

Improve adherence to the Mediterranean diet through an innovative app: a pilot study

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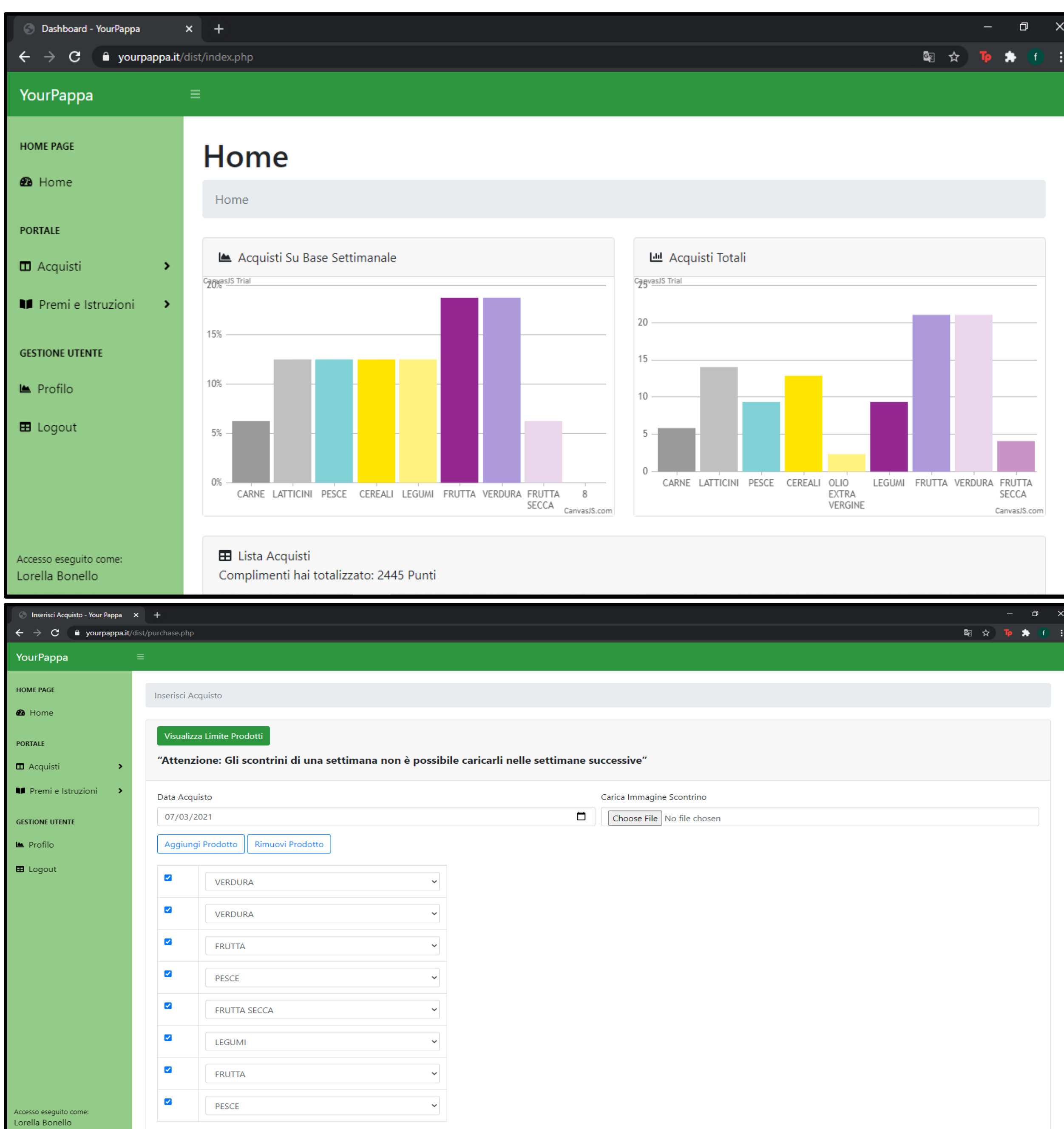
Background and Purpose

Worldwide, the prevalence rate of overweight or obesity between 1980 and 2013 increased by 27.5% among adults and 47.1% in children for a total of about 2.1 billion individuals in 2016 with overweight/obesity¹. The Mediterranean diet (MD) is a sustainable and healthy diet which contextually helps to protect against both overweight or obesity and noncommunicable diseases² and has a low environmental impact³. However, the compliance to this type of diet is still poor. Given this, the authors created a Web app to promote the MD. The purpose of this study was to evaluate the efficacy of the Web app YourPappa in terms of adherence to the MD.

Design/methodology/approach

The authors developed a Web app, YourPappa (Figure 1), with the aim of encouraging virtuous dietary habits through a reward mechanism: the more virtuous and healthy foods are purchased, the higher the score. The points accumulated yield a reward in the form of health and wellness goods. After that, a randomized controlled study was conducted. All participants were given written advice on correct nutrition. Moreover, the case group was trained on the use of the app. The MD adherence was evaluated by a validated questionnaire (Medi-Lite).

Figure 1. Beta of Web App; Home and Grocery Shopping



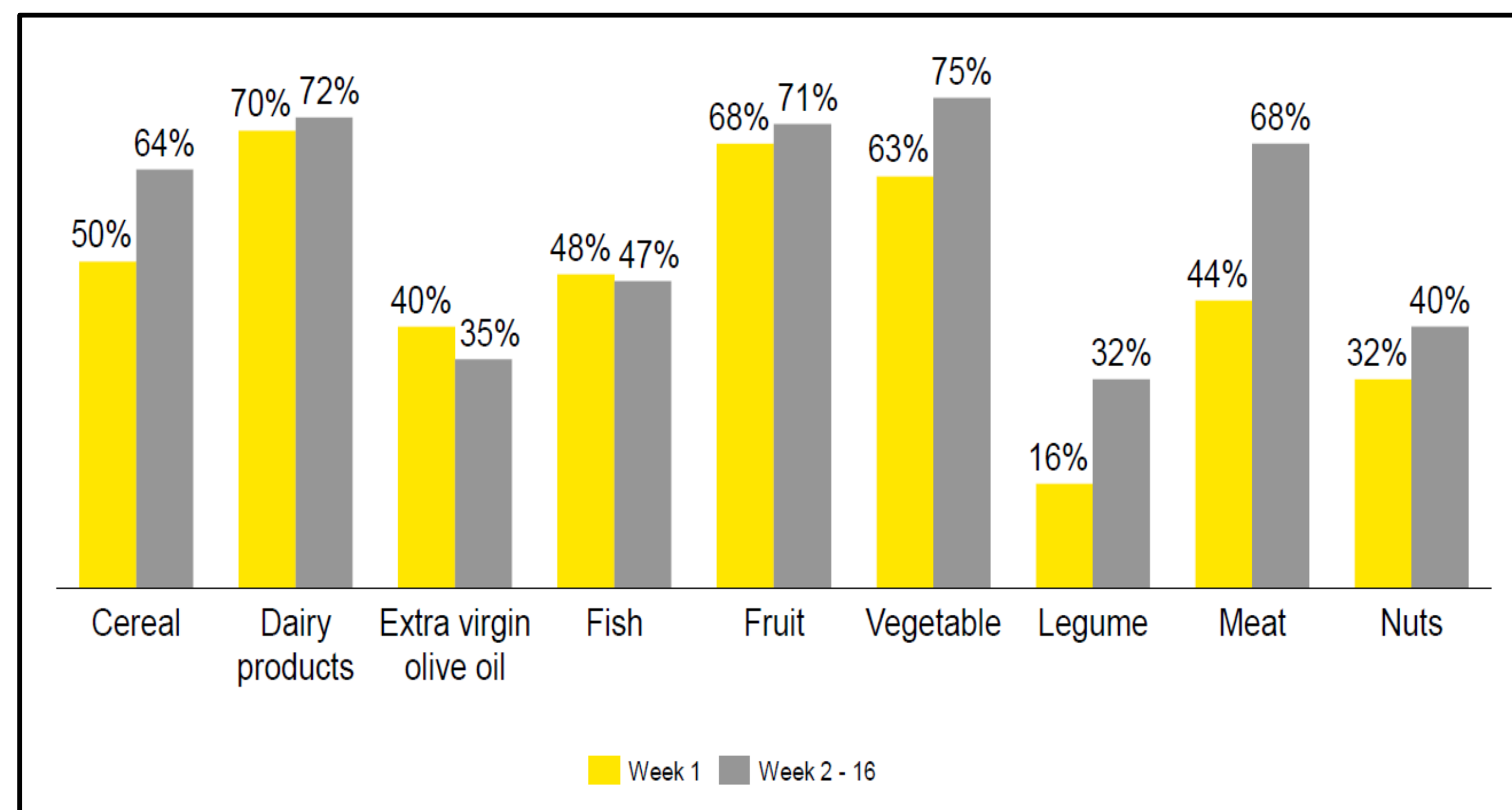
Acknowledgements

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Findings

Cases found an average increase in the Medi-Lite scores of 7.1%, whereas controls showed an increase of 0.7% ($p = 0.06$; effect size 0.60). We used the weighted average uploading percentage of each food category (by weekly uploading limit of the specific category) and, during the 16 weeks, vegetables, fruit, cereal, dairy and meat showed higher loading rate. Finally, we compared the weighted average uploading percentage of meat, a "slight" Mediterranean food, with classic Mediterranean food such as vegetables (66.0% vs 75.0%, $p = 0.07$, ES 0.66), fruit (66.0% vs 71.0%, $p = 0.31$, ES 0.34) and cereal (66.0% vs 64.0%, $p = 0.47$, ES 0.25) (Figure 2). At the end of the study, 80% and 68% of the case group stated that the Web app helped them to think about what they were buying during grocery shopping and promote the MD, respectively.

Figure 2. Increase in average consumption of the main product categories pertaining to the Mediterranean Diet



Research limitations/implications

Obesity and related diseases are a topical problem. New strategies are needed to counter it. This study showed interesting and encouraging results, which need further research and insight to be validated and supported.

References

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3. Berry, E.M. (2019), "Sustainable food systems and the Mediterranean diet", *Nutrients*, Vol. 11 No. 9, available at: <https://doi.org/10.3390/nu11092229>

