ABSTRACT

**INTRODUCTION:** Although research indicates that a plant-based diet may be helpful in preventing and controlling type 2 diabetes, this knowledge is not being utilized to establish effective policies about nutrition education in regard to type 2 diabetes. Additionally, there are a variety of barriers that currently limit individuals’ self-efficacy in consuming a plant-based diet and ability to adopt a plant-based diet.

**OBJECTIVE:** The primary objective of this study was to determine patients’ knowledge about a plant-based diet, willingness to adopt the diet, and their self-efficacy in doing so.

**METHODS:** This was a descriptive study which recruited participants through Facebook and Reddit. Participants completed a semi-structured online survey regarding their perceptions about a plant-based diet. Participants without a type 2 diabetes diagnosis were excluded from the study. Participants remained anonymous.

**RESULTS:** 58 participants were included in the study. The results indicated that the majority of participants do not follow a plant-based diet due to barriers of knowledge about the diet, cost of plant-based foods, and access to them.

**CONCLUSION:** The results of this study indicate that it is essential to reduce healthy-eating barriers and to improve dietary education for both physicians and type 2 diabetes patients. More research is needed to improve knowledge and self-efficacy of a plant-based diet.

RESEARCH QUESTION

Are individuals with type 2 diabetes knowledgeable about and willing to adopt a plant-based diet?

BACKGROUND

- Diabetes mellitus type 2 is the 7th leading cause of death and affects over 12-14% of the U.S. population (McMacken & Shah, 2017).
- Research suggests dietary choices to be a key driver in the insulin resistance associated with type 2 diabetes. In particular, the primary factors found to cause insulin resistance include meat and animal fats, high calorie fast-food products, sugar-sweetened beverages, and highly processed grains (McMacken & Shah, 2017).
- A plant-based diet is composed of whole plant foods with an emphasis on fruits, vegetables, grains, beans, legumes, nuts, and seeds. A plant-based diet may be helpful in preventing and controlling type 2 diabetes, improve glycemic control, lower body weight, and reduce cardiovascular risk factors for diabetes (Turner-McGrievy & Harris, 2014).

METHODS

- Participants were recruited through Facebook and Reddit. Participants included males and females aged 18 years and older, with any racial or ethnic background. The survey excluded participants from individuals without type 2 diabetes.
- Informed consent was provided. After, participants were prompted to begin the online survey. Participants remained anonymous for the purposes of the study.
- The survey asked questions about the participant’s thoughts and experience with a plant-based diet, knowledge on healthy eating, and self-efficacy in adopting a plant-based diet. The survey consisted of 13-15 questions which followed a multiple choice, free-response, and five-choice Likert scale design. Participants had the option to refrain from answering any of the questions.
- Exempt approval was obtained by the Institutional Review Board (IRB) at UCSD.

RESULTS

- 58 individuals completed the survey (Figure 1). Five (8.6%) participants reported that they follow a plant-based diet, while 53 (91.4%) indicated that they do not.
- Following the Diet: All 5 (100%) participants reported that the diet is enjoyable. Three (75%) participants learned about the diet through their physician while 2 (25%) were unsure. Four (80%) reported having more energy on the diet. Participants reported improvements in the side effects of type 2 diabetes while on the diet (Figure 2).
- Not Following the Diet: 49 (92.4%) participants reported that they still consume fruits and vegetables daily. Thirteen (24.5%) feel that the diet sounds enjoyable while 26 (49.1%) feel that it sounds unenjoyable. 20 (38.5%) participants have an interest in learning more about the diet, while 11 (21.2%) are unsure and 21 (40.4%) are uninterested. Ten (18.8%) willing to adopt a plant-based diet, while 15 (28.3%) are unsure and 28 (52.9%) are unwilling. Twenty eight (52.8%) participants believe that they would be able to successfully follow a plant-based diet. Participants were also asked to indicate any perceived barriers to the diet (Figure 3).

DISCUSSION

- The goal of this research was to understand individuals with type 2 diabetes’ experience with a plant-based diet, knowledge about healthy eating, and self-efficacy in adopting the diet.
- A majority of participants do not follow a plant-based diet due to barriers of knowledge about the diet, cost of plant-based foods, and access to them. Additionally, the majority of participants do not perceive a plant-based diet to be enjoyable.
- A minority of participants follow a plant-based diet. These participants reported improvements in side effects since adopting the diet. Most participants learned about the diet through their physician.
- These findings suggest that it is essential to reduce unhealthy-eating barriers and to improve dietary education for both physicians and type 2 diabetes patients.
- Limitations within this study include the small sample size and self-report nature of the survey. These limitations reduce the reliability, validity, and generalizability of the findings.
- More research is needed to understand the most effective way to improve knowledge and self-efficacy of a plant-based diet for individuals with type 2 diabetes.

POLICY IMPLICATIONS

- Improve Education: A policy aimed to improve nutrition education and update dietary recommendations is needed. Policy guidelines could be adjusted and improved to align more closely with vegetarian and vegan diets while reducing the recommended intake of animal products.
- This would be recommended on the basis of emerging scientific evidence suggesting a significant association between animal fat intake and increased insulin resistance (Goff, Bell, So, Dornhorst, & Frost, 2005).
- Increasing education about plant-based diets would also familiarize physicians with this pattern of eating. This is important as vegetarian and vegan diets are gaining more popularity every year (Frellick, 2015).

REFERENCES