

# GROWING TREND OF VEGANISM IN METROPOLITAN CITIES: EMPHASIS ON BAKING

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## ABSTRACT

**Background:** *Veganism is a new food trend is gaining momentum in India. A diet based on large quantities of fruit and vegetables has a positive impact on our health. A vegan diet is based on plants and has increased in popularity over the recent years. Health is the most central reason for choosing a vegan diet. Meat free diets in India can be traced back to the Indus Valley Civilization, and Indian culture shows a great respect for animals in various cultural texts. Every major Indian religion viz. Hinduism, Buddhism and Jainism encourage ahinsa that is non-violence toward other living beings. In modern India bakery products have made a way into our homes. Cakes, Breads, Puddings, Pie etc. are a common thing which can be now found in every household list. The challenge is each of these products contain animal based product and people who are following veganism cannot consume them. Vegan baking is a challenge because of the use of various products like eggs, milk, etc. in normal recipes. Several Chefs and companies are working on products that are vegan. Everyday more substitutes are coming and Market is growing with a steady pace.* **Objective:** *To study and find out the trend of vegan baking in Metropolitan Cities of India and spread awareness about Vegan Baking.* **Methodology:** *The study was conducted by a random sampling survey from cities Kolkata and Delhi, taking the opinions of consumers through a self-designed questionnaire who have opted for Veganism, & their needs. Sample were taken into the study to know about the awareness on the topic. The total number respondents were 100 between age of 18-65 residing in Delhi or Kolkata.* **Results:** *It was found that 92% People in these Metropolitan Cities are aware of Vegan food and more numbers are getting attracted towards it. Following a Vegan diet in India is not a difficult thing because of the availability of a wide variety of Pulses, Grains etc. Bakeries that serve vegan products are few in numbers due to implications of substituting ingredients (32%); it but the demand of vegan bakery products is growing.* **Conclusion:** *The trend of Vegan food in India is growing and with rise in demand there will be an increase in demand of bakery products as well. Chefs and Bakery operators need to introduce more Vegan products in their menu and develop new vegan recipes.*

**Key Words:** *Vegan, Vegan Baking, Vegetarian, Plant Based, Baking*

## INTRODUCTION

Veganism is a practice of abstaining from the use of animal products, particularly in diet, and is also an associated philosophy that rejects the commodity status of animals. A follower of veganism is known as a vegan. Distinctions are sometimes made between several categories of veganism. Dietary vegans (or strict vegetarians) refrain from consuming animal products, not only meat but also eggs, dairy products and other animal-derived substances. The term ethical vegan is often applied to those who not only follow a vegan diet but extend the philosophy into other areas of their lives, and oppose the use of animal products for any purpose (Gupta, 2016).

In 1944 when the Vegan Society in England was founded by Donald Watson, the term ‘vegan’ came into existence. Initially it meant “non-dairy vegetarian” but later on this converted into “doctrine that man should live without exploiting animals”.

World Vegan Day is held every 1st November to mark the society’s creation. Donald Watson, secretary of the Leicester Vegetarian Society, set up a new quarterly newsletter” Vegan News” in November 1944. He chose the word vegan himself. The first edition attracted over 100 letters from people who resolved to give up eggs and dairy. Vegan News changed its name to The Vegan in November 1945 and by now it had 500 subscribers. It published recipes, health news and a “vegan trade list” of animal-free products such as Colgate toothpaste, Kiwi shoe polish, Dawson & Owen stationery (Gupta, 2016).

Vegetarianism encompasses a spectrum of eating patterns: from diets that leave out all animal meats and products (vegan) to diets that include eggs, milk, and milk products. Plant-based diets refer to diets predominantly based on plant foods, including most vegetarian diets and other diets in the spectrum, such as those including fish (Tonstad et al., 2009). In general, vegetarian diets provide relatively large amounts of cereals, pulses, nuts, fruits, and vegetables. In terms of nutrients, vegetarian diets are usually rich in carbohydrates, n-6 fatty acids, dietary fiber, carotenoids, folic acid, vitamin C, vitamin E, and Mg and relatively low in protein, saturated fat, long-chain n-3 fatty acids, retinol, vitamin B(12), and Zn (Key et al., 2006). In recent years, the vegetarian dietary pattern has been adopted by an increasing number of people in Western countries (Fraser, 2009), where it is usually an adopted lifestyle by choice during adulthood (Fraser, 2009). Moreover, vegetarianism is not common in the West (<5% of the population) (Key et al., 2006), which limits the power of studies examining the macro- and micronutrient value of vegetarian diets (Fraser, 2009; Key et al., 2006; Obersby et al., 2013; Baines et al., 2007). By contrast, a substantial proportion of the Indian population (35%) are vegetarians (Key et al., 2006) (10%–62% for different regions) (Arnold et al., 2009). The history of vegetarianism has its roots in the civilization of ancient India, and the origin of vegetarian-ism in India has often been linked to

the cow protectionism and veneration associated with Hindu culture (Narayan, 2008). The earliest records of vegetarianism as a concept and practice among a significant number of people concerns ancient India (Spencer, 1993), where the diet was closely connected with the idea of non-violence toward animals (called ahimsa in India) and was promoted by religious groups and philosophers (Walters and Portmess, 2001).

According to Alina Petre, Healthline (2019) prominent types of this lifestyle include:

- **Dietary vegans:** Often used interchangeably with “plant-based eaters,” this term refers to those who avoid animal products in their diet but continue to use them in other products, such as clothing and cosmetics.
- **Whole-food vegans:** These individuals favor a diet rich in whole foods, such as fruits, vegetables, whole grains, legumes, nuts, and seeds.
- **Junk-food vegans:** Some people rely heavily on processed vegan food, such as vegan meats, fries, frozen dinners, and desserts, including Oreo cookies and non-dairy ice cream.
- **Raw-food vegans:** This group eats only foods that are raw or cooked at temperatures below 118°F (48°C).
- **Low-fat, raw-food vegans:** Also known as fruitarians, this subset limits high-fat foods, such as nuts, avocados, and coconuts, instead relying mainly on fruit. Other plants are occasionally eaten in small amounts.

Bangalore based nutritionist Dr. Anju says, “Indian population is largely non-meat based. For them the source of protein is mainly derived out of plant origin foods like dal, rajma and the likes. If paneer, milk and curd are ruled out, then to ensure there is enough protein and calcium in their diet, proper planning must be done in consultation with an expert.” (Sengupta, NDTV Foods, 2017).

Health Practitioner and Macrobiotic Nutritionist Arora say, “I personally don’t recommend vegan diets, as it can pose serious nutrient deficiency. However, if one is to opt for vegan diet, it is highly recommended that one consumes fermented and organic vegetables like kimchi and saurakat. Water kefir and coconut kefir are also healthy options they can try. Try and consume lots of seasonal veggies especially Moringa to balance nutrition (Sengupta, NDTV Foods, 2017).

Finding alternative ingredients for vegan baking has opened up options for development and the opportunity to focus on flavours. The biggest challenge in vegan baking is overcoming the loss of eggs’ functionality, as they provide stable emulsions, structure, stability, and texture.

The innovative discovery of ‘aquafaba’ refers to the liquid in a can of chickpeas. This liquid can be beaten into a meringue creating a vegan egg replacement. Now, we are observing the availability of different commercial lines of egg replacers made from pulses and/or seeds. Also, ingredients like tahini (made from ground sesame seeds) and coconut milk are replacing traditional dairy in recipes, giving short textures and rich buttery flavours to classic baked goods like shortbread (Drummer, 2019).

The public is unaware of common substitutes available in market for substituting raw material for making Vegan Baked goods, it is quite easy as per Gupta, 2019 mentioned the substitutes available in Market. “The main issue which comes when trying to bake vegan product is replacing the dairy products, as dairy and baking go hand-in-hand. Baking without eggs, curd, butter etc. seems unimaginable.” Some alternatives for commonly used items in baking:

- **Eggs:** Eggs used for binding everything together, it is a substance which hold cakes, cookies etc together and it helps to retain moisture and texture. To go egg-free while baking you may try using mashed bananas, silken tofu, soy yogurt, vegan buttermilk, a mixture of water and ground flaxseed or a combination of corn starch and potato starch which is also known as egg replacer. Each ingredient gives its own texture to the dish.
- **Milk:** Replacing milk is one of the easiest things to do as there are many alternatives already available in market, you may use soy milk, coconut milk, almond milk etc. Although the best alternative is unsweetened soy milk. And the best alternatives could be flavored soy milk which also gives an enriched flavor to your dish. For making buttermilk add around 10ml of apple cider vinegar to 500ml of soy milk and stir with a fork.
- **Butter:** Butter or other fats help in retaining moisture and flavor in the recipe. Replacing oil is not a very big issue various plant-based oils are easily available in market coconut oil being the best alternative because of added health benefits, and rapeseed oil because of its mild flavor. Vegan margarine is commonly available which can be used wherever creaming is required.
- **Sugar:** Sugar is not vegan because it is purified with bone-ash. Therefore, Stevia is a good replacer for sugar. For honey in recipes using date syrup or maple syrup can be a good call.
- **Color:** When you go for vegan baking either buy colors very carefully or use natural substitutes. Example: Beetroot for red, spinach for green (Prakhar’s Kitchen, 2019).

In order to carry out research the following objections were planned:

- To study and find out the trend of Vegan Baking.
- To spread awareness about Vegan Baking.

## **METHODOLOGY**

The primary data was collected by the self -designed questionnaire conducted in November, 2019 of randomly picked common people and some people who have opted veganism, situated in India.

The study was also based on the secondary information available at various sources of information like cook books, blogs, various websites, newspaper articles and old research articles.

The study was conducted on the basis of sample survey in various parts of Kolkata City and New Delhi.

Random sampling was done for people who opted vegan diet and some common people. The total no. of respondents was (n=100) between age 18 to 50 years, out of which Vegans were 20%(n=20) and other samples having regular diet were 80%(n=80).

**Tools and Techniques:** A self-designed questionnaire was framed to learn about awareness and opinions of respondents in Kolkata and New Delhi. The questionnaire was formed on the basis of Nominal Scale. It was used to represent people's attitude to this topic. The respondents were asked to think about their opinion about the topic and rate their preference on the scale.

The study adopted three-point rating scale method of questionnaire to obtain information about the respondents.

The rating scale adopted is as follows:

- Yes
- No
- Maybe

**Statistical Analysis:** The results were computed as frequency and percentages.

## RESULTS AND DISCUSSION

*Table 1: Growing Trend of Veganism in Metropolitan Cities of India*

QUESTIONS	Yes	Maybe	No
	n	n	n
Do you follow Veganism?	20	8	72
Are you aware of Veganism?	92	0	8
In your opinion, Is veganism a healthier trend?	56	32	12
Do you feel there is enough information or help for people to follow veganism in India?	76	16	8
Will opting for Veganism lead to too many restrictions?	76	16	8
Have you searched for vegan Products?	72	4	24
Have you ever consumed vegan food?	60	12	28
Can you differentiate between vegan and non-vegan food products?	80	8	12
Will you switch to vegan diet because of its health benefits?	32	16	52
Do you think there are enough Vegan Food outlets?	8	8	84
Have you searched for Vegan Bakery Products?	60	8	32
Are vegan substitutes expensive?	32	48	20
Baking vegan items is expensive?	52	36	12

On the basis of the data collected from the questionnaire from 100 respondents, data was compiled and analysed to find out the various results.

Out of the total sample, population 72% clearly denied that they are not vegan and other 20% were vegans this variation helped in this study by analysing inputs of two set of respondents. Even though everyone was not a vegan but 92% of respondents know about Veganism by which we can assess the awareness in public about this trend.

On being asked their opinion if Veganism is a healthier trend then 56% agreed to it whereas 32% were not sure if adopting veganism will lead to a healthier lifestyle. But even if it is a healthier trend 52% denied switching to veganism and only 32% of respondents thought of switching to Veganism.

The demand and consumption food is high which can be assessed when 60% of respondents said that they have consumed a vegan food at least once in their life which seemed surprisingly low as India is a Vegetarian country therefore the possibility of not having a vegan meal seems low a reason for this could be the use of *desi ghee* in most of Indian preparations. Another factor for demand can be seen as affecting demand is 72% of respondents have specifically looked for vegan products in market.

One abnormal reaction was observed when 76% of responses received said that there is enough information available to help people follow Veganism in India whereas in actual scenario very appropriate information could not be found to follow a vegan diet in India's preferred Indian Cuisine. And 80% of respondents were very sure about making difference between Vegan and Non-vegan food products, which made clear that people are well aware of what is a vegan food.

A factor that might restrict people from switching to vegan diet is restrictions that come with following veganism avoiding all dairy products is very difficult even 76% agreed to this fact and denied switching to veganism due to this reason.

Going into a venture that serves Vegan bakery products at this time will be a good call as 84% of respondents think that there are not enough outlets serving vegan food present in this scenario this is backed by another opinion by 60% of respondents according to which they have searched for Vegan options when looking for bakery products.

When it comes to price point of vegan bakery products then about 32% have an opinion that vegan substitutes are expensive and 48% were not sure about it. Similarly, 52% people think that baking vegan products is an expensive practice. Overall, we can assess that in peoples' opinion in reality some Vegan options are not very expensive but holding the practice of baking vegan items is a skilled task and many chefs are not aware of it therefore the supply is low and this increases the cost of products.

Dr. Deepika Malik, CEO of LifeCentury.com and Dr. Deepika's Wellness, two widely-consulted health portals, stresses that vegans must make an extra effort to include certain elements in their diet. "A person needs one gram of protein per kilo that they weigh, daily. So, a 60 kg person needs 60 grams of protein, which vegetarians can get through soya. Vegans must especially focus on calcium; which lacto-vegetarians get from dairy products. They can eat sesame seeds, almonds, green leafy vegetables, or take calcium supplements to satisfy this need." (Flock, Forbes India, 2009).

Plant proteins are naturally packed with other beneficial nutrients like fiber, vitamins, minerals, healthy fat, and antioxidants. They typically contain very little saturated fat, sodium and cholesterol. This may be one reason why vegetarian and vegan diets are linked with a lower risk of disease. (Palmer, 2019)

Researchers have found out that Dairy products are difficult to replace as the intrinsic attributes of dairy foods i.e. proteins and fats that are difficult to mimic in a non-dairy substitute. More so happens because people start consuming these foods in infancy, the taste preference is deeply ingrained. Consumers do feel the difference between milk-based and soy-based products. Once

their first reference is milk-based products, they tend to reject plant-based products made with oat and soy or other vegetable-based food. Vegan ingredients and cooking techniques can be overwhelming for beginners, even if the changes are relatively small. Methods for making vegan foods creamy or cheesy involve soaking and blending cashews (Gupta, 2016).

In a report by Vegan First Daily (2017)“With Vegan recipes being available online, transitioning to this lifestyle has also been fairly easy. Cafes and restaurants are identifying the huge potential this market has. Talking about desserts – One can find vegan offerings at the Rose Cafe and Getafix in Delhi. Purely Vegan cafés and restaurants are cropping up in multiple cities and are flooded with patrons relishing on delicacies palatable for their lifestyle. Typically, a vegan diet is like any vegetarian diet minus the dairy products (and any other animal products like honey). So, 2016’s super health trend is literally, that simple! Among edibles, newer brands like Chetran’s are evolving to exclusively cater to vegan diets – soy milk, soy tofu paneer and so on. Delhi based White Club ice-creams and Roy’s Vegan Soy curd are gaining popularity and are being talked about in the Vegan community very fondly.”

## **CONCLUSION**

Indian Society is still not able to accept Vegan lifestyle, although we follow ‘ahimsa’ and Ayurveda. Mahatma Gandhi started this concept in India and people were not aware about it for a long time. Now the scenario has changed, with organizations like PETA in the society more and more people are getting aware of Veganism and getting influenced to follow this path. There has been a constant debate if this practice is healthy or not, there are some advantages and disadvantages to this. One major disadvantage includes loss of some necessary dietary needs that are essential for human body and Advantage includes non-violence against animals and there will be no health issues like lactose intolerant, gluten-free meals etc.

There is a need to spread more awareness on this topic on how to effectively follow this lifestyle, more articles and literature need to be published. Some blogs are providing information about this but a very few of them are from India, others fail to fulfil the needs of Indian consumers therefore they don’t prove to be of much help to Indians. As far as baking is considered there are hardly any dedicated directories or blogs available in India which can teach people about Vegan Baking. Various food bloggers do post some recipes but they use imported ingredients or techniques which cannot be easily followed by everyone and hence makes Vegan products expensive.

In reality if we see to the price factor of Vegan substitutes in India, they won’t be very high as in our country there already exists a set of ingredients which can help in being a cheap substitute for bakery ingredients. For instance, Flaxseeds known as ‘*alsi*’ in Hindi has been known in our



country for a very long period of time, this works very well as a egg replacer. It is cheap and gives good volume and binding to products as well as provide extra nutritive value to things.

The availability of outlets that serve vegan food is not much because of the demand, as we can now see demand is slowly increasing some specialized outlets may come up. Earlier restaurants and bakeries saw no demand and some of them kept one or two vegan items on menu just for the sake of not using one or two customers. Now with awareness amongst the customer is on rise therefore they prefer such places. There are several restaurants which have a separate or dedicated menu with Vegan offerings. Still bakery is not so prevalent, consumers are looking for breads, desserts, pastries etc. which are vegan so coming up with an outlet that serves such items would be a great opportunity in future as it at this time competition is very low.

In final words we can agree that Vegan diet is healthy if followed properly and its demand and awareness is increasingly. In a country like India which already has so much of vegan food available it is not very difficult to follow such a diet we have so many vegetables, grains, and pulses etc. which are suitable for one such diet. When it comes to baking, we can see the trend of Indians moving towards baked desserts so with rise in number of Vegans the demand will increase. There are already many cheap alternatives to dairy ingredients used in baking are available in our country only proper awareness and education is required for any bakery operation to be successful. Vegan Baking is not expensive or difficult it only needs more exposure and time to be invested with which it may become cheaper than normal products in future, at present people who know about this charge more because there is no competition available in market and they are the only ones to fulfil the demand of consumers. With more awareness of the topic baking vegan goods will become very easy and profitable business.

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