
Effects Of Reduced Meat Consumption And Increase Of Plant Products In Diet

Introduction

Aim

The aim of this report is to determine how sustainable a plant based diet is and to come to an ultimate conclusion to this question by carrying out research and using past research to come to this conclusion. The Cambridge Dictionary defines the word 'sustainability' as "the quality of being able to continue over a period of time". This study is important because, for a long time plant based diets have been ignored and "high consumption of meat and a low regard for meat substitutes is still the dominant cultural pattern in most western societies." (Graça et al 2015, pg. 80-90). Clemens Wittenbecher writes in a journal article that "Habitual red meat consumption was consistently related to a higher risk of type 2 diabetes in observational studies" (2015). A connection between high meat consumption and cardiovascular disease is mentioned in the International Journal for Vitamin and Nutrition Research – "long-term consumption of increasing amounts of red meat and particularly of processed meat is associated with an increased risk of total mortality, cardiovascular disease, colorectal cancer and type 2 diabetes, in both men and women." (E.B Richi 2015). Thus there is a lot of importance in researching sustainability of plant based diets to benefit a more balanced and healthier lifestyle which will last long rather than being an on again off again venture. Economically, Oxford University researchers modelled the effects of many diets including a plant based diet and came to the conclusion that shifting to a vegetarian diet may mean that the "economic benefit of reduced greenhouse gas emissions could be as much as \$570 billion." (GaleOneFile, 2016). This is just one of the many benefits of why time should be invested into the long term implementation of plant based diets.

Literature Review

Continuous research and studies in the sustainability of vegetarianism and an increase in plant based diets has resulted in a mix of conclusions on whether they are sustainable, one on hand "Vegetarian diets, when properly planned, provide the full range of protein, essential fatty acids, vitamins, minerals and fibre necessary for optimal nutritional status" (Clarke 2015). However, an entirely plant based diet is not possible in the long run for most people as "nutritional needs may increase during stages of growth and development, pregnancy and lactation, which may mean that it becomes necessary to eat meat at certain stages of life" (Clark 2015).

Is a plant based Diet Sustainable?

As a result of contradicting reporting's of whether a plant based diet is sustainable at all a question has to be asked - Is a plant based Diet Sustainable? 'Producing meat requires significantly more land, water and energy resources than the production of nutritionally equivalent vegetarian foods' (Pohjolainen et al 2015). As a result, taking part in a meat-free diet would be economically beneficial as less energy resources would be used up and also

environmentally this would be more eco-friendly as less fossil fuels are burnt therefore exhibiting that a plant based diet is sustainable. The European Public Health Association (EPHA) states that 'Environmentally friendly habits include reducing the consumption of animal products and increasing the consumption of plant products' (2016). This implies that a plant based diet is sustainable as an increase of plant products in place of a decrease of animal products would be aiding the environment therefore increasing sustainability in the environment. However, there are contrasting reports where plant based diets may not be sustainable as 'The degree to which these food types become incorporated in diets depends on their relative costs.' (H. Charles et al 2018). This shows that there are conflicting studies on whether a plant based diet is sustainable.

There is a clear importance for more people in the UK to switch to a plant based diet. In the book 'Vegetarian and Plant-Based Diets in Health and Disease Prevention' the authors entertain the importance of a plant based diet being correlated to a healthier lifestyle 'The adoption of a vegan diet has become increasingly popular in light of expert recommendations to follow plant-based diets for improved health outcomes' (K. M. Mangano, K. L. Tucker, 2017). In the European Journal of Nutrition a key importance of cutting down on meat is signified when Sobiecki states 'The recent evaluation of the carcinogenicity of these foods by the International Agency for Research on Cancer has corroborated the findings of the WCRF by classifying processed meats as Group 1 carcinogen' (2017). Sustainability through a plant heavy diet can be achieved as a result of substituting processed meats for cooked vegetables thus decreasing risks of developing cancer and other health risks through exposure of carcinogens.

Effects

'A common ethical argument for vegetarianism in the early twenty-first century is that 40% of the world's grain goes to feed animals raised for meat rather than to feed people' (R. J. Frey, PhD, 2017). Economically, reducing meat consumption would allow more grain and crop to be grown for human consumption allowing costs to decrease to enabling access to more of the UK consumers to benefit from a plant based diet. To maximise sustainability, 'The FAO (Food and Agriculture Organisation of the United Nations) has suggested that adopting a vegetarian diet is one option to increase the amount of water available to grow more food in an increasingly climate-erratic world.' (Clarke 2015). Adopting a vegetarian diet can maximise sustainability because more water will be available to grow more food which economically, will aid the demand for food and food prices will be lower especially crops therefore allowing plant consumption to increase within the British consumer market.

Methodology

A questionnaire will be used obtain quantitative and qualitative data because information of a personal nature can be obtained more readily and will be quicker to accumulate responses as it is easier to access compared to an interview which would take longer. The target demographic will be the students of Manchester Metropolitan University, the minimum sample size of 100 students will be used and more may be asked to help solidify results and increase reliability of raw data. Quantitative data will be collected to produce a foundation for further analysis of raw data to help find a conclusion to research study.

References

-
1. Graça, J., Oliveira, A. and Calheiros, M.M., 2015. Meat, beyond the plate. Data-driven hypotheses for understanding consumer willingness to adopt a more plant-based diet. *Appetite*, 90, pp.80-90.
 2. Wittenbecher, C., Mühlenbruch, K., Kröger, J., Jacobs, S., Kuxhaus, O., Floegel, A., Fritsche, A., Pischon, T., Prehn, C., Adamski, J. and Joost, H.G., 2015. Amino acids, lipid metabolites, and ferritin as potential mediators linking red meat consumption to type 2 diabetes. *The American journal of clinical nutrition*, 101(6), pp.1241-1250.
 3. Richi, E.B., Baumer, B., Conrad, B., Darioli, R., Schmid, A. and Keller, U., 2015. Health risks associated with meat consumption: a review of epidemiological studies. *Int. J. Vitam. Nutr. Res.*, 85(1-2), pp.70-78.
 4. Gale OneFile: News (2016) 'New York: Study: Plant-Based Diets Would Help the Planet in Multiple Ways.' [Online] [Accessed on 27th December 2019], <https://link-gale-com.mm.u.idm.oclc.org/apps/doc/A576432600/STND?u=mmucal5&sid=STND&xid=50e5e6c4>.
 5. Clarke, A., 2015. Vegetarianism and sustainability. *Journal of the Australian Traditional-Medicine Society*, 21(2), p.106.
 6. Clarke, A., 2015. Vegetarianism and sustainability. *Journal of the Australian Traditional-Medicine Society*, 21(2), p.106.
 7. Pohjolainen, P., Vinnari, M. and Jokinen, P., 2015. Consumers' perceived barriers to following a plant-based diet. *British Food Journal*. Vol. 117 No. 3, pp. 1150-1167
 8. Birt, C., Buzeti, T., Grosso, G., Justesen, L., Lachat, C., Lafranconi, A., Mertanen, E., Rangelov, N. and Sarlio-Lähteenkorva, S., 2017. Healthy and sustainable diets for European countries
 9. Godfray, H.C.J., Aveyard, P., Garnett, T., Hall, J.W., Key, T.J., Lorimer, J., Pierrehumbert, R.T., Scarborough, P., Springmann, M. and Jebb, S.A., 2018. Meat consumption, health, and the environment. *Science*, 361(6399), p.eaam5324.
 10. Mangano, K.M. and Tucker, K.L., 2017. Bone health and vegan diets. In *Vegetarian and Plant-Based Diets in Health and Disease Prevention* (pp. 315-331). Academic Press.
 11. Sobiecki, J.G., 2017. Vegetarianism and colorectal cancer risk in a low-selenium environment: effect modification by selenium status? A possible factor contributing to the null results in British vegetarians. *European journal of nutrition*, 56(5), pp.1819-1832.
 12. Frey, Rebecca J., PhD. (2017) 'Vegetarianism.' *The Gale Encyclopedia of Nutrition and Food Labels*, Gale, a Cengage Company, pp. 564-571. Gale eBooks, [Online] [Accessed 1st Jan. 2020] <https://link-gale-com.mmu.idm.oclc.org/apps/doc/CX3645900170/GVRL?u=mmucal5&sid=GVRL&xid=7ac32a01>
 13. Clarke, A., 2015. Vegetarianism and sustainability. *Journal of the Australian Traditional-Medicine Society*, 21(2), p.106.