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Abstract

Multicenter Randomized Controlled Trial to Tackle Obesity through a Mediterranean Diet vs. A Low-Fat Diet in Children and Adolescents: Preliminary Results from the MED4YOUTH STUDY †

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Background and objectives: Youth obesity is likely to persist into adulthood, so it is important to tackle it from childhood to prevent associated risks in the future. To this end, the Med4Youth study [1,2] aims to investigate whether a low-calorie Mediterranean Diet (MD) is as effective in counteracting youth obesity and associated risk factors for cardiovascular diseases as the traditional clinical intervention with a low-calorie low-fat diet (LFD). Methods: A multicenter randomized controlled trial was carried out in children and adolescents (11–17 years, 50% female) overweight or with obesity (>90th percentile) from Italy (n = 80), Portugal (n = 26), and Spain (n = 42). Both dietary interventions were combined with an educational web-application to increase engagement and knowledge of participants through a "learning-through-playing" approach, using educational materials and games. To assess the efficacy of the intervention, anthropometric and biochemical parameters, as well as adherence to the MD, physical activity, food frequency, sociodemographic, and quality of life questionnaires were evaluated. Results: In total, 148 volunteers were recruited and randomized in one of the intervention groups, and so far, 107 finished the 4 months of treatment. The BMI z-score, the primary outcome, showed a significant reduction in both the MD group and the LFD group in all countries, but no significant differences have been found between groups. An increase in the level of adherence to the MD, measured through the KIDMED questionnaire, was also observed in both groups, although the score was higher in the MD group at the end of the intervention. Discussion: These preliminary results indicate that the MD intervention did not produce any additional benefits in comparison to the control group, but it is not less effective than the conventional clinical treatment based on a reduction in fat intake. In conclusion, the MD could be an effective, easier to follow and more sustainable dietary intervention to treat youth obesity in Mediterranean countries. The final results at the end of the study will allow us to prove, or not, these preliminary conclusions.

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Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the corresponding author on request.

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