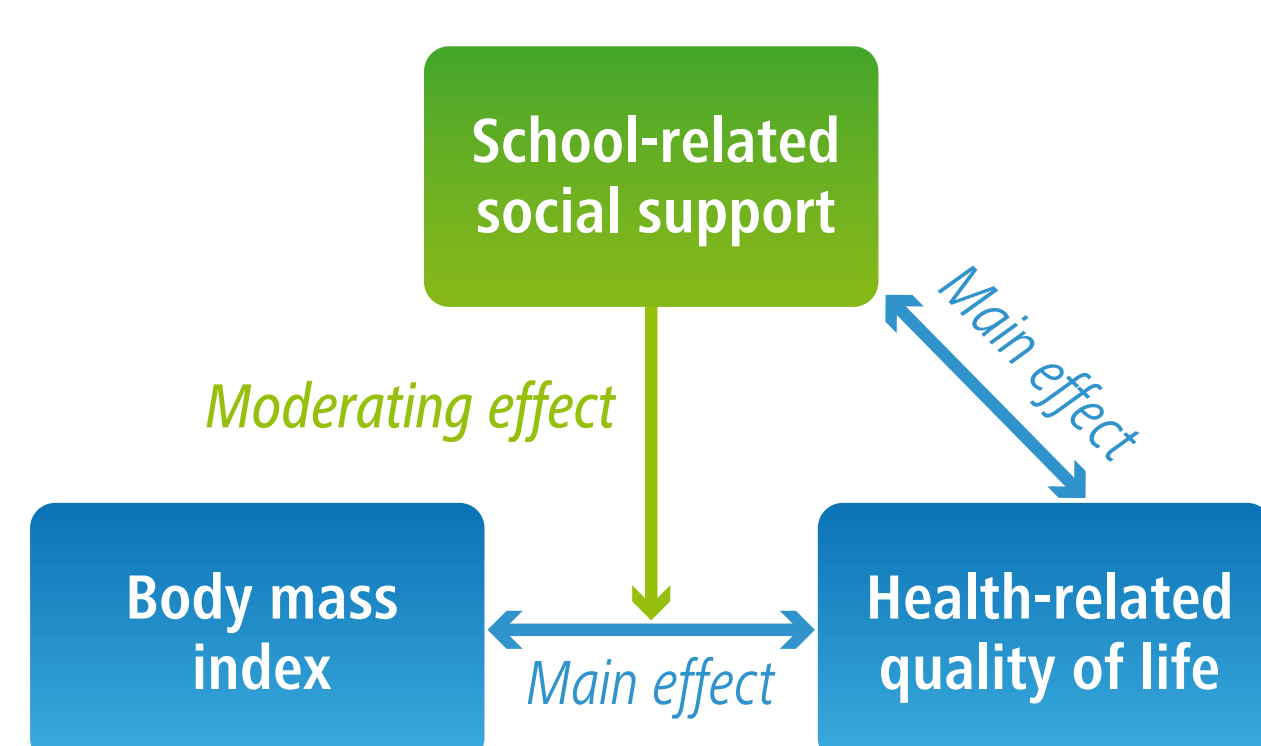
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## INTRODUCTION

Obesity has been associated with impaired health-related quality of life (HRQoL) in adolescents (1). Better understanding which modifiable factors may enhance the psychosocial well-being of obese youth constitutes an essential step for improved care. Previous research has underlined associations between higher school-related social support and greater well-being in the general adolescent population (2), and in limited clinical samples of obese adolescents (3).

The current study extends the existing literature by testing the moderating effect of perceived classmate and teacher support on the inverse association between body mass index (BMI) and HRQoL in a large and population-based sample of thin, normal-weight, overweight and obese adolescents.



## METHODS

► **Stratified random sample:** 11,342 French-speaking 10-18 year-old adolescents filled in standardised questionnaires within the 2014 cross-sectional “Health Behaviour in School-aged Children” (HBSC) survey (4).

### Variables

- **HRQoL score** based on the self-report version of the 10-KIDSCREEN instrument (5).
- **BMI in categories** (IOTF references).
- **Perceived classmate and teacher support:** for each support source, 3 categories derived from terciles of sum scores (5-point Likert scales): “poor”, “average”, “good”.

Classmate statements	Teacher statements
“The students in my class enjoy to be together”	“I feel that my teachers accept me as I am”
“Most of the students in my class are kind and helpful”	“I feel that my teachers care about me as a person”
“Other students accept me as I am”	“I feel a lot of trust in my teachers”

– **Sociodemographic characteristics.**

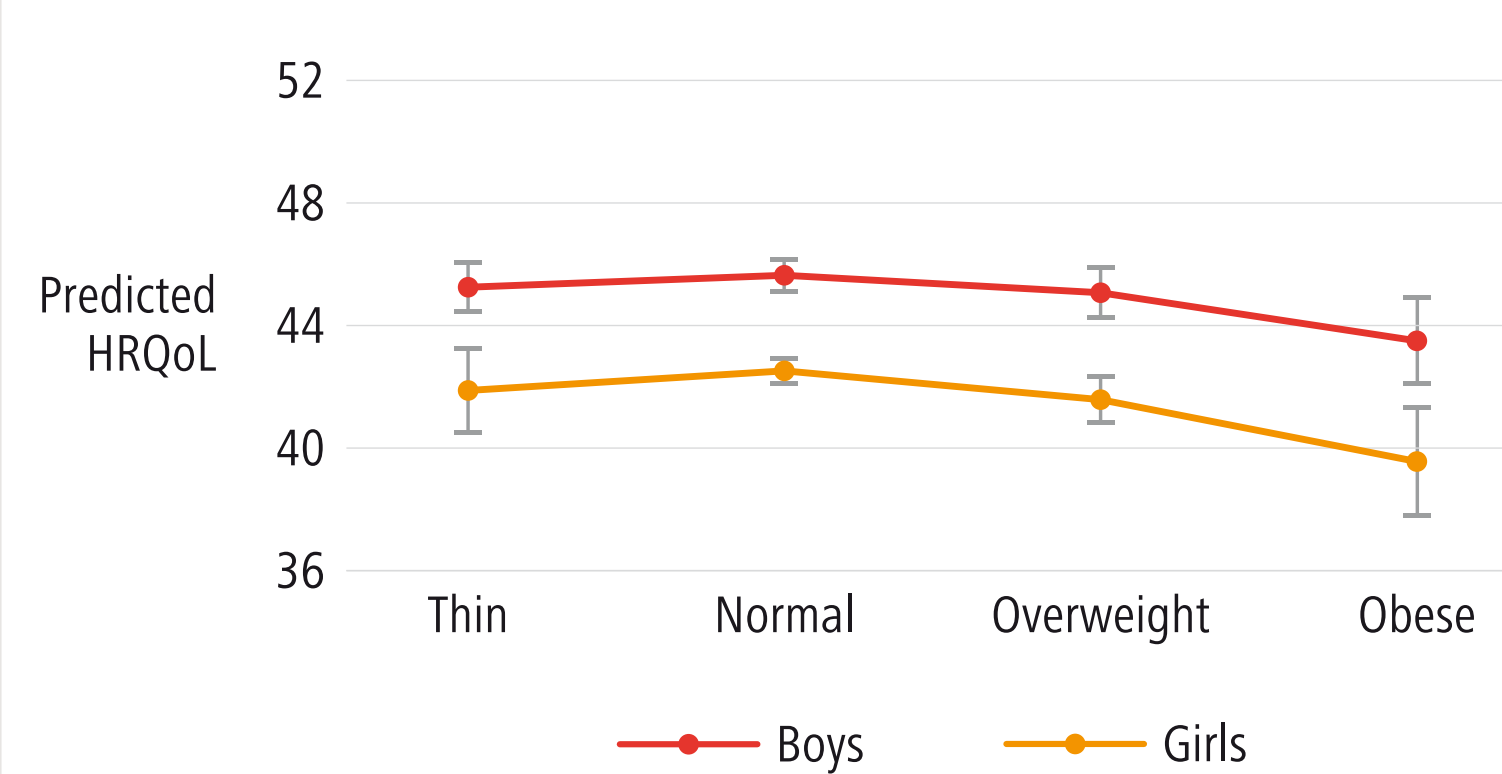
► **Multiple linear regression analyses stratified by sex** (with HRQoL as the outcome variable):

<b>Model 1</b>	BMI categories and sociodemographic characteristics
<b>Model 2</b>	Model 1 + perceived classmate (A) or teacher (B) support
<b>Model 3</b>	Model 2 + interaction “BMI X classmate support” (A) or “BMI X teacher support” (B).

## RESULTS

► In both sexes, obesity was significantly associated with decreased HRQoL, after adjusting for sociodemographic characteristics (Model 1, Figure 1).

**F1** Predicted health-related quality of life according to body mass index, in boys and girls

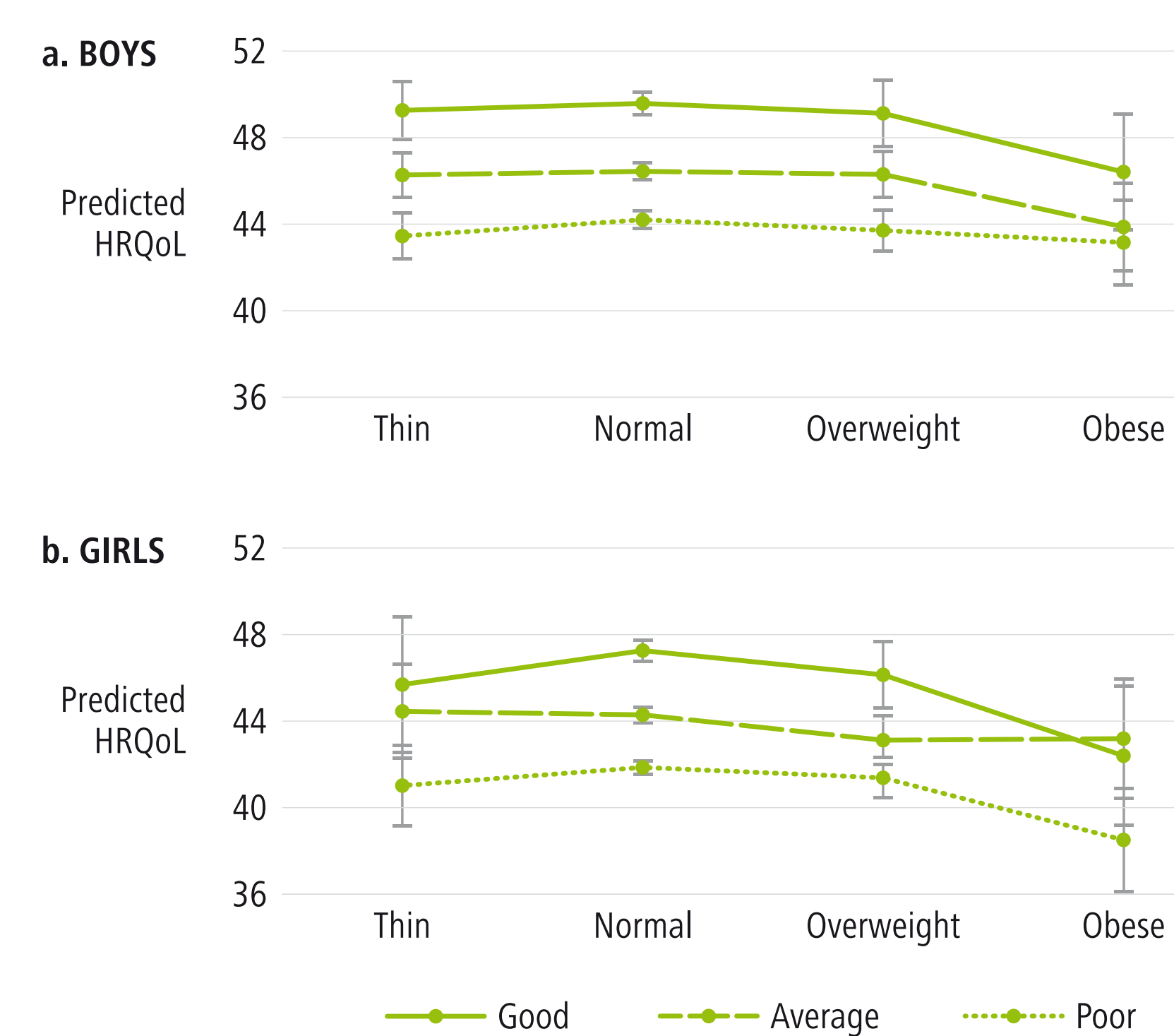


After adjusting for age, family affluence scale and family structure

► Significantly reduced HRQoL was observed for boys and girls having an average or poor perception of classmate (Model 2A) or teacher support (Model 2B), in comparison with those indicating good support, after taking BMI and sociodemographic characteristics into account.

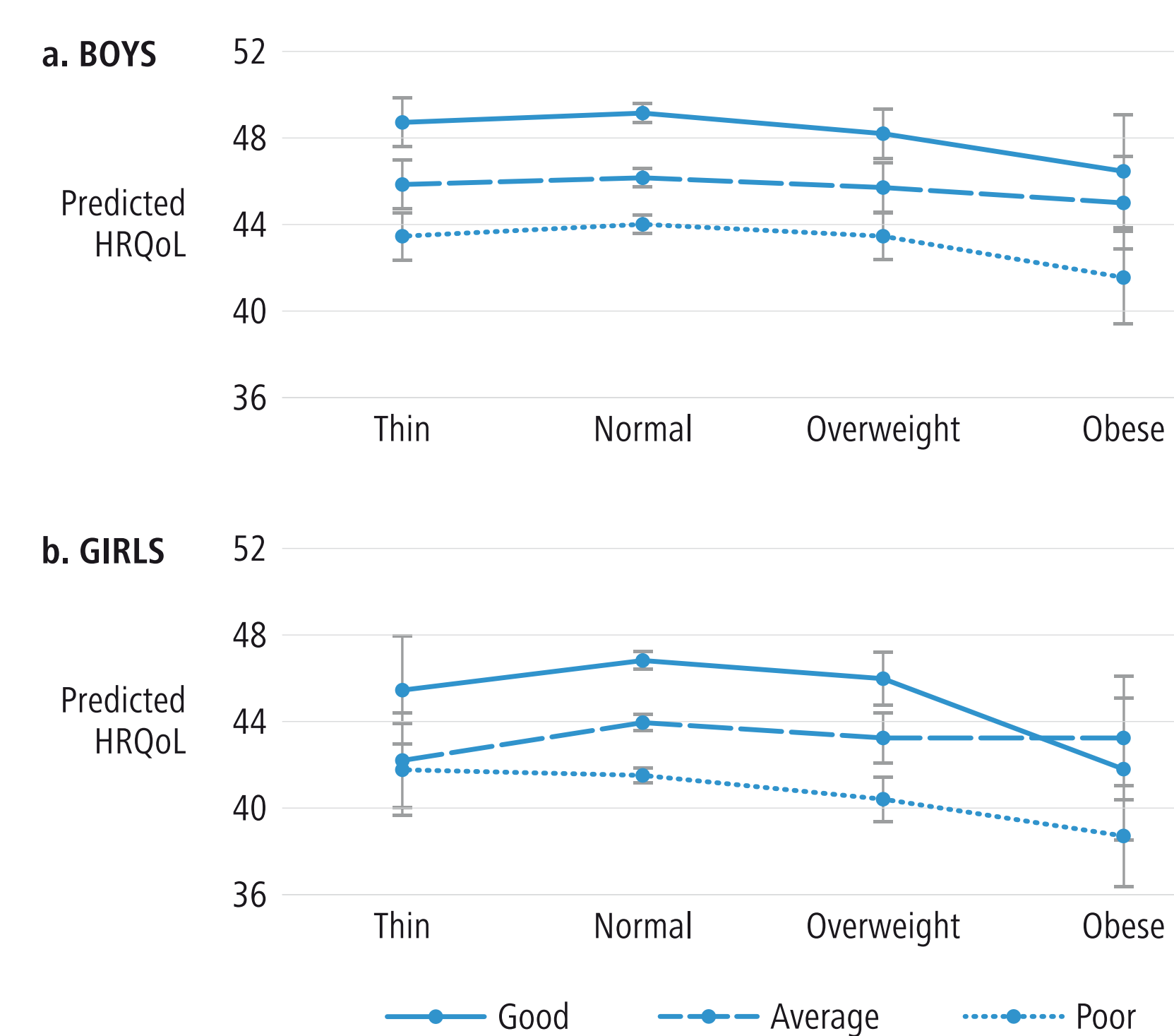
► For both boys and girls, interactions “BMI X classmate support” (Model 3A:  $p=0.85$  in boys and  $0.58$  in girls) and “BMI X teacher support” (Model 3B:  $p=0.97$  in boys and  $0.42$  in girls) were not significant, after adjusting for sociodemographic characteristics (Figures 2 and 3).

**F2** Predicted health-related quality of life according to body mass index and perceived classmate support, in boys (a) and girls (b)



After adjusting for age, family affluence scale and family structure

**F3** Predicted health-related quality of life according to body mass index and perceived teacher support, in boys (a) and girls (b)



After adjusting for age, family affluence scale and family structure

## CONCLUSIONS

- HRQoL is lower for obese boy and girl adolescents than for their normal-weight peers.
- High school-related social support is strongly associated with greater HRQoL in adolescents.
- However, school-related social support does not moderate the inverse association between BMI and HRQoL in adolescents: the decrease in HRQoL related to overweight and obesity is of a similar shape for the three levels of classmate and teacher support.

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## PERSPECTIVES

School-related social support constitutes an important component of adolescent well-being. Our findings underline the relevance of considering such support for promoting greater HRQoL in overweight and obese adolescents, but also in thin and normal-weight ones. Future studies are needed to confirm the absence of moderating effect of classmate and teacher support, to explore its effect on other weight-related components associated with decreased HRQoL in adolescents (like body image), and to include other sources of support (e.g., family).