The Impact of a Nutrition Education Intervention on the Dietary Habits of College Students While Enrolled in a Biology Course

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Abstract

As obesity, and its related complications, have become a more pronounced public health concern, it is imperative to create interventions to ameliorate this health condition. This 5-week study utilized a specific nutrient-dense plant-rich (NDPR) dietary protocol, developed by this research group, to assess the improvement in health and wellness. Participants received educational materials about the diet protocol along with information about the health benefits of a NDPR diet and the health consequences related to nutrient deficient diets. Pre and post outcome measures included body mass index, waist circumferences, and various questionnaires related to sleep, mood, stress, GERD, diet quality and life satisfaction.

Introduction

We examined whether a college course (BIO 300) that focuses on the connection between lifestyle and health would have an impact on students' self-efficacy to make diet related changes. Pre and post questionnaires were collected to evaluate diet quality, gastroesophageal reflux disease (GERD), mood, and stress. The span of the study was 5-weeks, that included an initial 1 ½ hours of immersion into the benefits of a NDPR diet and plan of the study. Weekly meal trackers were conducted electronically.

Our overall goal for this 5-week intervention was to educate college students about the impact and consequences of nutrition. By promoting the increased consumption of fruits and vegetables and encouraging a NDPR diet, the objective and purpose of WAM I is to improve student's depressive symptoms, stress levels, sleep quality and diet quality.

Methods

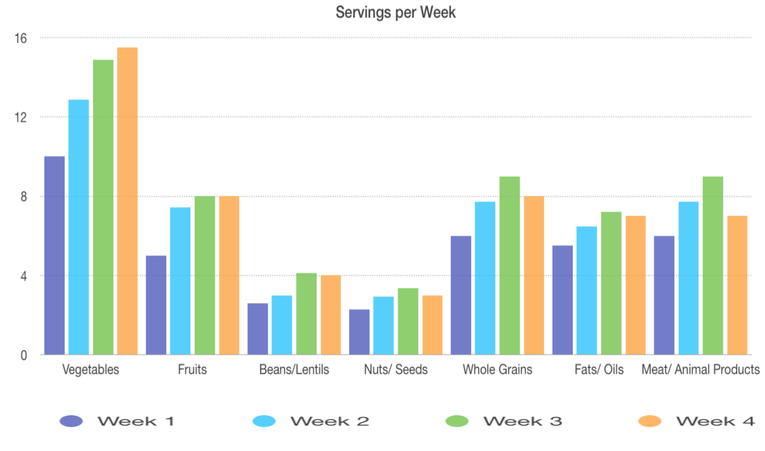
Participants: In conjunction with the BIO 300: Western and Alternative Medicine, 128 students completed all the necessary questionnaires and consented to be part of the study.

Procedures: This intervention utilized the health belief model. As part of the course, students had in-person lectures, take home materials, and guest speakers to support the link between lifestyle and health. Participants were encouraged to adopt a NDPR diet plan consisting of plant-based, whole-foods including: vegetables, fruits, nuts, seeds, whole grains, and legumes. Processed foods and animal products were suggested to be limited. Exercise was also recorded and evaluated.

Data Collection: The participants recorded their weekly food recall using a research electronic data capturing tool, REDCap. Participants were provided with pre and post questionnaires which included their self-reported depressive symptoms using the Patient Health Questionnaire (PHQ-9), stress levels using the Perceived Stress Scale (PSS), and GERD calculations.

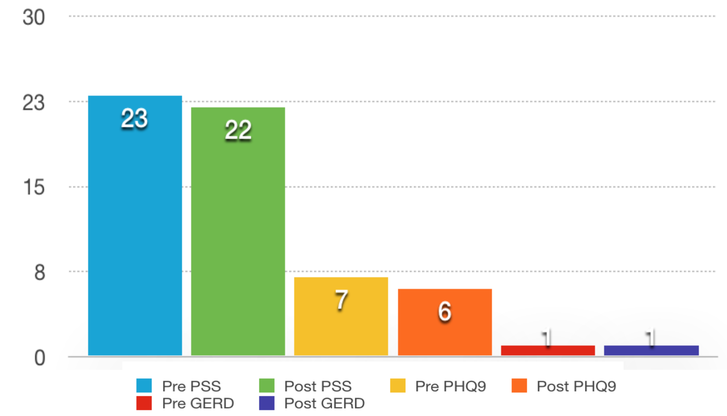
Results

After the intervention, the majority of participants showed improvement in diet quality. Vegetable, fruit, whole grains, beans, and nut consumption all increased. Participants also showed an increase in the amount of physical activity per week.



Results - continued

Participants showed a slight decrease in their depressive symptoms and stress levels. Since GERD was already low, the calculation remained low. Participants showed a valuable change in the amount of stress they reported along with improving their mood.



Discussion & Conclusions

Offering a course that focuses on the connection between lifestyle and health, students improved their self-efficacy to make personal changes to their diet. Bio 300 was a 5-week course that focused on the connection between Western medical treatment and the prevalence of disease.

Corresponding with the course, nutrition education is a valuable resource for students who wish to pursue a lifestyle change. Although this was a short-term study the decrease in mood and stress disorders has shown that college courses can have an impact on an individual's personal life. Since the target population had a large majority of healthcare majors, the goal of this intervention was to motivate future healthcare workers to identify the connection between lifestyle and health.

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