

## Vegetarianism among Young Adults in the Klang Valley

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**Abstract:** A quantitative study on vegetarianism among young adults was conducted in the Klang Valley of Malaysia. The findings show that among the vegetarians, there are fewer full time vegetarians (21%) compared to semi-vegetarians (79%). Most of the vegetarians (22%) eat plant foods and dairy products (lacto-vegetarians) and only 9% consume plant foods only (vegans). The reasons for being vegetarians include influence from friends and family members, concern for global warming, health issues and weight management, religion and mercy for animals in descending order of significance. This study also investigated the respondents' opinions on vegetarian foods. A majority of the semi-vegetarians (73%) found that vegetarian foods are tasty, whereas 86% of full time vegetarians stated that vegetarian diets are boring due to the lack of food choices, resulting in a desire in some to switch back to meat-eating. A total of 62% of the respondents will encourage their children to become vegetarians in the future. Although the young vegetarians are aware of the health benefits of plant-based diets, many lack the knowledge of the health-promoting compounds from plant sources, such as antioxidants and other phytochemicals that strengthen our immune system and protect us against various diseases. These research findings provide useful information to health authorities and the vegetarian food industry in promoting vegetarianism towards healthy living.

**Keywords:** Vegetarianism, plant-based diets, health benefits

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### Introduction

Vegetarianism is the belief in and practice of eating exclusively plant foods and abstaining from any form of animal foods. There are different types of vegetarianism such as vegan, ovo-vegetarian, lacto-vegetarian, ovo-lacto vegetarian, pollotarian and pescatarian. Reasons for becoming a vegetarian include a belief in animal rights, religion, health issues, food scares/disease transmission, aesthetic/gustatory issues, concern for global warming and environmental protection. Some of the nutritional concerns of vegetarianism are deficiency in protein, vitamin B12, vitamin D, calcium, iron and zinc which may lead to emaciation, anemia and rickets. Plant foods can be divided into four groups, namely cereals & grains, legumes, vegetables and nuts & seeds. Nutritionists recommend vegetarians to take a wide variety of plant foods with the right amount to meet the energy and nutrient need (Bellows, 2012).

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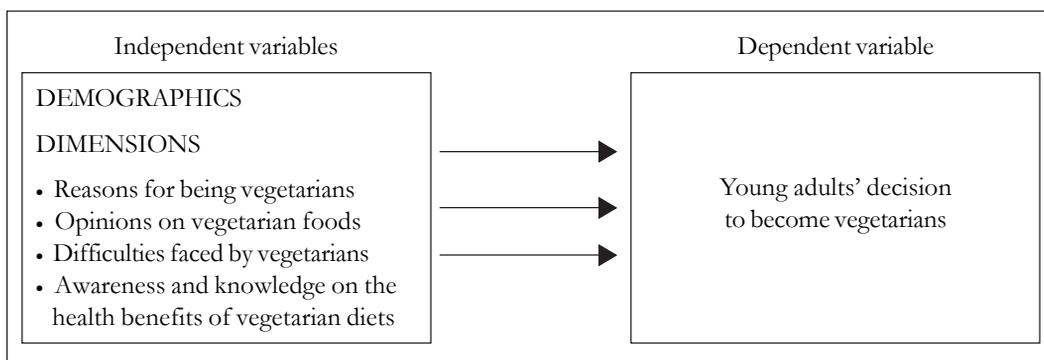
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Eating has been reported as the major cause of disease, disabilities and death in many regions of the world today. During the 20<sup>th</sup> century, when animal foods became more affordable, people switched from plant-based diets to animal-based diets and dramatically restricted the consumption of plant foods. This triggered the biggest health disaster in human dietary history and ushered in a new era of eating-related diseases. Heart diseases and cancers have become the hallmark of populations that adopt animal-based diets due to the high cholesterol and saturated fat found in animal meat. The Disease Reversal Program group in the U.S. reported that many critical illnesses such as cancers and cardiovascular diseases can be reversed by adopting 100% plant-based diets without any medication (Anderson, 2008). As more consumers believe in disease prevention rather than disease treatment, an increasing number of people around the world are switching to vegetarian diets for good health.

A food consumption trend among the young Malaysian today is to patronise fast food restaurants where they gorge themselves on hamburgers and other foods with high cholesterol and calories while restricting plant food to iceberg lettuce and tomato ketchup. This research aims to study vegetarianism among young adults with the ultimate intention of cultivating and promoting a healthy eating habit among Generation Y from young so that they can enjoy good health throughout their life.

## Methodology

A quantitative survey on vegetarianism was carried out among young adults in the Klang Valley of Malaysia. Survey questionnaires were distributed randomly to a total of 167 young vegetarians of age 18-35 in the university campus and through the Internet. The questionnaire was designed to find out the main reasons that drive youngsters towards vegetarianism, the difficulties faced by vegetarians, their opinions on local vegetarian foods and their awareness and knowledge of the health benefits of vegetarian diets. The attributes of 'Reasons to become vegetarians' were animal right, go green/reduce global warming, health, weight management, influence of family, friends and co-workers, and religion/culture. For 'Opinions on vegetarian diets' dimension, the attributes were tasty, tasteless or boring. To investigate the difficulties faced by vegetarians and their knowledge on the health benefits of vegetarian diets, open-ended questions were designed for them. Both dependent and independent variables studied are summarised in the following conceptual framework. Data collected in this study were analysed statistically by using SPSS 19 software.



**Figure 1.** The conceptual framework of the independent and dependent variables studied

## Results and Discussion

### *Demographic Analysis*

A total of 97% of the respondents were of age 18 to 28 with only 3 % being between age 19 to 35. Out of the 167 respondents, 95% were Chinese, others were Malays and Indians. Those practising Buddhism constituted the highest number of respondents(47%), followed by Christians (23%) while Muslims and Hindus were a minority, correlating with the small number of these two races in this study. The 'Others' category had 24% of the respondents which included Taoists and free-thinkers, indicating that some people practice vegetarianism not because of religion.

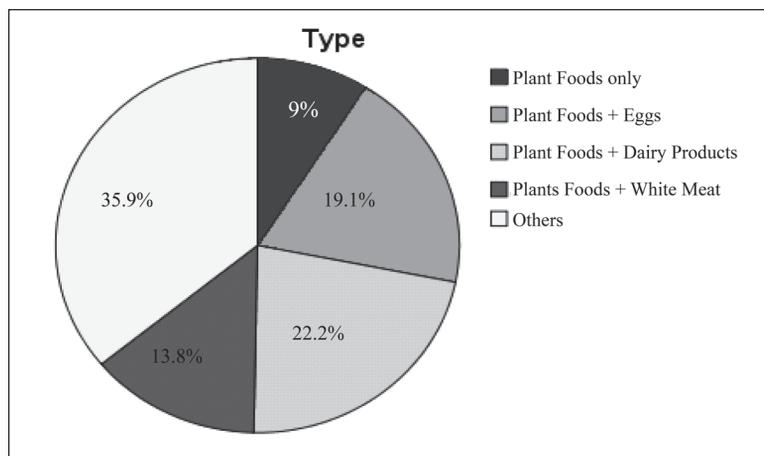
In terms of gender, 65% of respondents' were female and 35% male. Most of the male respondents who were approached during the survey were non-vegetarians due to their perception that eating vegetarian meals would lead to a lack of energy to work and meat would provide more energy compared to vegetables.

### *Categories of Vegetarians*

Table 1 and Figure 2 show the distribution of various types of vegetarianism. There were fewer full time vegetarians (21%) compared to semi-vegetarians (79%). Most of the vegetarians (22%) eat plant foods and dairy products (lacto-vegetarian), 19% of the respondents consume plant foods and eggs (ovo-vegetarian), followed by 14% who eat plant foods and white meat (pollotarian) and only 9% consumed only plant foods only (vegans). A total of 36% categorised

**Table 1.** Distribution of full-time and semi-vegetarians

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Full time	35	21.0	21.0	21.0
	Semi	132	79.0	79.0	100.0
	Total	167	100.0	100.0	



**Figure 2.** Breakdown of different categories of vegetarians among the respondents

**Table 2.** Frequency of full time and semi-vegetarians with reasons for being vegetarians

Reasons	Frequency		Total
	Full time vegetarians	Semi -vegetarians	
Animal rights	0	6	6
Go green/Reduce global warming	5	47	52
Health	3	17	20
Weight management	0	20	20
Influence of family, friends and co-workers	25	31	56
Religion/Culture	2	11	13
Total	35	132	167

themselves as ‘Others’. This indicates they are most probably being vegan only on certain days while on other days, they consume red meat or other meat products.

### ***Reasons for Becoming a Vegetarian***

Individuals become vegetarians because of influence from family, friend and co-workers, concern for global warming, health issues and weight management, religion/culture and mercy for animals, in descending order of significance (Table 2). This correlates with the findings from Rubin (2009) who noted that friends would influence a person’s eating habits the most. Family is also one of the influencing factors because if parents are vegetarians, their children are most likely to follow suit.

It was found that 31% of the young respondents who were vegetarians cited environmental protection particularly the reduction in global warming as a major reason. It is both energy and water intensive to produce animal foods. As water scarcity is limiting food production, leading scientists have issued one of the sternest warnings that food shortages could force the world into vegetarianism in order to cater for the expected 9 billion population by year 2050 (Vidal, 2012).

The Expat Online Magazine (Melvin, 2012) reported in the Vegetarian’s Guide to Malaysia that vegetarianism is becoming increasing popular among health-conscious and ethical consumers and this has led to several high-profile local celebrities promoting their stance. Malaysia’s Health Minister is also promoting vegetarianism among Malaysians. Many young females want to be slim due to social influence which brings a perception that “thin is beautiful”. The study of Smith (2009) showed that young girls like to eat often and tend to think that they are fat but they do not have the time for physical exercise. Thus, the nutritionists will advise them to take vegetarian diets for certain period of time as plant foods contain less fat and calories.

### ***Health Benefits of Vegetarian Diets***

To find out how much the young respondents know about the health benefits of vegetarian foods, two open-ended questions were posed to them: “How does vegetarian food benefit our health?” and “What are the substances/compounds in plant foods that have health benefits?”. The most popular answers to the first question were vegetarian foods are healthier, effective for weight loss, contain low cholesterol and saturated fat and less toxicity. The top five health-enhancing substances in plants mentioned by the young vegetarians were dietary fibre, vitamins,

protein, chlorophyll and minerals. More than 50% of the respondents agreed to the statement that critical illnesses such as cancers and cardiovascular diseases can be reversed by adopting 100% plant-based diets (Table 3). A total of 62% of the respondents will encourage their children to become vegetarian in the future (Table 4). Although the young vegetarians are aware of the health benefits of plant-based diets, many lack the knowledge of the health-promoting compounds from plant sources, such as antioxidants and other phytochemicals that strengthen our immune system and protect us against various diseases.

According to the Rave Diet report on “Eating” (Anderson, 2008), animal-based diets can clog our arteries leading to various diseases such as heart disease, strokes, diabetes, hypertension, atherosclerosis, kidney failure, osteoporosis, arthritis, fibroids, immune deficiency, senility, and cancers. The primary cause of clogged arteries is cholesterol and the only dietary source of cholesterol is animal foods. The cholesterol content in red meat and lighter meat (such as chicken and fish) are basically the same. Shrimps have six times the amount of cholesterol as beef. Milk has been called the “liquid meat” because it contains just as much cholesterol and fat as red meat. Drinking three glasses of milk as recommended give us the same amount of artery-clogging cholesterol as eating 21 slices of bacon. Animal-based foods weaken our immune system. A weakened immune system cannot recognise and kill cancer cells in the body. Having a strong immune system is the only cure for cancers. Plant foods are the only foods that strengthen the immune system and contain cancer-fighting nutrients. The Disease Reversal Program group in the U.S. reported that many critical illnesses such as cancers and cardiovascular diseases can be reversed by adopting a 100% plant-based diet without any medication. Phytochemicals from plant sources, particularly the potent antioxidants such as resveratrols, flavanoids, beta-carotene, lycopene, grape seed extract, vitamins C and E play an important role in body defense by strengthening our immune system and neutralising free radicals. The antioxidant capacity of freeze-dried acai berry (ORAC=1,027 mmol TE/g) is the highest reported for any food and it has been used as a preventive and therapeutic agent against cancers (Schauss, 2011). Antioxidants have anti-cancers, anti-ageing, anti-chronic inflammation and anti-free radicals properties. Scientists now believe that free radicals are casual factors in nearly every known disease, from heart disease, arthritis and cancer to cataracts. In fact, free radicals are a major culprit in the ageing process itself (Packer, 2011).

**Table 3.** Frequency and percentage of respondents agreeing with the reversal of critical illness from adopting a 100% plant-based diet

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	86	51.5	51.5	51.5
	No	81	48.5	48.5	100.0
	Total	167	100.0	100.0	

**Table 4.** Frequency of respondents who will encourage their children to become vegetarians in the future

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	103	61.7	61.7	61.7
	No	64	38.3	38.3	100.0
	Total	167	100.0	100.0	

**Table 5.** Frequency of full time and semi-vegetarians' opinions towards vegetarian foods

Vegetarians	Vegetarian foods			Total
	Tasty	Tasteless	Boring	
Full time	5	17	13	35
Semi	96	35	1	132
Total	101	52	14	167

Nutraceuticals are bioactive compounds, generally extracted from plant sources and are beneficial to our health including joint health, heart health, brain health, women's health and weight management. Blueberries aid memory, alertness, and cognitive function. Dietary fibre such as beta-glucan (from oats) helps in lowering blood cholesterol and insoluble fibres reduce constipation and possibly lower the risk of colon cancers.

In fact, the Academy of Nutrition and Dietetics (formerly the American Dietetic Association), published a report (2009) lauding the benefits of a vegetarian diet: "It is the position of the American Dietetic Association that appropriately planned vegetarian diets, including total vegetarian or vegan diets, are healthful, nutritionally adequate, and may provide health benefits in the prevention and treatment of certain diseases. Well-planned vegetarian diets are appropriate for individuals during all stages of the life cycle, including pregnancy, lactation, infancy, childhood, and adolescence, and for athletes."

### ***Opinions on Vegetarian Foods***

Respondents' views on vegetarian foods are displayed in Table 5. A majority of the semi-vegetarians (73%) found that vegetarian foods are tasty, whereas 86% of full time vegetarians stated that vegetarian diets are boring and tasteless due to the lack of food choices, causing some of them to toy with the idea of switching back to meat consumption.

Further research on this area is recommended to expand the vegetarian food industry and to produce more varieties of food choices to satisfy both local vegetarians and vegetarian tourists travelling to Malaysia. This would in turn benefit the tourism industry and the nation's economy.

### **Conclusion**

A majority of the young vegetarians in the Klang Valley of Malaysia practise semi-vegetarianism with most being lacto-vegetarians. The main reasons for being vegetarians are influence from friends and family, concern for global warming and health issues. Many full time vegetarians find vegetarian foods boring due to limited choices, suggesting that the food industry and restaurants need to develop more varieties of vegetarian foods to meet the demands of vegetarian consumers. Information obtained from this study could assist health authorities and food establishments in promoting vegetarianism towards healthy living.

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