Logistic regression was also carried out to investigate the combined effect of the abovementioned risk alleles on the risk of becoming obese, as defined by Cole. In order to investigate the combined effects of the risk alleles on the relative likelihood of obesity among the children participating in the study, the study sample was stratified into three groups: the children whose genotypes contained no risk alleles of the examined genes (reference group), the children whose genotypes contained 1-2 risk alleles and the children with genotypes of 3-4 risk alleles of MC4R and FTO. These genotypes were considered as the predictor variables in our logistic regression model, while the risk of becoming obese was considered our dependent variable. The level of significance was set at p <0.05. Odds ratios (ORs) with 95% confidence intervals (95% CI) were calculated.

RESULTS

The descriptive characteristics for both groups included are presented in Table 1. The mean age was approximately 11 years for both groups (p>0.05) and the overweight/obese population had, as expected, an elevated BMI, BMI-z-score, weight and weight z-score, waist circumference, waist-to-hip ratio, waist-to-height-ratio (p<0.001). The overweight/obese population also had a high birth weight (p=0.006) and increased height z-score (p<0.001).