

**"TO UNDERSTAND THE POPULARITY OF VEGAN PRODUCTS AMONGST THE
URBAN POPULATION OF PUNE CITY"**

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ABSTRACT

This paper measures the understanding of vegan products amongst the population of Pune city. Vegan is a concept adopted by people; they buy products manufactured using 100% plant-based ingredients. This study includes data collected through a structured questionnaire which was designed as an instrument. Data were collected from 90 citizens from Pune city of various demographics. The conclusion of the study shows that 28.9% of people in Pune urban city think that vegan food doesn't contain any animal and milk-based products. Further study found that 52.2% of people are aware of what exactly is vegan food and they know that there is a difference between Vegan food and vegetarian food but there is data that indicates 7.8% of people are not aware of the difference. 41% of people want to adopt vegan or plant-based meat products just to bring a little change to their regular lifestyle and want some changes in their food habits. Around 13.3% of people don't want to adopt vegan or plant-based meat products because they think that they cannot replace the meat product.

Keywords: Vegan products, Vegetarian products, plant-based meat products, alternatives of meat products.

INTRODUCTION

Veganism is an extreme form of vegetarianism, and though the term was established and patented in 1944, the concept of avoiding animal products can be traced back to ancient Indian and eastern Mediterranean societies. It was first mentioned by the Greek philosopher and mathematician Pythagoras of Samos around 500 BCE. Followers of Buddhism, Hinduism, and Jainism also advocated vegetarianism, believing that humans should harm other animals.

The first vegetarian society was formed in 1847 in England. Three years later, Rev. Sylvester Graham, the inventor of Graham crackers, co-founded the American Vegetarian Society. Graham was a Presbyterian minister and his followers, called Grahamites, obeyed his instructions for a virtuous life: vegetarianism, temperance, abstinence, and frequent bathing. In November 1944, a British woodworker named Donald Watson announced that because vegetarians ate dairy and eggs, he was going to create a new term called “vegan,” to describe people who did not. Tuberculosis had been found in 40% of Britain’s dairy cows the year before, and Watson used this to his advantage, claiming that it proved the vegan lifestyle protected people from spoiled food. Three months after coining the term, he issued a formal explanation of the way the word should be pronounced: “Vegan, not Veejan,” he wrote in his new Vegan Society newsletter, which had 25 subscribers. By the time Watson died at age 95 in 2005, there were 250,000 self-identifying vegans in Britain and 2 million in the U.S. Moby, Woody Harrelson, and Fiona Apple are vegans. So is Dennis Kucinich.

The earliest record of vegetarianism dates back to the 5th Century BCE in India. The ancient religion of Jainism promotes a meat-free diet. Jain vegetarianism is one of the strictest religiously motivated diets on the Indian subcontinent. Hinduism and Buddhism also incorporate a vegetarian diet, originating in approximately 1500 BC and the 5th century. The origin of veganism in India can be traced to ancient times when philosophers like Mahavira and Acharya Kundakunda influenced the vegan practice in India. The terms “vegan” and “vegetarian” are often used interchangeably in India. With the diverse cultural traditions, the philosophy of veganism is reinforced by the concept of ahimsa or non-violence.

A vegan product involves eating only foods that come from plants source. Those who follow this diet avoid all animal products, including meat, dairy, and eggs. Some people also avoid eating honey. A vegan diet can be highly nutritious, reduce the risk of chronic diseases, and helps to weight loss. A 2018 Gallup poll reports that about 3% of people in the United States are fully vegan and notes that

sales of plant-based foods are rising. People who choose to live a vegan lifestyle may also avoid clothes, soaps, and other products that use or contain parts of animals, such as leather and animal fur. Some adopt this lifestyle for its environmental benefits as a sustainable diet.

Many people think that a plant-based diet and a vegan diet are the same. Both diets have made headlines for their health benefits in recent years and while they are similar, there are some key differences: Vegan diets eliminate all animal products, while plant-based diets do not necessarily eliminate animal products, but focus on eating mostly plants, such as fruits, vegetables, nuts, seeds, and whole grains.

“With a vegan diet, you eliminate all animal products, including dairy, meat, poultry, fish, eggs, and honey,” says Christine Kirlaw, M.D., an internal medicine physician at Piedmont. Some people choose to follow a vegan diet for ethical, environmental, or health reasons. While going vegan can have health benefits, there are some pitfalls to avoid. “Just because something is vegan doesn’t mean it’s healthy,” she says. “If you’re vegan, you can still technically eat vegan cookies, potato chips, and other vegan junk food, which can be high in calories and low in nutrients. I recommend sticking to whole foods as much as possible.

“With a plant-based diet, you can decide whether or not you want to consume animal products, and the focus is on eating mostly foods that come from plant sources,” says Dr. Kirlaw. Plant-based diets also emphasize eating whole foods, meaning the food has undergone little – if any – processing and is as close to its natural state as possible. Plant-based foods include Vegetables, Fruits, Whole grains (quinoa, faro, barley, and oatmeal), Plant-based oils (avocado, olive, and canola), Nuts, and seeds.

A meat substitute or meat alternative is a food that may have a taste, texture, or appearance similar to meat but does not contain meat. People eat meat substitutes for a variety of reasons. Some people choose not to eat meat at all for ethical reasons or due to other personal beliefs. Others may choose meat substitutes for health reasons. Meat can cause digestive symptoms such as diarrhea or constipation in some people. Some evidence suggests from trusted Sources that eating red meat can increase the risk of a gastrointestinal condition called diverticulitis.

Popular meat substitutes are 1. Tofu (condensed soy milk that manufacturers press into blocks of varying firmness, similar to how dairy milk becomes cheese). 2. Tempeh (it is a traditional Indonesian soy-based meat substitute. It has a few key differences from tofu). 3. Seitan (it comes from wheat gluten. The production process removes the starch from the wheat, usually by rinsing it with water. This process leaves behind a protein-dense food that has a texture similar to that of chicken and a mild taste). 4. Textured vegetable protein (Textured or texturized vegetable protein (TVP) is a by-product of soybean oil extraction. Some people call it defatted soy flour.) 5. Protein-rich plant foods (Some whole foods, such as beans, lentils, chickpeas, and mushrooms, contain protein or have a meaty texture and can work well as meat substitutes. Food manufacturers often include these types of food in their vegetarian and vegan products.)

Meat substitutes are more beneficial and healthful alternatives to meat, but it depends on the particular product, how a person prepares it, and which meat they are comparing it with. For instance, eating meat substitutes that are high in sugar, salt, saturated fats, or processed ingredients may not be better than eating fish or organic chicken breast. Conversely, eating lots of processed, salted meats may not be better than eating natural meat alternatives. Meats are rich sources of protein and contain all the essential amino acids. They also contain iron and vitamin B-12, which many plant foods do not contain. However, meat also contains no fiber and may contain cholesterol and saturated fat. The American Institute for Cancer Research says that eating more than 18 oz of red meat per week raises the risk of colorectal cancer.

Meat alternatives are widely available and can be a healthy way to get protein and other nutrients without eating meat. Many are suitable for vegetarians and vegans, but they can also be a great option for people who eat meat but are looking to cut it down for health or environmental reasons. The key to any healthy diet is to choose a variety of nutrient-rich whole foods and be sure to include enough protein, fiber, vitamins, and minerals.

According to a report published by Global News Wire, India’s meat substitute market is estimated to advance at a compounded annual growth rate of 7.48% during the forecast period of 2021–26,

reaching US\$ 47.57 million by 2026. The market is largely driven by rising health concerns, coupled with an increase in awareness of different diseases caused by a deficiency in proteins. Over the next few years, growth in the number of vegetarians will continue to fuel the market.

Brand names of Vegan Products: -

Mock Meat Brands in India: Veggie Champ, Evo Foods, Good Mylk (Veganarke), Soft Spot, Papa Cream

LITERATURE REVIEW

1. Research paper titled “Plant-based meat alternatives: Compositional analysis, current development, and challenges”. (Mudasir Ahmad et al June 2022). Plant-based meat substitutes are being produced to meet consumer demand and to produce viable food supplies in the future. Their nutritional profiles are almost identical to those of animal-sourced meats. The use of meat alternatives helps mitigate the negative impacts of livestock on the environment and human health. As a result of recent product development and marketing efforts, plant-based meat alternatives are being produced in greater quantities. Although it is still at an early stage, several technological challenges remain. A current focus on processing technology innovation and creative product formulations is improving meat-like product qualities. Adding additives to produce a meat-like texture, juiciness, mouth feel, and flavor raise concerns regarding nutrition, food safety, clean label, cost, and consumer confidence. The review evaluated materials and processes associated with meat analogs, current development, challenges in the market and among consumers, and future opportunities.

2. Research paper titled, “The Functionality of Ingredients and Additives in Plant-Based Meat Analogues” (Konstantina Kyriakopoulou, et al March 2021). Meat analog research and development focuses on the production of sustainable products that recreate conventional meat in its physical forms like texture, appearance, taste, etc., and nutritional aspects. Minced products, like burger patties and nuggets, made of chicken or steak-like cuts, and emulsion products, are the major categories of meat analogs. In this review, the authors have discussed key ingredients to produce these novel products, with a special focus on protein sources, and the importance of ingredients. Mixing and blending different plant materials to obtain superior functionality is now the common practice. Another trend is the exploration of novel protein sources such as seaweed, algae, and proteins produced via fermentation.

The consumption of plant-based protein foods as a replacement for meat in Western countries seems to encounter several barriers, despite the consumer's awareness of environmental issues. Barriers are the: unwillingness of consumers to make dietary changes, due to the enjoyment of eating conventional meat, the nutritional appeal, and the convenience that meat offers. The latest research and development activities on meat analogs have shown that it is possible to produce meat-like texture with the use of plant-based proteins and technologies such as extrusion, shearing, and mixing. Generally, the functional properties of readily available protein-rich ingredients are not optimal for meat analogs.

3. A research paper titled, “Plant-Based Meats, Human Health, and Climate Change (Stephan van Vliet, et al October 2020). There is a huge concern about the effects of red meat on human health and climate change. Plant-based meat alternatives, designed to mimic the nutritional value of red meat, and recently been introduced to consumer markets. Meat production is criticized for its overuse of water supplies, landscape degradation, and greenhouse gas emission. Depending on the production of plant-based meat alternatives, environmental footprints may be lowered. In this review, the authors have discussed the nutritional and ecological impacts of eating plant-based meat alternatives vs. animal meats. Most humans fall on a spectrum of omnivores: they satisfy some nutrient requirements better from plant foods, while needs for other nutrients are met more by animal foods. The use of isolated plant proteins, fats, vitamins, and minerals as an alternative to animal foods underestimates the true nutritional complexity of whole foods in their natural state, which impacts human health.

4. Research paper titled “Considering Plant-Based Meat Substitutes and Cell-Based Meats: A Public

Health and Food Systems Perspective” (Raychel. Santo, and Brent et al August 2020). Seen in the past decade, interest has been growing in the development and production of plant-based and cell-based alternatives to farmed meat. The review explores key public health, animal welfare, economic, and policy implications that are related to the production and consumption of plant-based meat and cell-based meat substitutes, and how to compare their production with farmed meat. Production of plant-based substitutes may involve smaller environmental impacts compared to the production of farmed meats. Demand for both plant-based and cell-based meat may significantly reduce dependence on livestock to be raised. Interest in plant-based substitutes and cell-based meats has grown rapidly over the past decade. The global market for plant-based substitutes may reach \$85 billion (USD) by 2030. At the same time, while cell-based meat is not yet commercially available, research and development are proceeding rapidly. Seafood is used as an alternative in worldwide fisheries (Fry et al., 2016). Thus, the terms “meat alternatives,” “plant-based substitutes,” and “cell-based meats” include seafood alternatives for simplicity. Plant-based substitutes and cell-based meats are gaining popularity in global markets. This review of the evidence explored the extent of the production and consumption of meat alternatives which can mitigate some of the environmental, animal welfare, and public health problems associated with farmed meats, and how these products are usually promoted.

5. Research paper titled, “Status of meat alternatives and their potential role in the future meat market” (Hyun Jung Lee, et al Jul 2020). Plant-based meat and cultured meat are promising major meat alternatives that can be used as protein sources in the future. In addition, it's believed that meat alternatives will continue to gain importance because of concerns about traditional meat production's limited sustainability. The meat alternatives are expected to have different roles based on their different benefits and limitations. Traditional meat can be replaced by plant-based meat analogous to good sources of protein from their perspective of nutritional value. And plant-based meat will reach various consumers like vegetarian and halal food products. However, despite ongoing technical developments, their palatability, including appearance, flavor, and texture, is still different from the consumers' standard established from livestock-based traditional meat. Currently, the world population is growing fast and will reach 9 billion by 2050. It is estimated that we will need at least double the amount of meat compared to the amount we are producing now. This rapid increase in the global demand for meat is attributed not only to population growth but also to the economic development of developing countries.

6. Research paper titled, “Meat analog as future food (Ishamri Ismail1, et al Jan 2020). The replacement of the main ingredient with other than meat is defined as a meat analog”. It is also known as a meat substitute, meat alternative, fake or mock meat, and imitation meat. Due to the health awareness among consumers in their diet and for a better future environment, there is an increased importance of meat analog in the current trend. Because of the low fat and calorie foods intake, flexitarians, animal disease, natural resources depletion, and reducing greenhouse gas emissions are the factors that led to this shift. In this paper, the traditional and current available meat analog is presented. The novel ingredients used, the process, market prospects, future trends, and regulations of the meat analogs are objectively discussed. Australia was the most popular country for veganism in 2018, followed by the UK and New Zealand. While the number of vegans in America grew tremendously by 600% from approximately 4 million in 2014 to 19.6 million in 2017. In terms of sustainability, meat production has driven environmental change and natural resource depletion. The livestock industry requires an estimated 40% arable land, 14.5% greenhouse gas emission, 36% and 29% crop calories produced, and agricultural freshwater used, respectively. On average people should consume at least 75% less red meat to fall drastically unsustainable in the livestock sector. Due to animal diseases, healthier foods, strong demand for wholesome and religious food, and economic reasons, the consumption of vegetable proteins in food products has been increasing over the years. As mentioned earlier, the livestock meat-based diet requires more environmental resources than a plant protein-based diet. However, developing and innovating a new food product that satisfies the consumers' demand is very challenging. Before developing a plant protein-based diet the quality, nutrition, and sensory characteristics are the first parameters to be taken into

consideration. Some studies have nevertheless demonstrated that the production process and ingredients involved in the meat analogs are lacking nutritionally (i.e., over-processing, high salt content, and genetically modified organisms) more than conventional meat. The fact that plant-based protein products present insufficient essential amino acids and trace elements, owing to be more challenging to create a product that imitates the meat's nutritional values.

OBJECTIVES

1. To understand the concept of vegan products.
2. To Study the different reasons for veganism.
3. To understand why people refrain from going vegan.
4. To understand the popularity of vegan products amongst the urban population of Pune city.

HYPOTHESIS

1. H₁ People choose vegan food because they think it's healthy.
2. H₂ People think vegan food is expensive.

RESEARCH METHODOLOGY

The methodology used in this research paper is mixed Research Methodology.

The research involves the mixing of quantitative and qualitative methods. The nature of data is a mixture of variable words.

1. Primary sources: Questionnaire spread across Pune city.
2. Secondary sources: online articles, and research papers for primary data in the questionnaire.

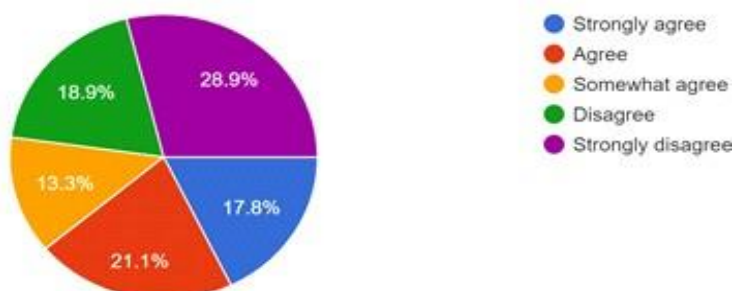
DATA ANALYSIS

Age	Female	Male	Grand Total
18 - 25	20	45	65
26 - 35	7	12	19
36 - 45	2	1	3
46 - above	1	2	3
Grand Total	30	60	90

Data given in the above chart indicate that out of 90 respondents, 60 that is 66.7% are male, and out of 90 respondents, 30 that are 33.3% are Female. The maximum numbers of respondents 65 were between the age group 18 years 25 to be followed by 19 respondents falling between the age group of 26-35 Years, 3 respondents falling between the age group of 36 to 45, and 3 respondents fall between the age group of 46 to above.

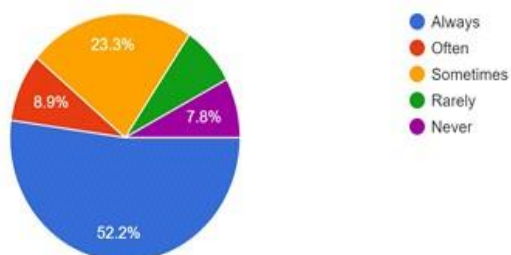
Do you think vegan food contains any animal meat and milk based products ?

90 responses



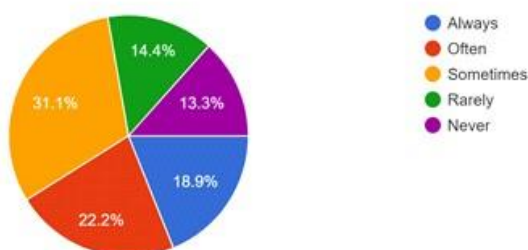
Data given in the pie diagram indicate that out of 90 respondents 16 that is 17.8% strongly agree that vegan food contains any animal meat and milk-based products, and out of 90 respondents 19 that is 21.1% agree that vegan food contains any animal meat, and milk-based products, out of 90 respondents 12 that is 13.3% somewhat agree that vegan food contains any animal meat and milk-based products, out of 90 respondents 17 that is 18.9% Disagree that vegan food contains any animal meat and milk-based products, out of 90 respondents 26 that is 28.9% strongly disagree that vegan food contains any animal meat and milk-based products.

In your opinion do you think that there is a difference between vegan food and vegetarian food
90 responses



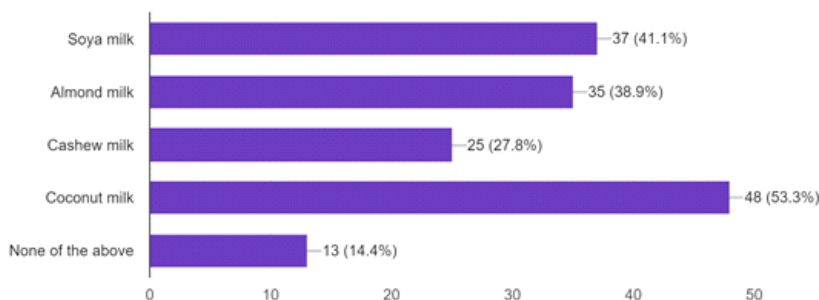
Data given in the pie diagram indicate that out of 90 respondents 47 that is 52.2% always think that there is a difference between vegan food and vegetarian food, and out of 90 respondents 8 that is 8.9% often think that there is a difference between vegan food and vegetarian food, out of 90 respondents 21 that is 23.3% sometimes think that there is a difference between vegan food and vegetarian food, out of 90 respondents 7 that is 7.8% Rarely think that there is a difference between vegan food and vegetarian food, out of 90 respondents 7 that is 7.8% never think that there is a difference between vegan food and vegetarian food.

Would you like to adopt vegan or plant-based meat products
90 responses



Data given in the pie diagram indicate that out of 90 respondents 17 that are 18.9% Always like to adopt vegan or plant-based meat products, 20 that is 22.2% Often like to adopt vegan or plant-based meat products, out of 90 respondents 28 31.1% Sometimes like to adopt vegan or plant-based meat products, out of 90 respondents 13 that is 14.4% Rarely like to adopt vegan or plant-based meat products, out of 90 respondents 12 that are 13.3% Never like to adopt vegan or plant-based meat products.

Which of the vegan or plant-based product you have tried(Milk)
90 responses



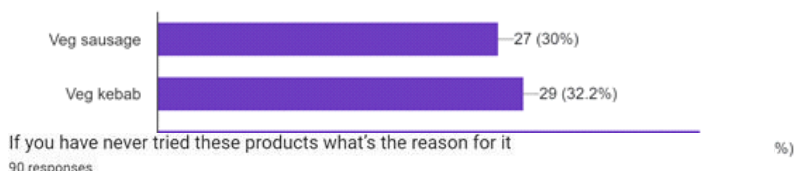
Data given in the chart diagram indicate milk alternative that out of 6 options 37 (41.1%) respondents prefer to drink soya milk, followed by 35 (38.9%) respondents prefers to drink almond milk, followed by 25(27.8%) respondents prefers to drink cashew milk, followed by 48(53.3%) respondents prefers to drink coconut milk. This was followed by 13(14.4%) respondents who never tried any of the soya milk, almond milk, cashew milk, or coconut milk.

Data given in the chart diagram indicate meat alternatives that out of 5 options 27(30%) respondents always prefer to eat veg sausage, followed by 29(32.2%) respondents snacks prefer to eat veg kebab, followed by 43(47.8%) respondents prefers to eat a veg burger, followed by 7(7.8%) respondents prefers to eat veg fish, Followed by 21(23.3%) respondents who never tried any of the veg sausage, veg kebab, veg burger, veg fish.

Data given in the pie diagram indicate that out of 90 respondents 19 that are 21.1% do not believe in the concept of a vegan product or meat alternatives, and out of 90 respondents 22 that is 24.4% people are unaware of the vegan product or meat alternatives, out of 90 respondents 17 that is 18.9% people are concerned about the price of the vegan product or meat alternatives, out of 90 respondents 14 that is 15.6% people are unaware about the vegan product or meat alternatives, out of 90

Which of the vegan or plant-based product you have tried (Alternative meats)

90 responses



If you have never tried these products what's the reason for it

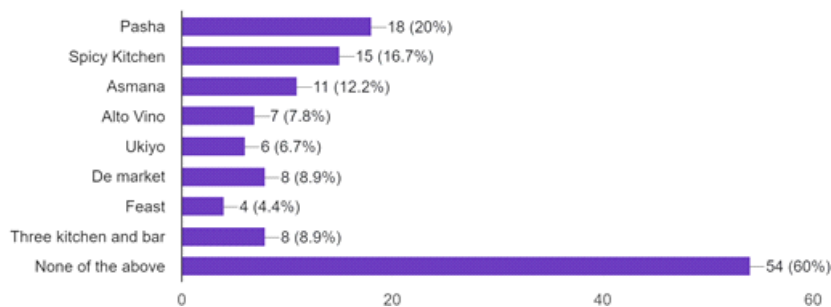
90 responses



respondents 18 that is 20% of people have already tried this product.

Have you tried vegan food from the following restaurants in Pune city

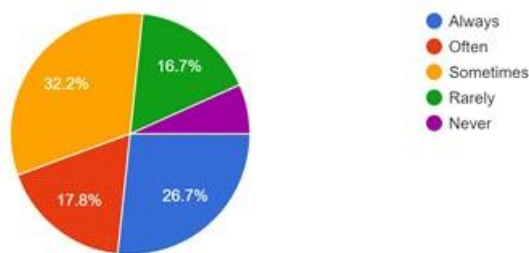
90 responses



Data given in the chart diagram indicate that out of 9 options 18(20%) respondents always prefer to go and try in a pasha restaurant, followed by 15(16.7%) respondents who always prefer to go and try in a spicy kitchen restaurant, followed by 11(12.2%) respondents prefers to go and try in Asmana restaurant, followed by 7(7.8%) respondents prefers to go and try in alto vino restaurant. Followed by 6(6.7%) respondents who always prefer to go and try Ukiyo restaurant, Followed by 8(8.9%) respondents who always prefer to go and try De market restaurant, Followed by 4(4.4%) respondents who always prefer to go and try in Feast restaurant, Followed by 8(8.9%) respondents prefers to go and try in Three kitchens and bar restaurant, Followed by 54(60%) respondents never visited any of these above mention restaurants.

If the vegan products are available in the supermarket would you prefer to buy any

90 responses



Data given in the pie diagram indicate that out of 90 respondents 24 that is 26.7% Always would prefer to buy vegan products from the supermarket, 16 that is 17.8% Often would prefer to buy vegan products from the supermarket, out of 90 respondents 29 that is 32.2% Sometimes would prefer to buy vegan products from the supermarket, out of 90 respondents 15 that is 16.7% Rarely would prefer to buy vegan products from the supermarket, out of 90 respondents 6 that is 6.7% Never would never to buy vegan products from the supermarket.

If you are non-vegetarian what would be your motivation to switch to veganism

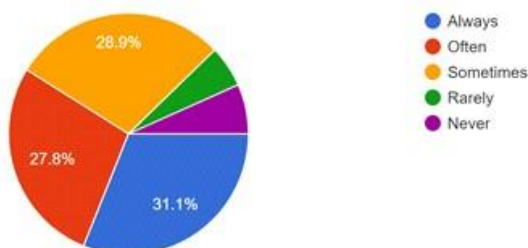
90 responses



Data given in the pie diagram indicate that out of 90 respondents 50 that is 55.6% respondents shift to veganism because they want to try something new, out of 90 respondents 18 that is 20% respondents shift to veganism because they want to find a healthier option, out of 90 respondents 10 that is 11.1% respondents shift to veganism because they want to try to follow a trend, out of 90 respondents 7 that is 7.8% Respondents shift to veganism because they want to try to go back to basic, out of 90 respondents 5 that is 5.6% respondents shift to veganism because it can replace the meat products.

Do you think vegan or plant-based foods is environment friendly

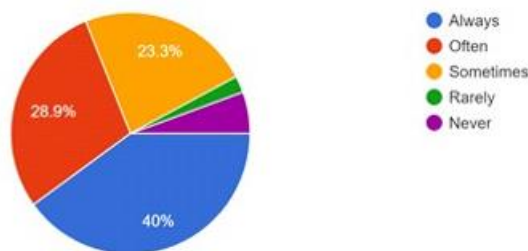
90 responses



Data given in the pie diagram indicate that out of 90 respondents 28 that is 31.1% Always think vegan or plant-based foods are environment friendly, out of 90 respondents 25 that is 27.8% Often think vegan or plant-based foods are environment friendly, out of 90 respondents 26 that is 28.9% Sometimes think vegan or plant-based foods is environment friendly, out of 90 respondents 5 that is 5.6% Rarely think vegan or plant-based foods is environment friendly, out of 90 respondents 6 that is 6.7% Never think vegan or plant-based foods is environment friendly.

Do you think vegan products and plant-based products are Healthy

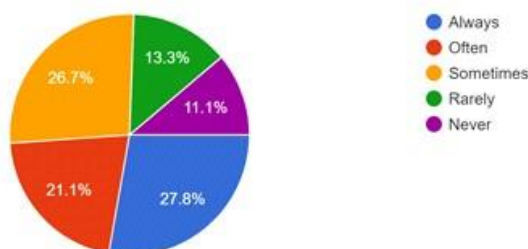
90 responses



Data given in the pie diagram indicate that out of 90 respondents 36 that is 40% Always think vegan products and plant-based products are Healthy, out of 90 respondents 26 that is 28.9% Often think vegan products and plant-based products are Healthy, out of 90 respondents 21 that is 23.3% Sometimes think vegan products and plant-based products are Healthy, out of 90 respondents 2 that is 2.2% Rarely think vegan products and plant-based products are Healthy, out of 90 respondents 5 that is 5.6% Never think vegan products and plant-based products are Healthy.

Do you think one needs to consult a doctor before going veganism or vegan products

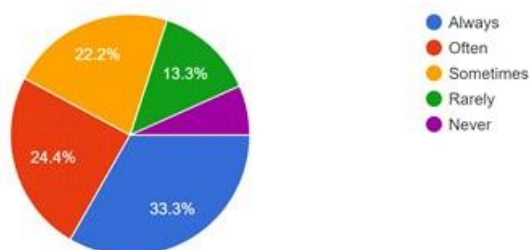
90 responses



Data given in the pie diagram indicate that out of 90 respondents 25 that is 27.8% Always think one needs to consult a doctor before going veganism or vegan products, out of 90 respondents 19 that is 21.1% Often think one needs to consult a doctor before going veganism or vegan products, out of 90 respondents 24 that is 28.7% Sometimes think one needs to consult a doctor before going veganism or vegan products, out of 90 respondents 12 that is 13.3% Rarely think one needs to consult a doctor before going veganism or vegan products, out of 90 respondents 10 that is 11.1% Never think one needs to consult a doctor before going veganism or vegan products.

In your opinion going vegan is a great opportunity to improve your eating habits

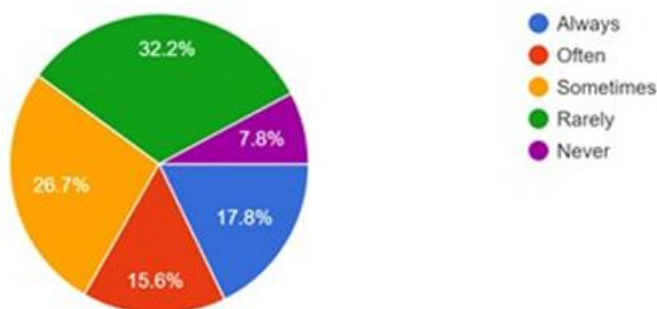
90 responses



Data given in the pie diagram indicate that out of 90 respondents 30 that is 33.3% Always think going vegan is a great opportunity to improve your eating habits, out of 90 respondents 22 that are 24.4% Often think going vegan is a great opportunity to improve your eating habits, out of 90 respondents 20 that are 22.2% Sometimes think going vegan is a great opportunity to improve your eating habits, out of 90 respondents 12 that are 13.3% Rarely think going vegan is a great opportunity to improve your eating habits, out of 90 respondents 6 that are 6.7% Never think going vegan is a great opportunity to improve your eating habits.

In your opinion is it easy to find vegan food at a restaurant

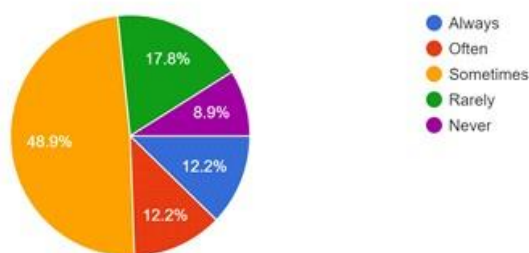
90 responses



Data given in the pie diagram indicate that out of 90 respondents 16 that is 17.8% Always think it is easy to find vegan food at a restaurant, out of 90 respondents 14 that is 15.6% Often think it is easy to find vegan food at a restaurant, out of 90 respondents 24 that is 26.7% Sometimes think it is easy to find vegan food at a restaurant, out of 90 respondents 29 that is 32.2% Rarely think it is easy to find vegan food at a restaurant, out of 90 respondents 7 that is 7.8% Never think it is easy to find vegan food at a restaurant.

In your opinion do you think that one can easily find all vegan alternatives

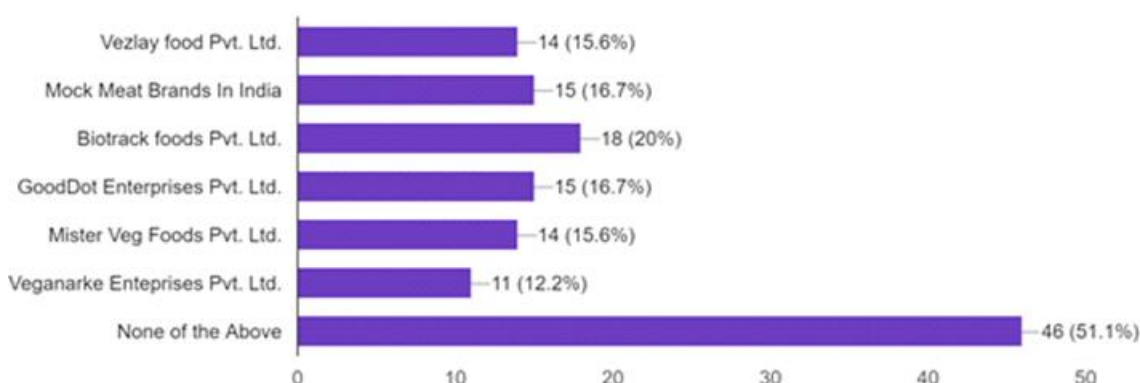
90 responses



Data given in the pie diagram indicate that out of 90 respondents 11 that is 12.2% Always think that one can easily find all vegan alternatives, out of 90 respondents 11 that is 12.2% Often think that one can easily find all vegan alternatives, out of 90 respondents 44 that is 48.9% Sometimes think that one can easily find all vegan alternatives, out of 90 respondents 16 that is 17.8% Rarely think that one can easily find all vegan alternatives, out of 90 respondents 8 that is 8.9% Never think that one can easily find all vegan alternatives.

Are you aware of the following company's who manufactures vegan products

90 responses

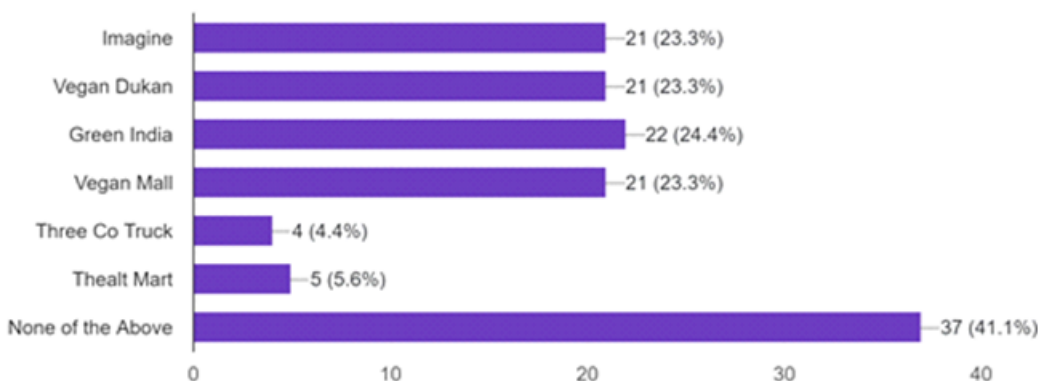


Data given in the chart diagram indicate that out of 7 options 14(15.6%) respondents are aware of VeZlay Food Pvt. Ltd who manufacture vegan products, 15(16.7%) respondents are aware of Mock Meat Brands In India who manufacture vegan products, and 18(20%) respondents are aware of Bio track Foods Pvt. Ltd. who manufacture vegan products, followed by 15(16.7%) respondents are aware of Good Dot Enterprises Pvt. Ltd. who manufacture vegan products. Followed by,14(15.6%) respondents who are of Mister Veg Foods Pvt. Ltd. which manufactures vegan products, followed by 11(12.2%) respondents who are aware of Veganarke Enterprises Pvt. Ltd who manufacture vegan

products, followed by 46(51.1%) respondents, are unaware of the following companies mentioned above.

Are you aware of the following online platform, where you can find vegan products

90 responses



Data given in the chart diagram indicate that out of 7 options 21(23.3%) respondents are mostly aware of the brand imagine where vegan products are available, followed by 21(23.3%) respondents who are mostly aware of the brand vegan Dukan where vegan products are available, followed by 22(24.4%) respondents are mostly aware of the brand Green India where vegan products are available, followed by 21(23.3%) respondents are mostly aware of the brand vegan mall where vegan products are available. Followed by 4(4.4%) respondents are mostly aware of the brand Three co truck where vegan products are available, followed by 5(5.6%) respondents are mostly aware of the brand Thealt Mart where vegan products are available, followed by 37(41.1%) respondents are not aware of the following online platform, where you can find vegan products mentioned above.

HYPOTHESIS TESTING

H₀= Urban population of Pune city does not choose vegan food because they think it is not healthy.

H₁= Urban population of Pune city chooses vegan food because they think it is healthy.

Mean	3.2222
Variance	2.0849
Observations	90
df	89
t Stat	21.1641
P(T<=t) one-tail	0.0001
t Critical one-tail	1.6622
P(T<=t) two-tail	0.0001
t Critical two-tail	1.987

T-test has been used to validate this hypothesis which will help to find out the prime reason to choose why urban populations of Pune city prefer vegan food.

The *p*-value is 0.00001 which is greater than 0.05. Hence it can be said that the result is significant at *p* < 0.05. It can be further said that the null hypothesis has been rejected and the alternative hypothesis has been accepted.

H₀= Urban population of Pune city thinks vegan food is not expensive.

H₂= Urban population of Pune city thinks vegan food is expensive.

Summary of Data				
	Treatments			
	1	2	3	Total
N	90	90	90	270
$\sum X$	356	328	271	955
Mean	3.9556	3.644	3.0111	3.537
$\sum X^2$	1518	1336	919	3773
Std.Dev.	1.1108	1.257	1.0757	1.212
Result Details				
Source	SS	df	MS	
Between-treatments	41.6963	2	20.848	$F = 15.74966$
Within-treatments	353.433	267	1.3237	
Total	395.13	269		

The f -ratio value is 15.74966. The p -value is 0.00001 which is greater than 0.05. Hence it can be said that the result is significant at $p < 0.05$. It can be further said that the null hypothesis has been rejected and the alternative hypothesis has been accepted. It can be concluded that people choose vegan food because they think it's healthy. To validate this hypothesis ANOVA has been used which tests the variance among the variables.

FINDINGS

1. The primarily collected data from the questionnaire were more males in the age group of 18-25 who know that vegan food does not contain any animal meat or milk-based products.
 - a. As per the primarily collected data from a questionnaire, there was a greater number of males in the age group of 18-25 who believes that sometimes there is a difference between vegan food and vegetarian food.
 - b. As per the primarily collected data from the questionnaire, there was a greater number of males in the age group of 18-25 who would like to adopt vegan or plant-based meat products.
2. As per the primarily collected data from a questionnaire, there were more males in the age group of 18-25 the people prefer to consume almond milk.
3. As per the primarily collected data from the questionnaire, there were more males in the age group of 18-25 the people prefer to eat a veg burger.
4. As per the primarily collected data from the questionnaire, there was a greater number of males in the age group of 18-25 who have not tried vegan products because they don't know the benefits of vegan products.
5. As per the primarily collected data from the questionnaire, there were more males in the age group of 18-25 who have not tried vegan food from the following restaurants in Pune city. are Pasha, Spicy Kitchen, Asmana, Alto Vino, Ukiyo, De market, Feast, Three kitchens and bar.
6. As per the primarily collected data from a questionnaire, there was a greater number of males in the age group of 18-25 sometimes they would prefer to buy vegan products from the supermarket.
7. The primarily collected data from the questionnaire were more males in the age group of 18-25 who want to shift from non-vegetarian to veganism because they want to try something new.
8. The primarily collected data from the questionnaire were more males in the age group of 18-25 who sometimes think that vegan or plant-based foods are environmentfriendly.
 - a. As per the primarily collected data from the questionnaire, there was a greater number of males in the age group of 18-25 who always think vegan products and plant-based products are Healthy.
 - b. As per the primarily collected data from the questionnaire, there was a greater number of males in the age group of 18-25 who always think that one needs to consult a doctor before going veganism or vegan products.
9. As per the primarily collected data from the questionnaire, there was a greater number of males in the age group of 18-25 who always believe that going vegan is a great opportunity to

improve their eating habits.

a. As per the primarily collected data from the questionnaire, there was a greater number of males in the age group of 18-25 who believe that it is rare to find vegan food at a restaurant easily.

10. As per the primarily collected data from the questionnaire, there was a greater number of males in the age group of 18-25 who believe that sometimes one can easily find all vegan alternatives.

11. As per the primarily collected data from a questionnaire, there was a greater number of males in the age group of 18-25 who are unaware following companies that produce vegan products (Vezlay Food Pvt. Ltd, Mock Meat Brands in India, Biotrack foods Pvt. Ltd., Good Dot Enterprises Pvt. Ltd., Mister Veg Foods Pvt. Ltd., Veganarke Enterprises Pvt. Ltd.)

12. As per the primarily collected data from the questionnaire, there was a greater number of males in the age group of 18-25 are not aware of the following online platform, where you can find vegan products mentioned are Imagine, Vegan Dukan, Green India vegan mall Three co truck., Thealt mart.

CONCLUSION

The primary goal of this study was to investigate the concept and awareness of eating vegan or plant-based foods. Through the data received 28.9% number of people in Pune urban city think that vegan food doesn't contain any animal and milk-based products which are true but some people still have a perception that vegan food contains animal and milk-based product, further through my study found that 52.2% people are aware of what exactly is a vegan food and they know that there is a difference between Vegan food and vegetarian food but there is data that around 7.8% people are not aware of the difference. But 41% of people want to adopt vegan or plant-based meat products just to bring a little change to their regular lifestyle and want some changes in their food habits, but around 13.3% of people don't want to adopt vegan or plant-based meat products because they think that it can replace the meat product. The data received also indicates that 85.6% number of people in Pune urban city have tried coconut milk, almond milk, cashew milk, and soya milk, and further for plant-based meat products percentage of 47.8% of people have tried and liked the veg burger, veg kebab, and veg sausages. 60% of people from Pune urban city are not aware that there are restaurants that serve vegan food but 40% of people are aware that there are restaurants in Pune city that serve vegan food. A very interesting fact has been found that around 55.6% of non-vegetarian people who like to switch to veganism to have a change in life and also want to try something new and around 40% of people want to switch to veganism because they find it as a healthier option. And 31.1% of people think that vegan or plant-based foods are environmentally friendly but there is a perception that around 6.7% of people do not agree with the following statement. Also, people in Pune city feel finding vegan food is not that easy but this is their perception, although many restaurants serve vegan food because of unawareness of the restaurants it becomes difficult for people to find vegan food in restaurants. These days many companies like Vezlay Food Pvt. Ltd, and Mister veg food have started to manufacture vegan and plant-based meat products, and still, people are unaware of the companies. There are also so many websites or online platforms like Imagine, Vegan Dukana, etc where people can easily find vegan and plant-based meat products.

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