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Título	Salivary Microbiological and Gingival Health Status Evaluation of Adolescents With Overweight and Obesity: A Cluster Analysis
Autores	Darlle Santos Araujo, Marlise Inêz Klein, Kelly Guedes de Oliveira Scudine, Luana de Sales Leite, Thais M. Parisotto, Caroline Marcantonio Ferreira, Fernando Luiz Affonso Fonseca, Matheus Moreira Perez, Paula Midori Castelo
Autor (es) USF	Thais M. Parisotto
Autores Internacionais	
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Resumo	Given the high prevalence of obesity in children and adolescents, the investigation of early markers is of clinical importance to better manage this condition. Thus, the aim was to evaluate the cross-sectional relationship between salivary microbiota, gingival health status, and excess weight in adolescents. A total of 248 students (14–17 y; 119 girls) were included, free of caries lesions and periodontal pockets. Physical examination included measures of height, weight, and body fat percentage (%BF). Oral examination was performed to gather information on dental (DMFT index) and gingival health status. Unstimulated saliva was submitted to qPCR reactions to quantify <i>Streptococcus mutans</i> , <i>Porphyromonas gingivalis</i> , Bifidobacteria, and <i>Streptococcus pneumoniae</i> percentages and the NFKappaB expression. Two-way ANOVA was applied considering <i>group</i> (normal-weight/overweight/obesity) and <i>sex</i> factors, in addition to cluster analysis. <i>Group</i> effect was significant for %S. <i>mutans</i> (partial eta² = 0.20; <i>p</i> < 0.001) and %Bifidobacteria (partial eta² = 0.19; <i>p</i> < 0.001), with overweight and obesity groups showing the highest levels compared to normal-weight ones, with no significant <i>sex</i> effect. There was no difference in the frequency of gingivitis, <i>P. gingivalis</i> , and <i>S. pneumoniae</i> percentages or NFKappaB expression between groups. Cluster analysis generated three clusters according to body fat accumulation: "Higher %BF," "Moderate %BF," and "Lower %BF." "Higher %BF" cluster was characterized by higher body fat percentage and higher salivary %Bifidobacteria, while cluster "Lower %BF" was characterized by lower body fat percentage and lower frequency of gingivitis ("Moderate %BF" cluster was the contrast). According to nutritional status, a difference in salivary <i>S. mutans</i> and Bifidobacteria percentages was







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	found, with overweight or obesity adolescents showing the highest percentages than
	normal-weight ones. Besides, a positive relationship between body fat accumulation and
	Bifidobacteria count was observed, indicating a possible interaction between oral bacteria
	communities and weight gain.
Fomento	

