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The effects of a 3-month nutrition intervention on dietary habits and weight change in hospitalized schizophrenic patients with metabolic syndrome

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Abstract

Introduction: Schizophrenic patients are more likely to develop metabolic syndrome (MetS) than the general population. Although the exact reasons for higher MetS prevalence are not yet been fully determined, poor dietary habits may contribute to its development. This study aims to examine the effects of a 3-month nutrition intervention on dietary habits and weight change in hospitalized schizophrenic patients with MetS.

Materials and Methods: Seventy-nine hospitalized schizophrenic patients with MetS (aged 18–67) were enrolled in a 3-month randomized controlled trial. Sixty-seven of initially enrolled patients (84.8%) completed the intervention. Participants were randomly assigned to an intervention group (IG; n = 33) or a control group (CG; n = 34). The IG followed the DASH diet (-400 kcal/day when compared to regular hospital diet), the CG continued being on a regular hospital diet (2200–2400 kcal/day), while both groups participated in a nutrition educational program (4 lectures about the development of healthier eating habits). Prior and after the intervention, body weight (BW) was measured and dietary habits were assessed using the nutrition section of Dlugosch & Krieger's General Health Behaviour Questionnaire. Participants also kept a diary of food individually purchased.

Results: Nutrition intervention positively modulated the dietary habits and BW of both groups. After 3 months, in the IG, the consumption of white bread ($p < 0.001$), pastries ($p < 0.001$), cured meat products ($p < 0.001$), sweets ($p = 0.003$), and carbonated soft drinks ($p = 0.009$) significantly decreased, while the consumption of whole-wheat bread ($p < 0.001$), fruits ($p < 0.001$), nuts ($p < 0.001$), and vegetables ($p < 0.001$) significantly increased, when compared to the baseline data. Simultaneously, in the CG, the identified modifications mainly referred to a decreased consumption of snacks ($p = 0.042$) and fast food ($p = 0.005$), together with an increased consumption of low-fat milk and dairy products ($p = 0.019$) and vegetables ($p = 0.003$). Furthermore, results have shown that, compared to the CG, IG significantly improved dietary habits by decreasing the consumption frequency of white bread ($p < 0.001$), cured meat products ($p < 0.001$), and sweets ($p = 0.043$), while at the same time significantly increasing the consumption frequency of whole-wheat bread ($p < 0.001$), low-fat milk and dairy products ($p < 0.001$), fruits ($p < 0.001$), nuts ($p < 0.001$), and vegetables ($p < 0.001$). After 3 months, BW significantly decreased in IG ($p < 0.001$) and CG ($p = 0.018$), but with no significant difference between respective groups ($p = 0.943$).

Discussion: The findings suggest that this type of a 3-month nutrition intervention could be a valuable tool for an improvement of dietary habits and potentially an add-on therapy to reduce the MetS prevalence and the overall cardiovascular risk in schizophrenic patients.

Conflict of Interest

There is no conflict of interest