Abstract

Background: Carbohydrate counting (CHC) is acknowledged by the American Diabetes Association (ADA) as an important tool. Objective: To assess the efficacy of photographic educational materials to train adolescents with DM to perform CHC. Subjects and methods: 76 adolescents were randomly divided into two groups of CHC orientation: by means of photographic materials (Photo) or by a list of foods (List). One month afterwards, the participants were contacted via telephone to answer questions on CHC to reinforce the training (Quiz). Two days after taking the quiz, required the participants to visit an experimental kitchen to observe food portions in natura and to respond to a questionnaire on the weights in grams or carbohydrate equivalents of these portions. Statistical significance was established at p < 0.05. Results: 54 adolescents completed the study (79.7% female), with 51.8% allocated to the Photo group and 48.1% to the List group. The mean age was 13.8 ± 2.0 years old, and the mean body mass index (BMI) was 21.0 ± 3.2 kg/m^2. The participants had average of 7.9 ± 1.5 years of schooling, while their parents had 8.0 ± 3.8 years. The knowledge of CHC was similar in both groups before the intervention. After the intervention, the Photo group achieved a significantly higher hit difference on the CHC assessment test than the List group (Photo: 2.5 vs List: 1.0; p = 0.03). Conclusions: The photographic educational material was more effective in helping adolescents with DM understand and learn to perform carbohydrate counting.

Keywords

Key words, Diet for diabetics, Adolescents, Teaching materials, Photographs.