Dependent Variable I prefer to make my own food choices

## Gender disparities

markem Practices hicks are killed in the poultry industry

xnnsure Drivers and barriers to veganism

ndent Variable Correlations
eling Intention to adopt veganism
Caviola Speciesism Scale Knowledge

Nirupama Sarma
Bhupesh Singh

Morally life of animals and humans is the same

# PUBLIC SURVEY OF 

tunderstandino of yrooanisn

## Perceptions of Vegan Food

Acknowledgements ..... 3
Executive Summary ..... 4
Chapter I. Introduction, Background and Scope of Study ..... 9
Chapter II. Detailed Results of the Survey ..... 15
II A. Knowledge/Awareness of the Term "Vegan" ..... 15
II B. Knowledge/Awareness of Vegan Substitutes and Promotion ..... 16
II C. Perception of Vegan Foods. ..... 17
II D. Attitude to Food: Health and Pleasure ..... 18
II E. Attitudes of Speciesism and Food as Personal Choice ..... 19
II F. Knowledge/Awareness of Practices in Factory Farming ..... 20
II G. Acceptability of Factory Farming Practices ..... 21
II H. Intention to Adopt Veganism and Key Drivers ..... 21
II I. Attitude to Vegans ..... 23
II J. Exposure to Communication on Veganism ..... 23
II K. Advanced Statistical Analysis ..... 24
Chapter III. Key Findings and Recommendations ..... 28
References ..... 36
Appendix A. Survey Instrument ..... 37
Appendix B. Data Tables ..... 47
Appendix C. Demographics ..... 59
Appendix D. Notes on Factor Analysis and Regression Analysis. ..... 60

## ACKNOWLEDGEMENTS

This exploratory study Vegan Advocacy in India was made possible through grants from Animal Charity Evaluators, The Pollination Project and Climate Healers. We are most grateful for their support and faith in this study.

The study aims to equip advocates for veganism in India with the data and insights necessary to accelerate and amplify the impact of vegan advocacy efforts. The study comprises a Literature Review, a Content Analysis of Social Media, and a Public Survey of Knowledge, Attitudes and Practices (KAP) on dietary practices with a focus on veganism.

This survey provides a valuable snapshot of knowledge, attitudes and practices in India with regard to dietary practices, with a focus on veg*nism. I thank Bhupesh Singh of Azul Research and Advisory Services for valuable data collection and analysis, Dr. Pradeep Krishnatray for contributing towards the study, and Neha Gupta for supporting the finalization of the report.
I am grateful to the study's advisors Dr. Krithika Srinivasan, Senior Lecturer in Human Geography, University of Edinburgh, and Dr. Usha Raman, Professor, Department of Communication, University of Hyderabad who, despite their packed schedules, made the time to provide valuable guidance for the study. I thank Shailesh Rai and Dr. Leila Caleb Varkey for their inputs at key points in the study. My heartfelt thanks to Anjali Gopalan of All Creatures Great and Small (ACGS) for the support extended to execute this project.

I dedicate this project to the thousands of animal rights and vegan activists in India, foot soldiers and leaders alike. Undeterred by challenges of time and resources, even sometimes in the face of hostility and intimidation by industry behemoths, they continue to pound the streets (and the Internet) to visibilize the genocide of animals in the name of food, and speak truth to power.

May we realize our vision for a gentler and kinder world, one in which all sentient beings enjoy lives of freedom, equality and dignity.

Nirupama Sarma<br>Principal Investigator nirupama.sarma@gmail.com

[^0]
## EXECUTIVE SUMMARY

This Public Survey of Knowledge, Attitudes and Practices (KAP) represents the third and final phase of a larger exploratory study titled Vegan Advocacy in India. This survey is preceded by a Literature Review ( $L R$ ) and a Content Analysis of Social Media of vegan advocacy and campaigning in India. The goal of the overall study is to equip advocates for veganism in India with the necessary data and insights to enhance the design of their advocacy campaigns for greater impact. The specific objectives of the survey are to:

1. Understand Knowledge, Attitudes and Practices with regard to dietary practices, with a focus on veganism.
2. Identify drivers for, and barriers to, the adoption of veganism with specific reference to animal rights and welfare; environmental sustainability and climate change; health, nutrition and fitness; and the perceived availability, accessibility, taste and affordability of vegan substitutes.

The survey was conducted online (due to Covid-related lockdown restrictions) with a total sample size of 1000 English-fluent men and women between 18-60 years of age. Self-claimed vegetarian and non-vegetarian respondents were recruited in proportion of their actual population (30:70). Vegans were excluded from the study.. The study sites were Tier 1 cities (Bengaluru, Chennai, Delhi NCR, Kolkata, Mumbai) where vegan advocacy is more focused and supported by an ecosystem of vegan products availability.

## KEY FINDINGS AND RECOMMENDATIONS

## 1. Knowledge/Awareness of Veganism and Exposure to Vegan Messaging

Correct understanding of veganism is quite low. While $77 \%$ of respondents claim to be aware of the term "vegan" and what it denotes, only $41 \%$ have a correct understanding. Given this, responses to the rest of the survey need to be treated with caution, since they may be based on perception rather than actual knowledge. It is also relevant to note that $30 \%$ of respondents said they have never been exposed to any vegan messaging.

Knowledge of practices followed by factory farming is low, with more than half the respondents unaware of routine practices. Statements relating to the dairy industry had higher correct responses, but even these were no more than $50 \%$. Incorrect responses were highest for statements pertaining to fishing and poultry, with poultry practices also drawing high levels (42\%) of "not aware" responses.

Vegan advocacy must be intensified to enhance full understanding (and appreciation) for veganism, using multipronged strategies to reach key audience segments. It is especially important to invest greater time and resources to the development of creative content formats and content dissemination, which could include multimedia marketing strategies and content-boosting tactics such as common hashtags for social media, as detailed in the Content Analysis of Social Media.

## 2. Perception of Vegan Foods

A majority (72\%) of respondents perceive vegan food as "healthy and nutritious," although more vegetarians (81\%) than non-vegetarians (70\%) subscribe to this view. Among vegetarians, $70 \%$ consider vegan food to be "tasty" as compared to $59 \%$ of
non-vegetarians, suggesting that health and taste perceptions can act as barriers for the latter. Among those with correct understanding of the term "vegan" $48 \%$ perceived vegan food as "costly."

Overall, there is high endorsement (70\%) of the health attributes of vegan foods on a standalone basis. However, this endorsement progressively drops when referencing that vegan diets have "enough protein and nutrients" (61\%); that to be healthy it is important to follow "only a plant-based diet" (48\%); that meat and eggs were to be avoided for better health ( $40 \%$ ); and is lowest (35\%) when suggesting that "milk and milk products are not good for health." Across the board, endorsement for a vegan diet is significantly lower for non-vegetarians than vegetarians.

This reflects the deeply-entrenched belief in the health and nutritive value of animalderived foods, which, together with their perceived pleasure and taste dimensions, effectively reiterate the idea of the 4 Ns (the belief that meat and other animal-derived foods are "Natural, Normal, Necessary and Nice") especially when it comes to dairy in India. Addressing such barrier beliefs is key to promote vegan adoption.

Intention to become vegan is positively correlated with higher perception of vegan food as being healthy and nutritious, easily available, and tasty (81\%, 70\% and $74 \%$ respectively).

It is strongly recommended that the benefits of a vegan diet be advocated on a standalone basis, rather than in comparison with a non-vegan diet. Tackling perception barriers in terms of their health and taste attributes (especially among non-vegetarians) and pricing is crucial. It is also worth reminding audiences that many common Indian foods are vegan by default, even if they are not commonly identified as such. Alongside, policy measures (incentives and subsidies) to support vegan substitutes can ensure they are competitive in terms of quality and pricing.

## 3. Speciesism and Attitudes to Animal Rights

Closely related to the idea of the 4 Ns is that of speciesism, which the survey tested using an adapted form of Caviola's speciesism scale.

Support for animals in neutral (non-food) contexts won far greater endorsement than within the context of food. For example, endorsement of statements such as "All animals deserve to enjoy their natural habitat free from captivity" was higher (71\%) than for statements relating to animals in the context of food, such as "I am concerned about the welfare of animals raised for meat and dairy" (61\%). This clearly indicates that speciesism is especially pronounced when it comes to animals exploited as food.

The survey also tested attitudes towards factory farming practices. Somewhat tellingly, disapproval for cows being artificially bred and raised in captivity for milk was higher (45\%) than disapproval for the breeding and slaughter of animals in the meat and poultry industries (34\%), pointing to the sacred space occupied by cows in majoritarian Hindu culture. Even so, such disapproval was expressed by less than half the respondents, indicating the low salience of the issue, and further reiterating the influence of speciesism and the 4 Ns on the continued perpetuation of carnism.

Tackling speciesism is a significant and deep-rooted challenge. Vegan advocacy must continue to use strategies such as anthropomorphizing, cognitive dissonance and moral disengagement (detailed in the $L R$ ) to dissolve the perceived boundaries between human and non-human animals. In addition, a greater focus on dairy could yield
early dividends, given that there is a far greater awareness of vegan milk substitutes than meat substitutes ( $67 \%$ and $40 \%$, respectively), and a higher disapproval of dairy practices. Awareness of milk substitutes is positively correlated with correct understanding of veganism (74\%) and Intention to adopt veganism (78\%).

## 4. Intention to Adopt Veganism, and Key Drivers

About $42 \%$ stated that they have no desire to change their diet; however, $44 \%$ agree to the statement "I could think about becoming vegan." Regression analysis indicates that $28 \%$ of the respondents report that they are "very likely" to adopt veganism. Those in the 18-30 years age group were least resistant to changing their diets, with an average response of $40 \%$.

The key drivers influencing the Intention to adopt veganism are, in order of decreasing salience, health and fitness ( $63 \%$ ), environment and climate change ( $60 \%$ ), followed lastly by concern for animal rights and welfare (55\%). These trends resonate with some evidence in the $L R$. Overall, a higher percentage of both vegetarians and 18-24 year-olds also display an Intention to become vegan, in the same order of salience as described above. While animal rights as a driver for vegan adoption was low across all age groups, it was highest (59\%) for 18 to 24 -year-olds.

In order to gain traction with more (and newer) audiences advocacy must effectively integrate the positive impacts of veganism for personal health/fitness as well as for environmental sustainability. However, this does not exclude the continued integration of animal rights as a theme: studies cited in the $L R$ clearly establish this as a key driver for those who have already turned veg*n (this study excluded vegans based on its specific research interests), and also suggest that ethical concerns facilitate the more long-term maintenance of veganism.

## 5. Food as Personal Choice, or to be Informed by Larger Concerns?

The study investigated whether dietary practices should be seen as a personal choice or something that should be informed by larger concerns -- such as their consequences for animals, human health and environmental sustainability. A majority (69\%) said personal choice is important, while endorsement was lower (58\%) for the idea that food choices should be influenced by larger concerns such as animal rights and environment. However, figures for endorsement for animal rights (in non-food contexts) are comparable with support for personal choice. This suggests that personal choice can, indeed, align with concern for animal rights (and other wider issues) and that they're not necessarily in opposition.

Given the sensitive nature of dietary practices in the country , and the current environment in which dietary choices have been negatively politicized, it is strongly recommended that emphasizing personal choice should be a sine qua non for vegan advocacy. Positioning veganism as an intersectional issue, and highlighting personal health and environmental benefits (identified as key drivers) is necessary to deflect hostility and criticism. Advocacy can foster a different narrative that expands the meaning of choice to reference a larger, more inclusive ethics for animals and the planet.

## 6. Social Norms Surrounding Vegans and Veganism

The survey tested attitudes towards vegans and veganism, given that it is a fairly recent movement and elicits strong reactions of social approval or disapproval (the $L R$ also identified "vegan stigma" as a potential barrier globally for vegan adoption). The survey
found admiration of vegans for their choices (60\%), alongside prejudices against vegans for being "elitist and promoting an impractical lifestyle (54\%)." This attitude was especially pronounced among vegetarians who recorded higher endorsement for statements indicating that vegans are "moralistic" and "elitist/impractical."
In addition, perceived sense of social support for adopting veganism was tested, with a majority (79\%) of those most likely to adopt veganism indicating that they felt they will receive the necessary support from friends and family, while the perceived lack of such support was one of the obstacles for those least likely to adopt veganism (25\%).
Further research is necessary to understand the source of these prejudice barriers towards vegans - as detailed in the $L R$, it could stem from the threat vegans pose through their counter-normative choice. Vegan advocacy must foster responsible consumerism and sustainable living in a manner that can integrate multiple concerns and thus help dilute and deflect such prejudice. Shaping social norms to increase the valorization of veganism is crucial, given that attitudes of approval and disapproval are highly relevant to the Intention to adopt veganism, as indicated by the statistical analysis. On-ground social networks as well as endorsements by eminent voices can provide motivation and support to vegans and offset social isolation.

## 7. Key Target Groups for Advocacy

Based on the analysis the study identifies three key groups most primed for vegan adoption.

- Younger age group of 18-30 years: they have a greater awareness of both dairy and meat substitutes and the vegan ecosystem per se; are more aware of animal agricultural practices; score lower on the speciesism scale, and are less likely to consider eating meat as a "sign of modernity and global culture." This finding finds resonance in the $L R$ and the Content Analysis of Social Media which suggest that globally, veganism has a young face, and that vegan advocacy in India is mostly driven by, and focused on, youth.
- Vegetarians: expressed a greater openness to becoming vegan (54\% vs $42 \%$ nonvegetarians), with higher endorsement for all three drivers for vegan adoption. They had a stronger perception of vegan foods as being healthy and tasty, and higher awareness of milk substitutes. However, caution needs to be exercised to promote veganism as a secular, inclusive and intersectional movement rather than risk conflation with traditional vegetarianism with its religio-cultural dietary prejudices around diet. In addition, it is imperative to continue the focus on promoting the abstinence of meat, fish and eggs, given their implications for millions of animals, human and planetary health.
- Women: The advanced statistical analysis (detailed below) finds that being female is associated with an Intention to adopt veganism, with a coefficient of 0.71 and a significance value of $.039(\mathrm{p}<0.05)$ which indicates that this effect is statistically significant. This finding is congruent with studies cited in the $L R$ which point to women being more inclined towards meat abstinence and reduction, globally and in India.


## 8. Advanced Statistical Analysis

The study developed and tested two hypotheses using Multiple Regression, to identify factors that align most significantly with the "Intention to adopt veganism."

The first hypothesis stated that socio-cultural and personal identity factors are strongly associated with the Intention to adopt veganism. The hypothesis test is significant, with an F value of 5.965 and $R 2$ of .166, meaning that approximately $16.6 \%$ of the variation in the Intention to adopt veganism can be explained by these independent variables.

The second hypothesis tested the influence of Knowledge, Attitudes and Practices (KAP) on the Intention to adopt veganism. The hypothesis test is significant, and explained 44\% of the variance for a combined influence of all these factors.

The analysis identified eight predictor variables that impact the Intention to adopt veganism. In terms of positive correlations, they are: Awareness of milk substitutes; Awareness of artificial insemination of cows/buffaloes; Attitudes towards a vegan diet (a vegan diet is healthy and can solve many health problems); Attitude towards animal rights; availability of vegan foods/substitutes; and Social Norms of approval for veganism. Two additional variables negatively correlated with vegan adoption are (higher/more frequent) meat consumption, and (high) costs of vegan food.

## CONCLUSION AND WAY FORWARD

This KAP survey is of significance for two key reasons: it is the first survey in India focused on veganism per se (previous studies have focused on vegetarianism). Secondly, it attempted to integrate behavior change constructs with the socio-cultural specificities of India. However, caution is advised when extrapolating this data and applying it to the larger population, given the small sample size of 1000 English-fluent respondents in five large metros. The low understanding of veganism among the respondents also places a caveat on the study overall.

What the study does reveal is the many complexities and contradictions defining this domain: that concern for animals can coexist with consuming animal-derived foods; that vegans may be perceived as admirable as well as elitist and moralistic.

Going forward, far more research is necessary to gain greater understanding of this domain. Mixed methodologies such as qualitative focus groups, in-depth interviews, and randomized KAP household surveys can together provide nuanced insights to shape vegan advocacy strategies.

However, as is well known, knowledge is a necessary but insufficient predictor for behavior change, and a linear KAP model has its limitations. Vegan advocacy must be anchored in a far wider array of interventions to take effect: legislation and enforcement of animal agriculture laws; credible food certification and labeling; consumer education and nudges towards ethical consumerism, incentives and subsidies for the development and marketing of vegan substitutes. It is only within such a supportive ecosystem that veganism can become a more widespread reality.

## CHAPTER I. INTRODUCTION, BACKGROUND AND SCOPE OF STUDY

This Public Survey of Knowledge, Attitudes and Practices (KAP) represents the third and final phase of a larger exploratory study titled Vegan Advocacy in India. The overall goal of the larger study is to provide advocates of veganism in India with the necessary data and insights to enhance the design of their advocacy efforts for greater acceleration and impact.
Towards this end, the first phase - the Literature Review (LR) - outlines the "state of knowledge" with regard to socio-cultural and psychological factors that impact dietary choices and behaviors globally and with specific reference to India. The second phase of the study, the Content Analysis of Social Media, provides an understanding of how advocacy for veganism is being framed, positioned and promoted within the complex socio-cultural and political dynamics in India. This survey builds on these two studies to further interrogate the issue. A reading of all three reports is encouraged to gain a fuller understanding.
Why the focus on veganism? Recent years have witnessed a rapid escalation in the production and consumption of animal-derived products in India. According to the National Family Health Survey (NFHS-5, 2021), only 27-29\% of the population is vegetarian. A majority, i.e. $83.4 \%$ men and $70.6 \%$ women in the 15-49 age groups, are non-vegetarian. The proportion of men aged 15-49 years who have never consumed chicken, meat or fish stands at $16.6 \%$. This translates into a decline of 5 percentage points from the $21.6 \%$ reported in the previous NFHS-4 survey (2017).
Alongside, production of animal-derived products has risen significantly: between 2007 and 2017 alone: production of milk increased by $63 \%$, and chicken (the most consumed meat in the country) by $114 \%$ (Rai, 2019). India is the leading producer of milk globally, the third highest exporter of beef, and has the highest cattle population in the world. In addition to the deleterious impacts of this industrialized animal agriculture on millions of animals, this portends badly for environmental sustainability and climate change, as livestock emissions are among the top three contributors to India's greenhouse gas emissions. India as a site for the study is critical: its 1.3 billion population is fast embracing the consumption of animalderived products, and this will have a multiplier effect, with serious long-term consequences.

Recent years have witnessed a nascent but growing movement for veganism in India, driven mostly by animal rights groups and activists, complemented by vegan entrepreneurs and advocates for health and sustainable living. The movement is well poised for acceleration and scale up, especially if demand can be strengthened through strategic vegan advocacy campaigns.

However, there is a dearth of behavior change research in India that can help guide vegan advocacy. Most studies in this domain are based in the west with its vastly differing sociocultural contexts. Addressing this gap, therefore, is necessary for designing evidence-based advocacy strategies, and this study is a step in this direction.
Please note that this study uses the term "non-vegetarian" (commonly used term in India with negative connotations in relation to the vegetarian normative) rather than the more-globally-recognized, preferable term "omnivore" only to align itself with other studies of this nature in India, and because it is more understandable to respondents.

It is pertinent to acknowledge upfront that vegetarianism in India holds vastly different connotations from the west, where vegetarianism is largely driven by individual choice, unlike in India where it is largely predetermined by religion and caste at birth. "Upper-caste"based lacto-vegetarianism is driven by religious notions of "purity" among Hindu cultural
elites, with meat-eating (especially beef, given the cultural veneration of the cow by the Hindu majoritarian population) being stigmatized. Recent years have witnessed conservative forces trying to impose vegetarian-only diets in public spaces and institutions, alongside attacks on marginalized populations for possessing beef, or transporting cattle. Given its regressive connotation, progressive groups have distanced themselves from vegetarianism, and instead, celebrate the right of minority groups to determine their dietary choices. In the process, meat has started to occupy a democratic image and any constructive discourse on animal or ecological vulnerability is rendered invisible.

## GOALS AND OBJECTIVES OF THE STUDY

The overall goal of the study is to equip advocates of veganism with necessary data and insights to enhance the design of vegan advocacy campaigns for greater impact. Specific objectives of this survey are to:

1. Understand the Knowledge, Attitudes and Practices (KAP) of the general urban population around dietary choices, with a focus on veganism.
2. Identify drivers for, and barriers to, the adoption of veganism -- with specific reference to animal rights and welfare; environmental sustainability and climate change; health, nutrition and fitness.

## RESPONDENT PROFILE AND SURVEY SITES

1. The survey was administered online in English to English-fluent 18 to 60 -year-olds who self-identify as vegetarians or non-vegetarians. Those identifying themselves as vegans were excluded from the study. The mix of Gender, Religion and Age ranges were in proportion of population as per census data (refer Table 1 below).

Table 1. Demographic Profile of Survey Respondents - Sample Profile

| S.N. | Headers | Categories | Representative Break-up | Count |
| :---: | :---: | :---: | :---: | :---: |
| 1 |  | Vegetarian | $30 \%$ | 300 |
|  |  | Non-vegetarian | $70 \%$ | 700 |
| 2 | Gender | Male | $52 \%$ | 480 |
|  |  | Female | $48 \%$ | 520 |
| 3 | Religion | Hindu | Muslim | $80 \%$ |
|  |  | Christian | $14 \%$ | 800 |
|  |  | Sikh/Jain/ Others | $3 \%$ | 140 |
| 4 | 4 | $18-24$ | $3 \%$ | 30 |
|  |  | Age | $25-30$ | $25 \%$ |
|  |  | $31-40$ | $20 \%$ | 200 |
|  |  | $41-50$ | $25 \%$ | 200 |
|  |  | $51-60$ | $20 \%$ | 200 |
|  |  |  | $10 \%$ |  |

2. The survey was administered among a cross-section of population based in five Tier 1 cities of India - Bengaluru, Chennai, Delhi NCR ${ }^{1}$, Kolkata and Mumbai. These are sites where vegan advocacy is more intense, and complemented by relatively better availability, accessibility of the nascent vegan products ecosystem.

## SAMPLING FRAME AND SIZE

The total sample size for respondents was fixed at 1000, based on three important factors:

- Other similar online studies conducted in India or elsewhere used a sample of around 1000 (Anderson J and Tyler L, 2018).
- This is a descriptive and exploratory study. It does not attempt to extrapolate the results to the population of interest. Instead, its purpose is to aid the design of evidence-based strategic communication campaigns based on insights gained from the study.
- We arrive at about the same sample size using the formula outlined. ${ }^{2}$


## METHODOLOGY

The study used quantitative research methods to explore the Knowledge, Attitudes and Perceptions of a sample of residents in urban India in 2022 towards dietary choices with a focus on veganism.

1. Cross-sectional survey design was adopted. Links were sent out to approximately 3000 members of the research agency's respondent database, curated from previous studies over the last ten years, combined with some fresh recruitments. A sample of the respondents participated via snowballing.
2. Participation in the survey was completely voluntary, with no incentives. A segment of the respondents opted out mid-way, which is to be expected in quantitative research.
3. At the back end, the agency ensured that only responses with approximately over $90 \%$ questions answered were considered valid. Quotas were also maintained at the back end.

The questionnaire was constructed drawing from four sources: the Literature Review ( $L R$ ), consultations with vegan activists and researchers, the research team's experience in this domain, and learnings gleaned from the pilot survey conducted in March 2022 in advance of the main survey.

The questionnaire broadly covers six main areas: Demographics (age, gender, city of residence, education, and Practices such as current dietary habits); Knowledge/Awareness; Attitudes; Perceptions; and Social Norms (such as approval or disapproval for vegans and veganism), all of which are independent variables. The sixth area, Intention to adopt veganism, is the dependent variable.

[^1]The key constructs and areas of interest studied were the following:

- Knowledge/awareness ${ }^{3}$ of the term "veganism" and of animal agriculture practices especially in relation to cows, chicken and fish
- Awareness and perception ${ }^{4}$ of vegan substitutes to meat and dairy in terms of availability, accessibility, pricing, taste, and nutritive value.
- Attitude towards food in terms of taste, pleasure, and health.
- Attitude towards animal rights/welfare and the idea of speciesism (Ryder, 1975). ${ }^{5}$
- Attitude towards animal agriculture practices (acceptability/disapproval); towards vegans and veganism (admiration for altruistic concerns, or disapproval for perceived elitism, judgmentalism or perceived impracticality).
- Social Norms, attitudes of approval or disapproval towards vegans/veganism
- Intention to adopt veganism, and the drivers such as concern for animal rights/welfare, health and fitness, and/or environmental sustainability and climate change; taste.
- Exposure, if any, to veganism and sources of such exposure (interpersonal discussions, news media, social media, conferences etc).
- Current practices such as food habits (vegetarian or non-vegetarian), frequency of meat/ dairy consumption.
- Demographic profile (socio-cultural factors) including age, gender, income, occupation, education, caste, religion and dietary practices. Also, personal identity factors traditional or modern; religious or secular ${ }^{6}$.
Each of the above constructs were appropriately operationalized and integrated into the survey. The speciesism scale (Caviola et al., 2018) was adapted based on the specific needs of this survey with its focus on the use of animals as food. These items were reverse-coded where necessary to measure levels of agreement or disagreement in relation to pro-animal and pro-vegan attitudes. Attitudes, perceptions, and intentions were measured via levels of agreement or disagreement on a 7-point Likert scale and awareness and knowledge via Yes/ No or True/False/Not aware options (See Appendix A: Survey Instrument). The seven items (on the Likert scale ranging from "extremely agree" to "extremely disagree") determine the extent to which the respondent considered himself/herself as "traditional" or "modern."
The Attitudes and Social Norms components were further analyzed to group them into domains using Factor Analysis.
Since all demographic questions were measured on an ordinal scale except age and income, the analysis required non-parametric statistics. The questions and the scales used in the study were developed keeping Indian socio-cultural contexts in mind. The survey was administered

[^2]in English, and was conducted online in compliance with donor requirements given the Covid pandemic-related lockdown restrictions. The research team used SurveyMonkey to administer the survey. Excel was used for data entry, and SPSS for data analysis.

## ADVANCED STATISTICAL ANALYSIS

The above constructs were further analyzed to test the two key hypotheses for the survey.
Multiple Regression was used to test the two key hypotheses for the study. Various factors (independent variables such as age, gender etc.) were analyzed to understand their impact on the dependent variable (Intention to adopt veganism).

Hypothesis 1: Socio-cultural and personal identity factors have a strong association with Intention to adopt veganism. Personal identity referred to ideas of traditional/ modern; religious/secular.

The socio-cultural and personal identity factors explored include gender, age, religion, income, occupation, caste, education, and dietary habits (excluding those who were vegan). In addition to these demographics the idea of "personal identity" was measured on a Likert scale.

Hypothesis 2: Knowledge/awareness of animal exploitation; Attitudes of speciesism; Practices such as frequency of meat/dairy consumption; perceived Social Norms; and access /availability/cost of vegan substitutes are correlated with the Intention to adopt veganism.

- Awareness of vegan products was measured using six dichotomous (Yes/No) questions.
- The treatment meted out in factory farms to animals such as chickens and cows was measured through six (True/False) questions.
- The attitude to meat and dairy consumption and plant-based vegan foods was measured through 21 questions on a 7-point Likert scale.
- The Attitudinal domains were formed to explore stated Intention to adopt veganism (using Q. 45-56, See Appendix A).
- Perception of vegan foods
- Three scale questions were developed to measure Social Norms, which vary based on multiple factors such as religion/caste/class and gender, and reference groups such as family/friends and colleagues. Social norms present themselves in the form of approval/ disapproval for specific food choices.

The Multiple Regression analysis helped understand whether Knowledge, Attitude, Practices and Social Norms together significantly explain variation in the dependent variable (Intention to adopt veganism). The following process was adopted:

- A 21-item scale measured attitude toward veganism. Factor analysis using varimax rotation reduced the 21 -item scale to yield five factors.
- Multiple Regression modeling was used to understand the relationship between the several independent variables and the "Intention to adopt veganism."
- The dependent variable "Intention to adopt veganism" was operationalized using a 5 -item scale (for example, I am willing to become vegan to prevent violence toward animals raised for food). Responses to the 7-point Likert scale measuring

Knowledge, Attitudes, Perceptions and (intended) Behavioral changes were added to yield a summary index where the minimum a respondent could score was 5 and the maximum was 35 .

- Various factors were analyzed, and their impact on the Intention to adopt veganism was measured.
- Five models were created by adding predictor variables in a stepwise manner to determine which model would work best for vegan advocacy. Model 1 included only Knowledge variables, while Model 2 added Food Practices as a predictor. Model 3 included Perception items, Model 4 included Attitude toward veganism factors, and Model 5 included Social Norm variables. The model with the highest variance (Model 5) which was both sensitive and had the best fit, was chosen to explain the factors.


## LIMITATIONS OF THE STUDY

- The results of this study are based on a non-probabilistic sample of 200 respondents from each of the Tier-I cities listed earlier. Given the population size and its diversity in these cities, the sample is extremely small. Therefore, caution should be exercised when extrapolating from this data for application to the general population.
- Given the low levels of understanding of the term "vegan," responses to the survey questions need to be tempered with caution.
- The respondents were recruited from the databases of the market research agency based on self-selection, which may have created a bias.
- The study questionnaire was administered only to those fluent in English, excluding a large part of the population.


## CHAPTER II. DETAILED RESULTS OF THE SURVEY

Based on population proportionate sampling, 18\% of the respondents followed an "only vegetarian" diet, $12 \%$ followed vegetarian diet with some flexibility, and $70 \%$ consumed nonvegetarian food on a regular basis (See Chart 1).
For research purposes, we categorized food choices into "vegetarian food only" (including cow/buffalo milk, curd, and other milk products but no eggs/meat/fish); "primarily vegetarian" (including milk and eggs - 8\%, and including milk, eggs, and fish - 4\%); and "non-vegetarian food" (including vegetarian food, and in addition, milk and milk products, eggs/meat/fish).

Chart 1: Dietary Practices of Respondents


## II A. KNOWLEDGE/AWARENESS OF THE TERM "VEGAN"

A majority (77\%) said they were aware of the term "vegan," with claimed awareness being especially high in Mumbai and Kolkata (approximately 90\%). However, less than half (approximately 41\%) of those who claim awareness could identify the correct descriptor for the term, with about $22 \%$ misunderstanding it to refer to vegetarianism, or only meat abstinence (see Chart 2).

Chart 2a: Knowledge/Awareness of Veganism


Relatively better understanding of veganism was found among women (44\%) and among 41 to 50 -year-olds (49\%). This was approximately half of each cohort. Next to 41 to 50 -yearolds, in correct understanding, are 18 to 24-year-olds (See Appendix B, Table 1).

Chart 2b: Knowledge/Awareness of Veganism


Correct responses to the question "Who is a vegan?" improves with Education approximately $60 \%$ of Postgraduates/PhDs have correct understanding of veganism. (See Appendix B, Table 2).

## II B. KNOWLEDGE/AWARENESS OF VEGAN SUBSTITUTES, CELEBRITIES, AND BUSINESSES

Overall, a majority (67\%) are aware of vegan milk substitutes; approximately half (53\%) are aware of vegan businesses (companies or people) that sell vegan products, or of celebrity Indian vegans (48\%). Two in five are aware of vegan meat substitutes ("clean" - 44\%, and "mock" meat - 42\%) or of any organization that promotes veganism (see Chart 3 below).

Chart 3: Knowledge of Vegan Substitutes, Vegan Celebrities and Businesses


The age group of $25-30$-years is most aware of milk substitutes ( $77 \%$ ), as well as of meat substitutes ( $46 \%$ for mock meat and $49 \%$ for clean meat). Awareness of mock meats or clean meats is also high among the 18-30 age bands (ranging between $42 \%$ and $49 \%$ ).

Approximately $57 \%$ to $60 \%$ among 18-30-year-olds have awareness of companies/people that sell vegan products (See Appendix B Table 6). Thus, overall awareness of vegan substitutes appears more common in the age group of 18 through 30 years.

Milk substitutes are identified with veganism. Awareness of milk substitutes is correlated with correct understanding of veganism (74\%), while the correlation of awareness of labgrown "clean" meat is much lower (36\%).

Awareness of milk substitutes and "clean" meat is correlated with the Intention to adopt veganism at $77 \%$ and $52 \%$ respectively. More among non-vegetarians (45\%) have heard about "clean" meat than vegetarians (37\%) (See Appendix B Table 7).

Awareness of milk substitutes is greater among the more educated segments: Graduates and Postgraduates/PhDs. (See Appendix B Table 8)

## II C. PERCEPTION OF VEGAN FOODS

A majority (72\%) perceive vegan food to be "Healthy" and "Nutritious"; 62\% perceive it to be "Tasty" and "Easily available," while 43\% perceive vegan food to be "costly" (See Chart 4).
Please note that these responses need to be interpreted with caution given that correct understanding of the term vegan/ veganism itself is quite low (Appendix B, Table 4).

Chart 4: Perception of Vegan foods


In terms of pricing, $40 \%$ men and $46 \%$ of women perceive vegan food to be "costly." Almost half ( $48 \%$ ) the 18 to 24 -year-olds ( $48 \%$ ) also share this view, while $74 \%$ in this age group also agree that it is "healthy and nutritious." A majority of 65\% among 25 to 40-year-olds assert that vegan food is "tasty." (See Appendix B, Table 3)

A higher proportion among vegetarians (81\%) as compared to non-vegetarians (70\%) perceive vegan food to be "healthy and nutritious;" More vegetarians (70\%) than nonvegetarians (59\%) perceive it to be "tasty" - suggesting that both health and taste attributes could be a barrier for non-vegetarians to adopt veganism.

Among those with correct understanding of the term "vegan" a majority (71\%) consider it to be "healthy and nutritious," even while half ( $48 \%$ ) consider vegan food items to be "costly" (See Appendix B Table 4).

A higher proportion of Graduates and Postgraduates/PhDs find vegan food as "healthy and nutritious." A higher proportion among those with Class XII as highest education, perceive vegan food to be "costly" (See Appendix B Table 5).

## II D. ATTITUDE TO FOOD: HEALTH AND PLEASURE

The survey investigated the connotations of health and pleasure associated with meat and dairy based foods.

The survey finds high endorsement for the statements that "vegan diet can solve many health problems" (70\%), and "... is wholesome with enough nutrients etc. (61\%)).
Yet, a majority (65\%) do not agree that milk is "bad for health," or that milk or milkbased products are an "unnecessary pleasure" (59\%). Half the respondents believe that eating meat-based dishes (such as chicken tandoori, mutton biryani) are one of the "joys of life" (See Chart 5).
This data suggests that a positive attitude to veganism may coexist with cultural beliefs and habits that consider meat and dairy as essential to diet, pointing to some of the challenges for advocacy.

Chart 5: Attitude to Food - Health and Pleasure


Those in the 31-40 years age group are most positively disposed towards health benefits of a vegan diet, across attributes. They are more likely (46\%) to consider it important to avoid meat and eggs to be healthy and fit. A majority ( $74 \%$ ) of them also agree that a vegan diet is "healthy and can solve many problems."
41 to 50 -year-olds are more likely to disagree with the statement that meat and milk-based delicacies are an "unnecessary pleasure" (57\% and 54\% respectively). (See Appendix B Table
9). More vegetarians (55\%) than non-vegetarians (45\%), consider "only plant-based" diets to be healthy.

An overwhelming majority (90\%) of those with Intention to adopt veganism vouch for health benefits of a vegan diet, while $71 \%$ of this sub-group consider "only plant-based" diet to be healthier. A higher proportion of vegetarians think that a vegan diet is healthy as well as wholesome ( $78 \%$ and $76 \%$ respectively). (See Appendix B, Table 10)

Fewer among Postgraduates/PhDs (40\%) believe that "only plant-based diet" is the only healthy diet, even as a greater proportion (63\%) of higher educated sub-groups consider vegan diet as wholesome, with enough proteins and nutrients (See Appendix B Table 11).

## II E. ATTITUDES OF SPECIESISM AND FOOD AS PERSONAL CHOICE

Endorsement for the lives of animals in context-neutral settings was high: A majority (71\%) believe that "animals deserve to enjoy their natural habitat, free from captivity;" and $70 \%$ believe that "morally, the lives of animals are equal to that of humans" (See Chart 6).

However, endorsement for the same in non-neutral food settings was lower: "I am concerned about the welfare of animals raised for meat and dairy" ( $61 \%$ ) and "people's food choices should be made based on larger concerns such as animal rights and environmental impact/climate change" (58\%). This suggests that speciesism is especially pronounced when it comes to animals viewed as "food," a reflection of the perceived essentiality of meat (and dairy) that is captured in the concept of the "4 Ns" - i.e., "Natural", "Normal," "Necessary" and "Nice" as detailed in the $L R$ (Piazza et al., 2015). Speciesism is a key barrier to vegan adoption.

Chart 6: Attitudes of Speciesism and Food as Personal Choice


Concern for animals raised for meat and dairy was higher ( $60 \%$ ) in the under-50 age group than those in the $\mathbf{5 0}$-plus age range ( $48 \%$ ). Those in the $18-24$ age group are less likely ( $43 \%$ ) to consider eating meat "as a sign of modernity and global culture," a belief that has partly fuelled the embracing of meat consumption even among cultural vegetarians in India, as detailed in the $L R$. A higher proportion (58\%) in this age group finds a "big difference between killing animals and killing plants," while in the 18-30 age group a majority ( $68 \%$ to

69\%) believe humans "do not have the right to use animals however they want" (See Appendix B, Table 12).

There was high support (69\%) for the idea of food as "personal choice," rather than having someone telling them what to eat or not to eat. Independence and agency in making food choices is especially important ( $75 \%$ ) for 41 to 50 -year-olds; this is also the group that loves its biryanis (traditionally meat-based) and ice creams. However, a higher proportion (65\%) in this age group also considers exploitation of animals for food as wrong, and that "humans do not have the right to use animals however they want" (70\%).

Personal choice is more important among those with correct understanding of veganism (73\%) and/or those more likely to become vegans (77\%). (See Appendix B, Table 13).

A majority of vegetarians express a greater concern for the welfare of animals raised for meat and dairy, and also differentiate killing of plants from killing of animals ( $74 \%$ and $70 \%$ respectively).

## II F. KNOWLEDGE/AWARENESS OF PRACTICES IN FACTORY FARMING

The survey tested awareness levels through a mix of true and false statements relating to factory farming practices. This was based on the premise that correct awareness will positively influence an Intention to adopt veganism. The analysis refers to percentages of correct answers (based on true/false statements); instances where respondents chose an incorrect response are defined as "incorrectly aware." There was a relatively high percentage of "not aware" responses.

Overall, lack of awareness was highest for the poultry and fishing industries. Most respondents ( $66 \%$ ) are unaware (or incorrectly aware) of the practice of killing male chicks, whereas $70 \%$ are unaware (or incorrectly aware) of "debeaking"7 practices with baby chicks. Statements related to the poultry industry had the highest "not aware" responses of $41 \%$ and $42 \%$, which is significant given that chicken is the most consumed meat in India. A majority of $69 \%$ were unaware of fishing practices.
In the case of the dairy industry, $50 \%$ were unaware of artificial insemination and $53 \%$ of the killing involved in the dairy industry ${ }^{8}$. Almost half ( $47 \%$ ) were unaware of the use of antibiotics/hormones in animal agriculture. A majority (55\%) are unaware or have incorrect awareness of practices followed in the fishing industry ("fishing boats ensure that they only catch fish meant to be eaten"), while $53 \%$ are unaware of antibiotics/hormones use in factory farming (see Chart 7).

Findings on awareness of factory farming practices are similar across age segments; as for gender, men display marginally higher awareness (51\%) of the use of antibiotics/hormones on animals raised for food than women (42\%) as well about artificial insemination, and killing in the dairy industry (See Appendix B Table 15).

Correct understanding of veganism is correlated with greater awareness of the usage of antibiotics/hormones on animals raised for food (51\%) and of artificial insemination in dairies (52\%) (See Appendix B Table 17).

[^3]Chart 7: Practices followed in Dairy, Meat and Fishing Industries


Those aware of artificial insemination of cows are more likely to adopt veganism (50\%) as compared to those not aware (44\%). Those aware of killing involved in the poultry industry are more likely to adopt veganism (55\%).

Vegetarians have a greater awareness of artificial insemination in the dairy industry (58\%), and about half of those aware, disapprove of it (49\%), (See Appendix B, Table 17 and 18).

## II G. ACCEPTABILITY OF FACTORY FARMING PRACTICES

Overall there appears to be a greater sense of unacceptability about practices in the dairy industry (45\%) compared to the meat industry (34\%), (See Chart 8).

Chart 8: Acceptability of Practices followed in Dairy and Meat industries
$\left.\begin{array}{|r|ccc|c|}\hline \text { Is it acceptable for dairy companies to artificially breed } \\ \text { and raise cows in captivity to produce milk? }\end{array}\right)$

More among vegetarians (37\%) and those with correct understanding of veganism (39\%) disapprove of breeding and slaughter of animals for meat (See Appendix B Table 18).

Fewer (39\%) among the educated Postgraduates/PhDs find it unacceptable that dairy companies artificially breed and raise cows in captivity to produce milk, as compared to overall (45\%), (See Appendix Table 20 and Chart 8)

## II H. INTENTION TO ADOPT VEGANISM AND KEY DRIVERS

The survey explored if respondents were open to the idea of changing their diets, and mapped the possible motivators for the change. About 42\% agreed with the statement "I have no desire to ever change my diet" and $44 \%$ agreed to the statement "I could think about becoming vegan."

Resistance to changing diet ("I have no desire to ever change my diet") was higher among vegetarians (48\%) compared to non-vegetarians (43\%); and yet, more vegetarians (54\%) endorsed the statement "I could think about becoming vegan." Resistance to changing diet was highest in the older 50+ age group, and lowest in the 18-24 age group, followed by women.

The key drivers for Intention to adopt veganism, across all age groups, are Health/Fitness (63\%) followed by Environment/Climate Change (60\%). Animal rights/concern for violence faced by animals was the weakest driver for vegan adoption at 55\% (See Chart 9 and Appendix B, Table 21).

Chart 9: Intention to Adopt Veganism and Key Drivers


Intention to become vegan was highest in the younger 18-24 years age group. Within this age group $66 \%$ are willing for the reason of health/fitness and $62 \%$ for environment/climate change as compared to those over 50 years ( $55 \%$ and $51 \%$ respectively). Broadly, concern for animals raised for food was the least cited reason for Intention to adopt veganism, except in the 18 to 24 age group, where it ranks third out of four possible drivers (See Appendix B, Table 21).

Vegetarians (54\%) are more likely to become vegan as compared to $42 \%$ non-vegetarians. This trend also reflects on each of the drivers of health and fitness, environment and climate, taste, and violence towards animals (See Appendix B, Table 22).

Those with a correct understanding of veganism are more likely to become vegan - if vegan food substitutes taste as good as real meat/dairy ( $61 \%$ ). Taste was also an important consideration for the more educated (graduates and post-graduates) who are willing to adopt veganism if vegan substitutes taste as good as the original animal-derived products (refer Appendix B, Table 23).

Concern for animal rights and welfare as a driver for vegan adoption for postgraduates/Ph.D. had the lowest (35\%) appeal.
Further statistical analysis was also conducted on the dependent variable, Intention to adopt veganism (refer pg. 15 for methodology). The results indicate that $28 \%$ of respondents were "very likely," 29\% "somewhat likely," and $24 \%$ "less likely," and $19 \%$ of respondents had no Intention to adopt veganism.

The perceived approval and support of family and friends play an important role in influencing the Intention to adopt veganism. For example, almost half (49\%) the respondents least likely to adopt veganism agreed with the statement "My family and friends will be upset or make fun of me if I become vegan," indicating that this could be a significant hurdle. Agreement with this statement was lower (39\%) for those most likely to adopt veganism. Similarly, the statement "If I decide to turn vegan, I can rely on people around me for help" drew agreement of $58 \%$ and $45 \%$ from vegetarians and non-vegetarians respectively, from a majority ( $79 \%$ ) of those most likely to adopt veganism, and only $25 \%$ from those least likely to do so. (refer Appendix B, Table 24).

## II I. ATTITUDE TO VEGANS

The survey tested attitudes towards vegans in order to gain an understanding of social norms with regard to these dietary choices. Overall, $60 \%$ admire vegans for their choices, specifically for not consuming animals or animal-derived products, as well as their concern for climate change (59\%). A similar proportion does not consider vegans as moralistic people, passing judgements on personal eating habits of others (See Chart 10).
However, over half (54\%) consider vegans to be elitist, promoting an impractical lifestyle.
Chart 10: Attitude to Vegans


Support for vegans was highest in the age groups of 25-30 years (64\%) and 41-50 years (65\%), who consider vegans "as responsible citizens who are concerned about climate change" (see Appendix B Table 24). Less than half (48\%) among 18 to 24 -year-olds are likely to consider vegans as "elitist people promoting an impractical lifestyle" as compared to approximately $59 \%$ among 41 to 50 -year-olds.

A higher proportion of vegetarians (70\%) as compared to non-vegetarians (59\%) admire vegans for not consuming animals or products derived from animals (Appendix B Table 25). More vegetarians consider vegans as responsible citizens concerned about climate change ( $66 \%$ ) as compared to non-vegetarians (58\%). Interestingly, more among vegetarians than non-vegetarians also consider vegans as moralistic ( $47 \%$ and $40 \%$ respectively) or elitist and impractical ( $\mathbf{6 3 \%}$ and $\mathbf{5 2 \%}$ respectively) (See Appendix B Table 25).

## II J. EXPOSURE TO COMMUNICATION ON VEGANISM

The survey shows that $60 \%$ have seen or received messages on veganism or vegan diet on social media at least once; $65 \%$ have read printed material or talked to a vegan, and $69 \%$
have had informal conversations with friend or family. However, around 32\% have had zero exposure to any communication on veganism. Approximately $40 \%$ plus have not seen TV shows, or heard radio programs on veganism and vegan diet.

Across all communication channels, exposure to vegan messaging was highest (ranging from $52 \%-73 \%$ across all communication channels) among 18 to 30-year-olds rather than the 30+ age group (ranging from $44 \%$ to $65 \%$ across all communication channels) (See Appendix B, Table 27). Within the 18-30 age group, discussion with friends and family was the highest ( $73 \%$ ) source of exposure for vegan messaging.

Chart 11: Exposure to Communication on Veganism


Education as a variable showed mixed results. Correct understanding of veganism and awareness of vegan milk substitutes did improve with education, among graduates and above, especially postgraduates/PhDs. They also show a greater value for healthy vegan food and concern for animals in general, non-food contexts, but are much less willing to question animalderived diets, and also score higher on the speciesism scale.

## II K. ADVANCED STATISTICAL ANALYSIS

## Hypothesis 1

The first hypothesis suggests that socio-cultural and personal identity factors are strongly associated with the Intention to adopt veganism. To test this, socio-cultural elements (demographics) such as gender, household income, age, religion etc., were converted into dummy variables and used along with six personal identity predictor variables that included attitudes to tradition, modernity, and religion (measured on a 7-point Likert scale) to test their impact on the Intention to adopt veganism. ${ }^{9}$

The hypothesis test is significant, with an F value of 5.965 and R 2 of .166 , meaning that approximately $16.6 \%$ of the variation in the Intention to adopt veganism can be explained by the independent variables. ${ }^{10}$

[^4]Being female as a predictor variable had a coefficient of 0.71 suggesting that being female is positively associated with the Intention to adopt veganism, and the significance level of 0.039 indicates a statistically significant relationship. Among the other predictors ${ }^{11}$ that represent personal identity factors which had a positive association with the dependent variable include: belief in marrying within the caste/sect with a coefficient of 0.26 and a significance level of 0.018 and, belief in educated girls staying at home with a coefficient of 0.26 and significance level of 0.019 . This suggests that such traditional/conservative beliefs are positively correlated with veganism. The final predictor, visiting places of worship based on religion, had a coefficient of -0.47 suggesting a negative association with an Intention to adopt veganism. The significance level of 0.000 ( $\mathrm{p}<.001$ ) indicates a highly significant relationship - indicating that such traditional/religious practices were negatively correlated with Intention to adopt veganism.
Overall, these findings contradict the assumption of the research team (that veganism is positively correlated with modernity, however, they may not be robust enough, and the results are thus best put aside.

## Hypothesis 2

The second hypothesis focuses on the relationship between Knowledge, Attitudes (including Perceptions) and Practices as independent variables related to the dependent variable - i.e., Intention to adopt veganism. The factors examined included :

- Awareness of vegan products and awareness of factory farming practices.
- Dietary practices (vegetarian or non-vegetarian).
- Perception of vegan foods, for instance in terms of health, taste, availability and pricing. (summation of scores of four items).
- Attitude towards veganism, for example, whether vegan diet can solve health problems and that it is wholesome with enough nutrients (21-items, factor analyzed and reduced to five factors).
- Attitude to Veganism was measured via the 21-item scale mentioned above. Factor Analysis using varimax rotation yielded five factors that together explained $\mathbf{5 7 . 2 \%}$ variance (see Tables 30 and 31 in Appendix D).
- Social Norms, which vary based on multiple factors such as religion/caste/class and gender/education, as well as reference groups (such as family/friends) presenting themselves in the form of approval/disapproval for specific food choices (three items summed, to create an index).
The first two variables (awareness and current dietary practices - vegetarian or nonvegetarian) were converted into dummy variables. A total of 13 predictor variables are used to determine their impact on the Intention to adopt veganism.


## The model for hierarchical regression analysis was arrived at by creating 5 models.

Five models were created by adding predictor variables in a stepwise manner to assess the which of the models may have the best desired impact on the dependent variable of

[^5]Intention to adopt veganism. Model 1 includes only Knowledge variables, while Model 2 adds dietary Practices (vegetarian or non-vegetarian) as a predictor. Model 3 includes Perception of vegan foods; Model 4 includes Attitudes toward veganism, and Model 5 includes Social Norm variables.

Chart 12: Implications of the Regression Analysis (Hypothesis 2)

| REGRESSOR | Model |
| :--- | :---: |
| INTERCEPT | 11.96 |
| Awareness of Milk substitutes | $0.70^{* *}$ |
| Awareness that cows and buffaloes are artificially inseminated | $0.87^{* *}$ |
| Cost of Vegan food | $-0.16^{*}$ |
| Availability of Vegan food | $0.20^{*}$ |
| Attitude towards Vegan diet <br> 1) Vegan diet is healthy \& can solve many health problems <br> 2) A vegan diet is wholesome with enough protein and other nutrients <br> essential for health/fitness | $0.12^{* * *}$ |
| Attitude towards Animal Rights <br> 1) Morally, the lives of animals is equal to that of humans <br> 2) There is a big difference between killing animals and killing plants <br> 3) Humans do not have the right to use animals however they want <br> 4) It is wrong to exploit animals for food <br> 5) Concern about the animals raised for dairy and meat <br> 6) All animals deserve to enjoy their natural habitat, free from captivity | $0.19^{* * *}$ |
| Attitude towards Meat consumption |  |
| Social norms | $-0.27^{* * *}$ |
| F | $0.53^{* * *}$ |
| $\mathrm{R}^{2}$ | $35.99^{* *}$ |
| $\mathrm{R}^{2}$ ADJ. | 0.45 |

The results show that the final model (Model 5) ${ }^{12}$ is the best fit for Intention to adopt veganism and includes eight significant variables as shown in Charts 12 and 13.
The hypothesis test is significant and explained $\mathbf{4 4 \%}$ of the variance. This indicates that the predictor variables used in the analysis account for $44 \%$ of the variation in the Intention to adopt veganism. The remaining $56 \%$ are due to other factors. Eight significant predictors of the Intention to adopt veganism emerged, as following (See Charts 13).
The statistical analysis also tested the possible effectiveness of five different models that impact the Intention to adopt veganism. These models were created by adding predictor variables in a stepwise manner. Model 1 included only Knowledge variables, while Model 2 added dietary practices as a predictor. Model 3 included perception items, Model

[^6]4 included Attitude toward veganism factors, and Model 5 included Social Norm variables. Social norms vary based on multiple factors such as religion/caste/class and gender, and reference groups such as family/friends and colleagues, presenting themselves in the form of approval/disapproval for specific food choices.

Chart 13: Commentary on the Regression Analysis (Hypothesis 2)

| Model Details | Details | Implications |
| :---: | :---: | :---: |
| Model | - 8 Significant variables : |  |
| The significant variables | Attitude towards Vegan diet | - An attitude that Vegan diet is healthy and can solve many health problems is a driver of intention to adopt Veganism. |
|  | Attitude towards Animal Rights | - A POSITIVE attitude towards animals and their rights is correlated with intention to adopt Veganism. |
|  | Attitude towards Meat consumption | - Higher/more frequent meat consumption negatively correlated with intention to adopt veganism. |
|  | Awareness of Milk substitutes | - Awareness of milk substitutes is positively correlated with intention to adopt Veganism. |
|  | Awareness of artificial insemination of cows/buffaloes | - A significant proportion of respondents is aware, and finds the practice unacceptable <br> - Respondents are aware of milk substitutes, and may have a propensity to switch |
|  | Cost of Vegan food | - Expensive Vegan food will be a deterrent to adoption |
|  | Availability of Vegan food | - Intention to adopt correlated with availability. |
|  | Social norms | - Intention to adopt is correlated with social mores and social acceptability. Among the more educated and more independent minded customers (more likely to adopt), social acceptability is less of a factor. As the perception regarding veganism improves in society, intention to adopt veganism will increase |

The results show that the final model (Model 5, which includes Social Norms) has the highest variance, which is both sensitive and has the best fit for Intention to adopt veganism - in effect, a holistic vegan advocacy approach should include all the variables represented by Model 5.

## CHAPTER III. KEY FINDINGS AND RECOMMENDATIONS

This survey is the third and final phase of the larger exploratory study titled Vegan Advocacy in India. The survey is preceded by a Literature Review (LR) and a Content Analysis of Social Media, which have shaped and informed its design. The goal of the overall study is to equip advocates for veganism in India with the necessary data and insights to strengthen and accelerate their vegan advocacy efforts for greater impact.

The survey was conducted online with the general urban population in the Tier 1 cities of Bengaluru, Chennai, Delhi, Kolkata and Mumbai. The objectives of this survey are to:

1. Understand Knowledge, Attitudes and Practices (KAP) with regard to dietary choices with a focus on veganism;
2. Identify drivers for, and barriers to, the adoption of veganism - with specific reference to animal rights and welfare; environmental sustainability and climate change; health, nutrition, and fitness.

## KEY FINDINGS

In summarizing these findings and recommendations, where relevant, this section also draws from data and insights from $L R$ and Content Analysis of Social Media.

1. Knowledge/Awareness of Veganism and Vegan Substitutes

While a majority ( $77 \%$ ) of respondents claim awareness of the term "vegan," only $41 \%$ have the correct understanding of the term. The survey also found that $30 \%$ of respondents had never been exposed to any vegan messaging.
This low level of correct understanding has important implications: it means that responses to the rest of the survey (especially with regard to perception of vegan food) come from an uneven and incorrect understanding of veganism. It is also very possible that respondents with a limited or skewed understanding of veganism do not recognize that a wide variety of foods within Indian cuisine are, by default, vegan.

A crucial aspect of transitioning to veganism is the awareness and ability to use vegan substitutes to meat, dairy and other animal-derived products. There is greater awareness ( $67 \%$ ) of vegan milk substitutes as compared to meat substitutes (around $40 \%$ ). About half the respondents ( $53 \%$ ) are aware of vegan businesses, with awareness being highest among 18 to 30 -year-olds (in the range of $57 \%$ to $60 \%$ ). Awareness of milk substitutes correlates well with both correct understanding of veganism (74\%) and Intention to adopt veganism (78\%). Awareness of milk substitutes as well as clean meat is highest among 25-30 year olds (77\%) and (49\%).

## 2. Perception of Vegan Foods

A majority of respondents (72\%) perceive vegan food to be "healthy and nutritious," "tasty" ( $61 \%$ ), and "easily available" ( $62 \%$ ) while $43 \%$ perceive vegan food to be "costly". Intention to become vegan is highly correlated with higher perception of vegan food being healthy and nutritious, easily available, and tasty ( $81 \%, 70 \%$ and $74 \%$ respectively).

## Health makes for a strong driver for veganism.

Among those with correct understanding of veganism, almost half (48\%) perceive vegan food as costly. This perception is borne out to some extent by reality, with most commercial vegan substitutes being more expensive than their non-vegan counterparts.

More vegetarians (81\%) than non-vegetarians (70\%) subscribe to the view that vegan food is "healthy and nutritious" and also have a more positive view on taste. The two sub-groups within the 18-30 years cohort record the highest endorsement ( $73 \%-74 \%$ ) of vegan food as healthy.

## 3. Attitude Towards Food - Health and Pleasure

Overall, there is relatively high endorsement (70\%) of the health attributes of vegan foods on a standalone basis; however, this endorsement progressively drops (61\%) when referencing that vegan diets have "enough protein and nutrients;" that to be healthy it is important to follow "only a plant-based diet" (48\%); and is lowest (35\%) when suggesting that milk and milk products are not good for health." Across the board, endorsement for vegan diets is significantly lower for non-vegetarians than vegetarians. Only $41 \%$ agreed that milk and "milk products such as ice creams, cakes and desserts are unnecessary pleasures."
Endorsement of statements pointing to the taste and pleasure of meat-based dishes is highest in the 41-50 years age group, while statements suggesting that it is important to avoid animal-derived products for health/fitness followed lowest trends in the 41-60 age group. This suggests a certain resistance to a vegan diet among the higher age groups, possibly a result of their being more habituated to traditional diet norms.
In contrast, younger age groups display a positive attitude towards the health benefits of a vegan diet, with endorsement being highest among the 31-40-year-olds, for statements referencing a vegan diet as "healthy and can solve many health problems ( $74 \%$ )", "has enough proteins and nutrients ( $66 \%$ )," and that it is "important to avoid meat and eggs to be healthy (46\%)." This trend is followed closely by the $18-30$ years age group.

## 4. Knowledge/Awareness of Factory Farming Practices

The survey tested respondents' awareness of factory farming practices based on the assumption that awareness of the realities will motivate vegan adoption. A series of correct and incorrect statements were administered to gauge responses (True/False/Not Aware) with incorrect responses designated as not aware (or incorrectly aware).
About half (53\%) the respondents are unaware (or incorrectly aware) that antibiotics/ hormones are administered in factory farming. A majority ( $67 \%$ ) are unaware of the killing in the dairy industry in the dairy industry, and $50 \%$ are unaware of artificial insemination. A majority of $69 \%$ were unaware of fishing practices; $71 \%$ of "debeaking" practices and $66 \%$ of the killing of male chicks in the poultry industry. Statements related to the poultry industry had the highest "not aware" responses of $41 \%$ and $42 \%$, and is of consequence given that chicken is the most consumed meat in India.
Generally, awareness on animal agriculture practices was higher among vegetarians, while in terms of age categories 18-30 year-olds display the highest awareness followed by 41-50 year-olds in some cases.

## 5. Acceptability of Factory Farming Practices

The survey also tested respondents' attitudes towards animal agriculture practices to understand their approval or disapproval for the same. Overall, $45 \%$ feel that it is not acceptable for "dairy companies to artificially breed and raise cows in captivity to produce milk," while fewer (34\%), feel it is unacceptable for "meat and poultry industries to breed and slaughter animals for meat." The youngest age group of 18-24 years score highest (49\%) in the disapproval of "artificial breeding to raise cows in captivity," and overall, vegetarians present a somewhat stronger disapproval of both dairy ( $49 \%$ vis $42 \%$ ) and "slaughter of animals for meat" related ( $37 \%$ vis $31 \%$ ). This greater disapproval for dairy practices is perhaps not surprising, given the majoritarian reverence for the cow. However, overall, the disapproval figures are low, at less than half, with about a quarter of respondents ( $21 \%-24 \%$ ) having "no opinion" responses, suggesting the low salience of the issue to the respondents.

## 6. Attitudes of Speciesism

The survey used an adapted form of the speciesism scale (Caviola et al., 2018). Overall, endorsement for the lives of animals in context-neutral settings was high - for example, a majority ( $71 \%$ ) believe that "animals deserve to enjoy their natural habitat, free from captivity," and $70 \%$ believe that "morally, the lives of animals are equal to that of humans." However, such endorsement for animals drops significantly in the case of non-neutral food settings: "I am concerned about the welfare of animals raised for meat and dairy" (61\%) and "people's food choices should be made based on larger concerns such as animal rights and environmental impact/climate change" (58\%).
This suggests that speciesism is especially pronounced when it comes to animals viewed as "food," a reflection of the perceived essentiality of meat (and dairy) that is captured in the concept of the " 4 Ns " - i.e., "Natural," "Normal," "Necessary" and "Nice" as detailed in the $L R$ (Piazza et al., 2015). Speciesism is a key barrier to vegan adoption.
As detailed through the advanced statistical analysis under Hypothesis 2, attitude towards animal rights/welfare constitutes an important correlate for Intention to adopt veganism, and should continue to be a key focus area for vegan advocacy.

## 7. Food as Personal Choice or Informed by Larger Concerns?

In order to understand how respondents feel about vegan advocacy's efforts to change dietary habits, the survey investigates whether dietary practices are perceived as strictly a personal choice, or whether respondents see these practices as being shaped by larger concerns such as their consequences (for animals and/or issues of environmental sustainability and climate change).
A majority (69\%) supported the idea of food as a "personal choice." Alongside, a majority ( $61 \%$ ) said they were concerned about the welfare of animals raised for meat and dairy, while an almost equal proportion ( $58 \%$ ) endorsed the idea that people's food choices should be based on larger concerns such as animal rights, environmental impact and climate change.
The results suggest that deductive logic doesn't apply here; personal choice can exist alongside (and not in opposition to) concern for other issues (such as animals and the environment). Non-vegetarians who enjoy meat, vegetarians who enjoy ice-creams, and vegans who enjoy tofu are all exercising "personal choice."

## 8. Attitudes to Vegans

Attitudes towards vegans and veganism are indicative of social norms and can act as drivers or barriers for the adoption of veganism. Overall, there is a positive attitude towards vegans and veganism, with about $60 \%$ admiring vegans for their choices, both for not consuming animal-derived products, and for their concern for the environment and climate change. However, this positive attitude is offset by data indicating that $54 \%$ consider vegans as "elitist and promoting an impractical lifestyle," while $40 \%$ see vegans as "moralistic people passing judgements on personal eating habits of others."
Admiration and approval of vegans for their choices was higher among those with a correct understanding of veganism; and it is worth noting that 18-24-year-olds are among the least to feel that vegans are moralistic (39\%) or elitist and impractical (48\%).

The perceived approval and support of family and friends play an important role
in influencing the Intention to adopt veganism. For example, almost half (49\%) the respondents least likely to adopt veganism agreed with the statement "My family and friends will be upset or make fun of me if I become vegan," indicating that this could be a significant hurdle. Agreement with this statement was lower (39\%) for those most likely to adopt veganism. Similarly, the statement "If I decide to turn vegan, I can rely on people around me for help" drew agreement of $58 \%$ and $45 \%$ from vegetarians and nonvegetarians respectively, from a majority ( $79 \%$ ) of those most likely to adopt veganism, and only $25 \%$ from those least likely to do so. (refer Appendix B, Table 24).

## 9. Intention to Adopt Veganism and Key Drivers

About $42 \%$ stated that they have no desire to change their diet; however, $44 \%$ agree to the statement "I could think about becoming vegan." Regression analysis indicates that $28 \%$ of respondents report that they are "very likely" to adopt veganism. Those in the 18-30 years age group were least resistant to changing their diets, with an average of $40 \%$.

Health/fitness (63\%) is a key driver for the Intention to adopt veganism followed closely by concern about environment and climate change $(60 \%)^{13}$. Preventing violence towards animals raised for food ranks lowest (55\%) as a possible driver for becoming vegan.
Vegetarians are more willing to become vegans ( $54 \%$ vs $42 \%$ non-vegetarians), with key drivers being climate protection (70\%) followed by health/fitness (68\%) as compared to non-vegetarians ( $58 \%$ and $60 \%$ respectively). Concern about the violence inflicted on animals raised for food ranked last as a driver ( $65 \%$ for both vegetarians and $53 \%$ for non-vegetarians. Those in the 18-24 age group had the highest endorsement for all three drivers.

## 10. Key Target Groups for Vegan Advocacy

a) Younger age group of $\mathbf{1 8 - 3 0}$ year-olds. Extrapolating from each of the subgroups $18-24$ years and $25-30$ years, there is sufficient evidence to suggest that the 18 $30^{14}$ age group is a key target. They score lower on the speciesism scale, and

[^7]higher on several parameters: higher awareness of animal agriculture practices; ${ }^{15}$ disapproval of "dairy companies artificially breeding and raising cows in captivity to produce milk" (49\%), and were less likely (43\%) to consider eating meat "as a sign of modernity and global culture. ${ }^{16}$ They also express positive Intention to adopt veganism across various drivers of health, animal rights and environment. The 25-30 year-olds also display greater awareness of both dairy (which is positively correlated with Intention to adopt veganism) and meat substitutes, and the vegan eco system overall. Younger age groups as a key target for vegan advocacy is corroborated by several studies cited in the $L R$.

In general, those 40+ years tended to present less positive responses (with some exceptions), while those in the 31-40 age group presented mixed results, and seemed most predisposed to health-driven choices around diet.
b) Vegetarians: They display a greater awareness - and disapproval - of animal agriculture practices, with a higher endorsement of vegan diet as being "healthy" and "tasty," and higher Intentions to become vegan ( $54 \%$ vs $42 \%$ for non-vegetarian). As noted earlier, Intention to become vegan is highly correlated with higher perception of vegan food as being healthy and nutritious, and tasty. However, caution needs to be exercised to distinguish an inclusive secular veganism from a majoritarian extension of vegetarianism. In addition, it is imperative to continue the focus on promoting the abstinence of meat, fish and eggs, given their implications for millions of animals, human and planetary health.
c) Women: Based on the Multiple Regression analysis (detailed below) the analysis finds that being female is associated with an Intention to adopt veganism, with a coefficient of 0.71 and a significance value of .039 ( $\mathrm{p}<0.05$ ) which indicates that this effect is statistically significant. This finding is congruent with studies cited in the $L R$ which point to women being more inclined towards meat abstinence and reduction, globally and in India. For example, the NFHS-5 (2021) shows that 83\% of men in India consume meat, as against $70.6 \%$ of women. In addition, while the percentage of men consuming meat has increased in recent the figures (since NFHS4,2017 ) in the case of women the figures have remained somewhat static.

## 11. Advanced Statistical Analysis

The first Hypothesis states that socio-cultural and personal identity factors are strongly associated with the Intention to adopt veganism.

The hypothesis test is significant, with an F value of 5.965 and R2 of .166, meaning that approximately $16.6 \%$ of the variation in the Intention to adopt veganism can be explained by the independent variables. ${ }^{17}$ The results indicated being female as significantly correlated to Intention to adopt veganism.

[^8]The second Hypothesis states that Knowledge of animal exploitation; Attitudes of speciesism; Practices such as frequency of meat/dairy consumption; perceived Social Norms; and access to/availability/cost of vegan substitutes are correlated with the Intention to adopt veganism.

The Hypothesis test is significant, and explained $44 \%$ of the variance in the Intention to adopt veganism (the remaining $56 \%$ variance is due to other factors which need to be investigated through further research).

The eight significant predictors for Intention to adopt veganism are: Awareness of milk substitutes; awareness of artificial insemination of cows/buffaloes; Attitudes towards a vegan diet (a vegan diet is healthy and can solve many health problems); Attitude towards animal rights (namely, animals deserve to live in their natural habitat;" "morally the lives of humans and animals are the same," and "killing of animals is different to killing of plants"); Social Norms (of approval and support for veganism); availability of vegan food/substitutes; (frequency of) meat consumption; and finally, the costs of vegan food. The last two variables - (higher) meat consumption and (higher) costs of vegan food are negatively correlated with the Intention to adopt veganism (Refer Charts 12 and 13 in Chapter II).

The statistical analysis also tested the possible effectiveness of five different models that impact the Intention to adopt veganism. These models were created by adding predictor variables in a stepwise manner. Model 1 included only Knowledge variables, while Model 2 added dietary practices as a predictor. Model 3 included perception items, Model 4 included Attitude toward veganism factors, and Model 5 included Social Norm variables. The results show that the final model (Model 5, which combines Knowledge and Attitudes with Social Norms) is the best fit for Intention to adopt veganism

## kEY RECOMMENDATIONS

Given that this is the third and final report under the Vegan Advocacy in India study, the recommendations below are based on the survey findings but also draw from the other two studies based on areas of congruence and corroboration.

1. It is crucial to accelerate, intensify and deepen vegan advocacy efforts, given the low levels of awareness of veganism, and low exposure to vegan messaging. This finds further corroboration in the Content Analysis of Social Media, which found that almost 70\% of the online vegan advocacy content analyzed had "low" or "very low" viewership (of 3000 or less). While knowledge alone is an insufficient predictor for behavior change, exposure to vegan advocacy is a crucial first step. The survey data suggests that approximately $50 \%$ of those who have been exposed to vegan messaging report that they are more likely to think about adopting veganism (as opposed to $44 \%$ of the unexposed population). In particular, vegan advocacy needs to focus both on creative content formats as well as content dissemination to reach wider (and newer) audiences rather than being restricted to narrow echo chambers of social media.
2. Vegan advocacy must necessarily integrate health, environmental sustainability and climate change as key drivers for vegan advocacy, positioning it as an intersectional social justice movement given that these are the key drivers identified by this survey,

[^9]with strong corroboration in the $L R$. This will facilitate greater uptake among new and wider range of audiences. Currently, a majority ( $\mathbf{7 0 \%}$ ) of vegan advocacy in India relies on animal rights as a driver, ${ }^{18}$ suggesting a significant disconnect between strategy and evidence-based realities. Framing vegan advocacy within the context of a broader ethical consumerism and sustainable living that integrates multiple concerns may serve as a more inclusive pathway going forward.

- While the health driver seems strongly primed for uptake, it is important to focus on the health benefits of a vegan diet on a standalone basis rather than in comparison with a non-vegan diet, or by referencing the negative impacts of nonvegan diets. In addition, barriers for vegan adoption as represented by the 4 Ns must be tackled, given the low traction for the idea that milk and milk products (as well as meat and eggs) are bad for health, or that they are an "unnecessary indulgence."
- When using environment as a driver it is important to simplify the complex and technical linkages between factory farming and climate change, provide an immediacy to the perceived remote consequences, and use multiple frames to empower audiences to take simple doable steps rather than deflect responsibility to the state alone, as detailed in the $L R$.
- However, this does not exclude a focus on animal rights, which is a primary driver for those who have already turned veg*n, as indicated in the $L R$. This survey focused only on non-veg*n respondents, based on its specific research interests. Vegan advocacy must continue to focus on this sub-group, which is most primed for vegan adoption.

3. Given that speciesism is a deep-rooted and significant barrier, vegan advocacy must continue to use strategies such as anthropomorphizing, cognitive dissonance and several others detailed in the $L R$ to continue to dissolve the perceived boundaries between human and non-human animals. This is undoubtedly a significant challenge.
4. Intensifying focus on dairy may yield early dividends, given the higher awareness ( $67 \%$ ) of vegan milk substitutes, the positive correlation between this awareness with Intention to adopt veganism (78\%); and the higher percentage of respondents (45\%) who found it "unacceptable" that dairy companies artificially breed and raise cows in captivity to produce milk (compared to $34 \%$ for the killing of animals in the meat and poultry industries). The perceived essentiality of dairy especially could prove a challenge, even while the increasing number of dairy substitutes in the market provides an opportunity.
5. Alongside, given the limited understanding of veganism, it is important to remind audiences that mainstream Indian cuisine already has a wide variety of foods which are, by default, vegan, and in the process deconstruct the idea of a (elitist, costly) vegan diet into a simple, doable practice. Perceived health, nutrition and taste barriers to vegan food need to be tackled, especially among non-vegetarians. Policy measures such as incentives and subsidies for the development and marketing of vegan products is crucial to driving down prices, as is increasing demand and building economies of scale.
6. Shaping Social Norms to increase the valorization of veganism is crucial, given that attitudes of approval and disapproval are highly relevant to the Intention to adopt veganism, as indicated by the statistical analysis. The survey found some admiration of veganism, alongside prejudices against vegans as being elitist and moralistic. On-ground social networks can provide the necessary support and guidance to existing and potential

[^10]vegans to tackle challenges and prevent isolation, while social modeling by eminent voices can provide the necessary motivation, alongside a greater legitimization of veganism and its positive implications for our collective future.

## CONCLUSIONS

This study is of significant value for two key reasons: it is the first survey in India focused on veganism per se (previous studies looked at vegetarianism). Secondly, it attempted to integrate behavior change constructs of KAP with the socio-cultural specificities of India. However, caution is advised when extrapolating this data for application to the larger population, given the study's very small sample size of 1000 English-fluent respondents in the five large metros.
Going forward it is crucial that further research be conducted that can build on the directions this study provides, and investigate the complexities of this domain of behavior change in greater depth. Such research could include mixed methodologies such as qualitative focus groups, in-depth interviews, and randomized KAP household surveys that can, together, provide nuanced insights to shape vegan advocacy strategies.
What the study does reveal is the many complexities defining this domain: that concern for animals can coexist with consumption of animal-derived foods; that vegan food may be considered healthy but not so tasty; or that vegans may be perceived as representing both positive values and elitist and moralistic lifestyles.
Exploring new and innovative ways is crucial. While advocacy is important, a linear KAP model has its limitations, and the link between knowledge and behavior is tenuous. In order to have impact vegan advocacy must be supported through a far wider array of interventions: legislation and enforcement, credible food certification and labeling, consumer education and nudges to encourage more ethical consumer behavior; incentives and subsidies to develop and market plant-based products, to name just a few. Strategic marketing and advertising could herald a new era, where vegan advocacy shifts the weight of the idea from "do not eat meat" to "eat this clean, healthy and sustainable vegan meat."

A key challenge is the deeply personal nature of dietary practices, and the complexities of trying to change them, especially given the divisive nature of the discourse in India. While valuing personal choice must serve as a sine qua non, vegan advocacy can enrich the discourse by reframing the issue within the "rights and responsibilities" framework, thus expanding the idea of individual rights to include a wider vision and responsibility for a more ethical and sustainable living.

## REFERENCES

Anderson, J., \& Tyler, L. (2018). Attitudes toward Farmed Animals in the BRIC Countries. Faunalytics. https://faunalytics.org/wp-content/uploads/2018/09/BRIC-FullReport.pdf

Caviola, L, Everett, Jim A.C., Faber, Nadira S (2018). The Moral Standing of Animals: Towards a Psychology of Speciesism. Journal of Personality and Social Psychology. University of Oxford

International Institute for Population Sciences (IIPS) and ICF. (2017). National Family Health Survey (NFHS-4), 2015-16: India. Mumbai: IIPS.

International Institute for Population Sciences (IIPS) and ICF (2021). National Family Health Survey (NFHS-5). India. Mumbai. IIPS.

Office of the Registrar General, India (2016). India Sample Registration System Baseline Survey 2014, Report. Office of the Registrar General and Census Commissioner of India, Ministry of Home Affairs, Government of India. New Delhi.

Piazza, J., Ruby, M. B., Loughnan, S., Luong, M., Kulik, J., Watkins, H. M., \& Seigerman, M. (2015). Rationalizing Meat Consumption. The 4Ns. Appetite, 91, 114-128. https://doi. org/10.1016/j.appet.2015.04.011

Rai, S. (2019, October 17). Wealthy Indians Must Eat Differently from Those Whose Rights They Defend. The Wire. https://thewire.in/environment/animal-agriculture-cows-methane-beef-vegetarianism-climate-crisis

Ryder, R. D. (1975). Victims of Science. The Use of Animals in Research. Davis-Poynter Ltd..

## APPENDIX A. SURVEY INSTRUMENT

## SECTION I: INTRODUCTION \& SCREENER

## INTRODUCTION

Greetings. We are doing this study on the food habits of Indian citizens. Through this study we want to understand the food preferences of Indians, their variations, the trends, and sentiments around food.

We will appreciate if you could complete this questionnaire, which will take about $\sim 20$ minutes.
We will analyse the data at the aggregate level so that response cannot be linked to anyone. We ensure complete privacy and confidentiality. Please do not consult anyone while filling up the questionnaire. There are no right or wrong answers. Thank you.

S1. Are you a Vegan?

| Attributes | Codes $-\mathbf{S 1}$ | Instructions |
| :---: | :---: | :---: |
| Yes | 1 | TERMINATE |
| No | 2 | CONTINUE |

TERMINATE IF THE RESPONDENT CHECK VEGAN
S2. Please indicate the kind of food you consume on a regular basis.
Please choose only one option (drop down menu)

| Attributes | S2 CODES |
| :---: | :---: |
| Vegetarian food ONLY <br> - Including cow/buffalo milk, curd, and other milk products <br> - But NO eggs, NO meat, NO fish | 1 |
| Vegetarian food <br> - Including milk and eggs <br> - But NO fish, NO meat | 2 |
| Vegetarian food <br> - Including milk, eggs and fish <br> - But NO meat | 3 |
| Non- Vegetarian food, <br> - Vegetarian food (including milk and milk products and eggs, meat and fish). | 4 |
| Any other (please specify) | 5 |

Q1. What is your gender?

| Attributes | Codes-Q1 |
| :---: | :---: |
| Male | 1 |
| Female | 2 |
| Other | 3 |

Q2. What is your age in number of completed years?

| Attributes | Codes- Q2 |
| :---: | :---: |
| 18-24 Years | 1 |
| $25-30$ Years | 2 |
| $31-40$ Years | 3 |
| 41-50 Years | 4 |
| 51-60 Years | 5 |

Q3. In which city do you currently reside?

| Attributes | Codes - Q3 | INSTRUCTIONS |
| :---: | :---: | :---: |
| Delhi | 1 | CONTINUE |
| Mumbai | 2 | CONTINUE |
| Kolkata | 3 | CONTINUE |
| Chennai | 4 | CONTINUE |
| Bangalore | 5 | CONTINUE |
| Any Other | 6 | TERMINATE |

## SECTION II: INTRODUCTION TO VEGANS \& VEGANISM

Q4. Have you heard the term 'Vegan' or 'Veganism'?

| Attributes | Codes-Q4 | Instructions |
| :---: | :---: | :---: |
| Yes | 1 | CONTINUE |
| No | 2 | CONTINUE |

Q5. Based on your understanding, how will you describe someone who is a vegan. (Please choose any one option)

| Attributes | Codes - Q5 |
| :--- | :---: |
| Someone who does not eat meat | 1 |
| Someone who does not eat any vegetable that <br> grows underground | 2 |
| Someone who does not eat eggs | 3 |
| Someone who does not eat eggs and fish | 4 |
| Someone who does not consume milk, eggs, meat <br> and other products derived from animals | 5 |
| Someone who is a vegetarian and does not <br> consume alcohol | 6 |

READ : FOR ALL
For your understanding: A vegan is someone who does not consume or use any products derived from animals - such as milk, eggs, fish, meat of any kind, honey or leather and silk. A vegan diet is also called a "plant-based" diet, with plant-based substitutes for meat/dairy. In this survey, we will use the term "vegan" to refer to such foods.
Please select the appropriate answer based on your understanding of vegan products and substitutes for meat and dairy. Please respond on a ' 7 ' point scale where ' 1 ' is 'Extremely Disagree' and ' 7 ' is 'Extremely Agree'.

| $\begin{gathered} \mathrm{Q} \\ \text { No. } \end{gathered}$ | Attributes |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | Vegan food (items) is costly | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7 | Vegan food is tasty | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | Vegan food is easily available | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9 | Vegan food is healthy and nutritious | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

For each of the statements below, please respond with a YES or NO, based on your understanding about Vegan food.

| Q <br> No. | Statements |  |  |
| :---: | :--- | :--- | :--- |
| 10 | Have you heard about vegan substitutes for meat or <br> "mock meats"? | YES (1) | NO (2) |
| 11 | Have you ever heard about vegan milk substitutes (such <br> as soy or almond milk, for example)? | YES (1) | NO (2) |
| 12 | Have you ever heard about meat grown in labs, also <br> called "clean" meat? | YES (1) | NO (2) |
| 13 | Have you ever heard about companies/people that sell <br> vegan products (such as milk, meat, etc.)? | YES (1) | NO (2) |
| 14 | Are you aware of any organisations promoting veganism? | YES (1) | NO (2) |
| 15 | Do you know of any Indian celebrity (sportsperson, film <br> star or other public figures) who is a vegan? | YES (1) | NO (2) |

SECTION III ATTITUDINAL STATEMENTS ON FOOD - OVERALL LEVEL
Given below are some statements. Please indicate your level of agreement or disagreement by selecting the appropriate response in the boxes below.

| $\begin{gathered} \mathbf{Q} \\ \text { no. } \end{gathered}$ | Attributes |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INDIVIDUAL RELATED - TASTE/HEALTH DRIVEN |  |  |  |  |  |  |  |  |
| 16 | Eating meat such as chicken tandoori, mutton biryani and fish fry are one of the joys of life | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17 | Milk and milk products such as ice cream, cakes and desserts are unnecessary pleasures | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18 | I prefer to make my own food choices rather than someone telling me what to eat or not eat | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19 | People's food choices should be made based on larger concerns such as animal rights and environmental impact/climate change | 1 | 2 | 3 | 4 | 5 | 6 | 7 |


| $\begin{gathered} \mathbf{Q} \\ \text { NO. } \end{gathered}$ | Attributes |  |  | Somewhat Disagree -3 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | Milk and milk products (paneer, curd, ice creams) are not good for health/ fitness | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21 | To be healthy/fit it is important to avoid meat and eggs | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22 | A vegan diet is wholesome, with enough protein and other nutrients essential for health/ fitness | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23 | A vegan diet is healthy and can solve many health problems. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24 | A healthy diet should only be plant-based, avoiding dairy, meat, fish, eggs and other animal-based products. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ETHICS, VALUES, WELFARE RELATED |  |  |  |  |  |  |  |  |
| 25 | Morally, the lives of animals is equal to that of humans. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26 | All animals deserve to enjoy their natural habitat, free from captivity | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27 | Humans do not have the right to use animals however they want. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28 | I am concerned about the welfare of animals raised for meat and dairy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29 | Eating meat is a sign of modernity and global culture | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30 | There is a big difference between killing animals and killing plants | 1 | 2 | 3 | 4 | 5 | 6 | 7 |


| $\begin{gathered} \mathbf{Q} \\ \text { NO. } \end{gathered}$ | Attributes |  |  |  | $\begin{aligned} & \text { Neither Agree nor } \\ & \text { Disagree - } 4 \end{aligned}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | I think it is wrong to exploit animals for food. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32 | It is okay to eat meat and dairy if the animals are raised and killed humanely | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SUSTAINABILITY RELATED |  |  |  |  |  |  |  |  |
| 33 | We must eat meat otherwise the world will be overrun by animals. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34 | A vegan diet is best for the environment and climate change | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35 | We must avoid dairy because it is the biggest contributor to global warming | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 36 | Producing meat is harmful for the environment and climate change | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## SECTION IV: ADDITIONAL QUESTIONS ON WELFARE \& SUSTAINABILITY

Given below are some statements people make about how animals are raised for food. Please indicate whether you think these statements are true or false.

| Q <br> No. | Statements |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| 37 | The dairy industry does not involve any <br> killing | True - 1 | False - 2 | Not aware - 3 |
| 38 | Fishing boats ensure that they only catch <br> fish meant to be eaten | True - 1 | False - 2 | Not aware - 3 |
| 39 | Baby chicks are given anaesthesia when <br> cutting their beaks | True - 1 | False - 2 | Not aware - 3 |
| 40 | The poultry industry kills male chicks <br> through drowning or crushing | True - 1 | False - 2 | Not aware - 3 |
| 41 | Cows/buffaloes are artificially inseminated <br> to create pregnancies and produce milk | True - 1 | False - 2 | Not aware - 3 |
| 42 | Animals raised for food are fed antibiotics/ <br> hormones | True - 1 | False - 2 | Not aware - 3 |

Please select the relevant response for you as appropriate on the scale below.

| $\begin{aligned} & \text { Q } \\ & \text { No. } \end{aligned}$ |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 43 | Is it acceptable for dairy companies to artificially breed and raise cows in captivity to produce milk? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Please select the relevant response for you as appropriate on the scale below.

| $\begin{gathered} \mathbf{Q} \\ \text { No. } \end{gathered}$ |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 44 | Is it acceptable that meat and poultry industries breed and slaughter animals for meat? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## SECTION V: ADDITIONAL ATTITUDINAL STATEMENTS ON VEGANS \& VEGANISM

The next set of questions are around your opinions about those close to you - your near and dear ones, being vegan and related food choices. For each statement, please select one of the responses as appropriate for you on the scale below.

| $\begin{array}{\|l} \mathbf{Q} \\ \text { No. } \end{array}$ |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 45 | I could think about becoming vegan | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 46 | My family and friends will be upset or make fun of me if I become vegan | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 47 | If I decide to turn vegan, I can rely on people around me for help. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Next, we have another set of statements around your own attitudes to and plans around veganism. Please mark the responses most appropriate to you. NOTE: There are no right or wrong answers.

| No |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No. |  |  |  |  |  |

Give below is a list of statements that people make about vegans. Please indicate your opinion how you view vegans by indicating your level of agreement or disagreement with each statement

| Q |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No. | (


| $\begin{aligned} & \text { Q } \\ & \text { No. } \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & \text { n } \\ & \frac{\pi}{2} \\ & \frac{1}{3} \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \text { on } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 56 | Vegans are responsible citizens concerned about climate change | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## SECTION VI: VEGANISM IN MEDIA

Information about veganism or vegan products is available from a variety of sources. Please indicate if you have been exposed to information about veganism, and to what extent.

| Q <br> No. | Never-1 | Once - 2 | Few <br> times-3 | Many <br> times-4 |  |
| :---: | :--- | :---: | :---: | :---: | :---: |
| 57 | Have you ever read a book, booklet, poster, or <br> any printed material (magazine, newspaper <br> article, ads) about veganism or vegan diet | 1 | 2 | 3 | 4 |
| 58 | Have you seen TV or film shows, or heard <br> radio programs on veganism or vegan diet | 1 | 2 | 3 | 4 |
| 59 | Have you attended meetings, workshops or <br> conferences on veganism or vegan diet? | 1 | 2 | 3 | 4 |
| 60 | Have you talked with your friends or family <br> members about veganism or vegan diet? | 1 | 2 | 3 | 4 |
| 61 | Have you ever received any messages on <br> veganism or vegan diet on social media <br> (Facebook, Twitter, Instagram, etc.) | 1 | 2 | 3 | 4 |
| 62 | Have you ever talked with someone who is a <br> vegan or consumes vegan diet? | 1 | 2 | 3 | 4 |

## SECTION VII: QUESTIONS AROUND CULTURAL BACKGROUND \& CONDITIONING

For each of the statements below, please indicate your extent of agreement or disagreement.
Q63. I believe a person should marry within the religion to which she/he belongs


Q64. I believe a person should marry within the caste/sect to which she/he belongs

|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Q65. I believe educated girls, after marriage, should stay at home and handle domestic responsibilities

|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Q66. I visit places of worship based on my religion: -

| $\begin{aligned} & \text { N } \\ & 1 \\ & \vdots \\ & \vdots \\ & \text { d } \\ & \text { Z } \end{aligned}$ |  |  | $\begin{aligned} & \dot{H} \\ & \dot{0} \\ & \dot{B} \\ & \dot{0} \\ & \dot{0} \\ & \text { on } \end{aligned}$ | Frequently - 3 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Q67. I follow the traditional practices of my community regarding what I eat (or don't eat):

| $\begin{gathered} \text { N } \\ 1 \\ \vdots \\ 0 \\ \text { U } \\ \mathbf{Z} \end{gathered}$ |  |  |  | $\begin{aligned} & \text { m } \\ & 1 \\ & \text { B } \\ & \text { d } \\ & \text { U } \\ & 0 \\ & 0 \\ & \hline \end{aligned}$ |  | $$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Q68. I follow traditional practices and rituals based on my religion:

| $\begin{aligned} & \text { r } \\ & 1 \\ & \vdots \\ & \vdots \\ & \text { d } \end{aligned}$ |  |  |  |  | $N$ <br>  <br>  <br> 0 <br> 0 <br> 0 <br> 0 <br> 0 <br> 0 | $$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## SECTION VIII: DEMOGRAPHIC INPUTS

Q69. What is the highest level of education you have completed?

| Attributes | Codes - Q69 |
| :---: | :---: |
| Postgraduate/ PhD | 1 |
| Graduate | 2 |
| Diploma | 3 |
| Class XII | 4 |
| Less than Class XII | 5 |

Q70. Which of the following best describes your occupation?

| Attributes | Codes - Q70 |
| :---: | :---: |
| Student | 1 |
| Salaried | 2 |
| Own business | 3 |
| Homemaker | 4 |
| Retired | 5 |
| Freelance | 6 |
| Unemployed | 7 |

Q71. Which religion were you born into?

| Attributes | Codes - Q71 |
| :---: | :---: |
| Hindu | 1 |
| Muslim | 2 |
| Christian | 3 |
| Jain | 4 |
| Sikh | 5 |
| Any other | 6 |
| Would rather not say | 7 |

Q72. Which caste do you belong to?

| Attributes | Codes - Q72 |
| :---: | :---: |
| Scheduled caste | 1 |
| Scheduled Tribe | 2 |
| OBC | 3 |
| Forward caste | 4 |
| Would rather not say | 5 |

Q73. What is the total monthly income of your household? Tick the most appropriate answer.

| Attributes | Codes - Q73 |
| :---: | :---: |
| Less than Rs 20,000 | 1 |
| Between Rs. 20,000 to Rs. 50, 000 | 2 |
| Between Rs. 50,001-75,000 | 3 |
| Between Rs. 75, 001-1 lakh | 4 |
| Between Rs. 1 lakh -1.25 lakhs | 5 |
| Between Rs. 1.26 lakhs to 1.50 lakhs | 6 |
| More than Rs. 1. 50 lakhs. | 7 |
| Would rather not say | 8 |

THANK YOU FOR YOUR TIME.

APPENDIX B. DATA TABLES

Table 1: Understanding of 'Who is a Vegan' - By Gender \& Age Groups

|  | Gender |  | Age Groups |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men (A) | Women <br> (B) | $\mathbf{1 8 - 2 4}$ <br> Years (C) | $\mathbf{2 5 - 3 0}$ <br> Years (D) | $\mathbf{3 1 - 4 0}$ <br> Years (E) | $\mathbf{4 1}-\mathbf{5 0}$ <br> Years (F) | $\mathbf{5 1 - 6 0}$ <br> Years (G) |
| Base | $\mathbf{5 2 0}$ | $\mathbf{4 8 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{1 0 0}$ |
| Someone who does not <br> consume milk, eggs, meat <br> and other products <br> derived from animals | $38 \%$ | $44 \% \mathrm{~A}$ | $41 \%$ | $37 \%$ | $39 \%$ | $49 \%$ cDEG | $37 \%$ |
| Someone who does not <br> eat meat | $25 \%$ | $22 \%$ | $26 \% \mathrm{~F}$ | $24 \%$ | $24 \%$ | $18 \%$ | $26 \%$ |
| Someone who does not <br> eat any vegetable that <br> grows underground | $12 \%$ | $10 \%$ | $10 \%$ | $14 \% \mathrm{f}$ | $12 \%$ | $8 \%$ | $12 \%$ |
| Someone who does not <br> eat eggs | $10 \% \mathrm{~b}$ | $7 \%$ | $7 \%$ | $9 \%$ | $9 \%$ | $11 \%$ | $7 \%$ |
| Someone who does not <br> eat eggs and fish | $9 \%$ | $7 \%$ | $11 \% \mathrm{eG}$ | $9 \%$ | $6 \%$ | $8 \%$ | $4 \%$ |
| Someone who is a <br> vegetarian and does not <br> consume alcohol | $4 \%$ | $8 \% \mathrm{~B}$ | $4 \%$ | $6 \%$ | $7 \%$ | $4 \%$ | $10 \% \mathrm{CF}$ |

Table 2: Understanding of 'Who is a Vegan' - By Education Levels

|  | Education |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Class XII (A) | Diploma (B) | Graduate (C) | Postgraduate/PhD (D) |
| Base | $\mathbf{1 6 0}$ | $\mathbf{1 4 6}$ | $\mathbf{5 4 5}$ | $\mathbf{1 4 9}$ |
| Someone who does not <br> consume milk, eggs, meat and <br> other products derived from <br> animals | $31 \%$ | $28 \%$ | $43 \% \mathrm{AB}$ | $58 \% \mathrm{ABC}$ |
| Other mentions | $69 \%$ | $72 \%$ | $57 \%$ | $42 \%$ |

Table 3: Perception of Vegan Food (Top 3 Box) - By Gender \& Age Groups

|  | Gender |  | Age Groups |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men (A) | Women (B) | $\mathbf{1 8 - 2 4}$ <br> Years (C) | $\mathbf{2 5 - 3 0}$ <br> Years (D) | $\mathbf{3 1}-\mathbf{4 0}$ <br> Years (E) | $\mathbf{4 1}-\mathbf{5 0}$ <br> Years (F) | $\mathbf{5 1 - 6 0}$ <br> Years (G) |
| Base | $\mathbf{5 2 0}$ | $\mathbf{4 8 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{1 0 0}$ |
| Vegan food is healthy <br> and nutritious | $71 \%$ | $72 \%$ | $74 \%$ | $73 \%$ | $71 \%$ | $70 \%$ | $69 \%$ |
| Vegan food is easily <br> available | $63 \%$ | $62 \%$ | $66 \% \mathrm{f}$ | $62 \%$ | $64 \%$ | $58 \%$ | $58 \%$ |
| Vegan food is tasty | $61 \%$ | $61 \%$ | $60 \%$ | $66 \% \mathrm{~F}$ | $64 \% \mathrm{~F}$ | $54 \%$ | $59 \%$ |
| Vegan food (items) is <br> costly | $40 \%$ | $46 \% \mathrm{~b}$ | $48 \% \mathrm{FG}$ | $44 \% \mathrm{~F}$ | $48 \% \mathrm{FG}$ | $34 \%$ | $35 \%$ |

Table 4: Perception of Vegan Food (Top 3 Box or 3 Highest Responses) By Diet, Understanding of Veganism and Disposition to Becoming Vegan

|  | Diet |  | Understanding of Veganism |  | Disposition to becoming Vegan |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Non Vegetarian Only (H) | $\begin{aligned} & \text { Vegetarian } \\ & \text { Only (I) } \end{aligned}$ | Correct (J) | Others (K) | Very Likely <br> (L) | Somewhat <br> Likely (M) | Less Likely (N) | None (0) |
| Base | 700 | 179 | 409 | 591 | 285 | 291 | 236 | 188 |
| Vegan food is healthy and nutritious | 70\% | 81\% J | 71\% | 72\% | 83\% MNO | 69\% | 67\% | 66\% |
| Vegan food is easily available | 63\% | 61\% | 55\% | 68\% J | 67\% mn | 60\% | 59\% | 62\% |
| Vegan food is tasty | 59\% | 70\% J | 57\% | 63\% j | 73\% MNO | 62\% NO | 53\% | 51\% |
| Vegan food (items) is costly | 43\% | 46\% | 48\% K | 40\% | 46\% | 42\% | 45\% | 38\% |

Table 5: Perception of Vegan Food (Top 3 Box or 3 Highest Responses) - By Education

|  | Education |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Class XII (A) | Diploma (B) | Graduate (C) | Postgraduate/PhD (D) |
| Base | $\mathbf{1 6 0}$ | $\mathbf{1 4 6}$ | $\mathbf{5 4 5}$ | $\mathbf{1 4 9}$ |
| Vegan food is healthy and nutritious | $64 \%$ | $70 \%$ | $74 \% \mathrm{~A}$ | $73 \% \mathrm{a}$ |
| Vegan food is easily available | $66 \%$ | $62 \%$ | $62 \%$ | $59 \%$ |
| Vegan food is tasty | $56 \%$ | $63 \%$ | $63 \%$ | $56 \%$ |
| Vegan food (items) is costly | $48 \% \mathrm{~B}$ | $36 \%$ | $43 \%$ | $45 \%$ |

Table 6: Knowledge of Vegan Food Substitutes, Vegan Celebrities and Businesses By Gender and Age - t\% That Says 'Yes '

|  | Gender |  | Age Groups |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men <br> (A) | Women <br> (B) | $\mathbf{1 8 - 2 4}$ <br> Years (C) | $\mathbf{2 5 - 3 0}$ <br> Years (D) | $\mathbf{3 1 - 4 0}$ <br> Years (E) | $\mathbf{4 1}-\mathbf{5 0}$ <br> Years (F) | $\mathbf{5 1 - 6 0}$ <br> Years (G) |
| Base | $\mathbf{5 2 0}$ | $\mathbf{4 8 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{1 0 0}$ |
| Heard about vegan milk substitutes <br> (such as soy or almond milk, for <br> example) | $67 \%$ | $67 \%$ | $65 \%$ | $77 \% \mathrm{CEFG}$ | $66 \%$ | $60 \%$ | $65 \%$ |
| Heard about vegan substitutes for <br> meat or "mock meats" | $45 \% \mathrm{~b}$ | $39 \%$ | $42 \% \mathrm{f}$ | $46 \% \mathrm{~F}$ | $42 \% \mathrm{f}$ | $34 \%$ | $48 \% \mathrm{~F}$ |
| Heard about meat grown in labs, also <br> called "clean" meat | $47 \% \mathrm{~b}$ | $41 \%$ | $42 \%$ | $49 \% \mathrm{eg}$ | $40 \%$ | $48 \% \mathrm{eg}$ | $38 \%$ |
| Heard about companies/people that <br> sell vegan products (such as milk, <br> meat, etc.) | $55 \%$ | $51 \%$ | $57 \% \mathrm{ef}$ | $60 \% \mathrm{EF}$ | $49 \%$ | $48 \%$ | $51 \%$ |
| Aware of any organisations <br> promoting veganism? | $39 \%$ | $38 \%$ | $40 \%$ | $41 \%$ | $40 \%$ | $33 \%$ |  |

Table 7: Knowledge of Vegan Food Substitutes, Vegan Celebrities and Businesses By Diet, Understanding of Veganism and Disposition to Becoming Vegan \% That Says 'Yes'

|  | Diet |  | Understanding of Veganism |  | Disposition to becoming Vegan |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Non Vegetarian Only (H) | Vegetarian Only (I) | Correct (J) | Others <br> (K) | Very Likely (L) | Somewhat <br> Likely (M) | Less <br> Likely <br> (N) | None <br> (0) |
| Base | 700 | 179 | 409 | 591 | 285 | 291 | 236 | 188 |
| Heard about vegan milk substitutes (such as soy or almond milk, for example) | 66\% | 70\% | 74\% K | 62\% | $\begin{aligned} & 77 \% \\ & \mathrm{mNO} \end{aligned}$ | 70\% 0 | 64\% | 49\% |
| Heard about vegan substitutes for meat or "mock meats" | 44\% | 39\% | 41\% | 43\% | 49\% NO | 48\% NO | 37\% 0 | 27\% |
| Heard about meat grown in labs, also called "clean" meat | 45\% I | 37\% | 36\% | 49\% J | 52\% n0 | 46\% 0 | 44\% 0 | 28\% |
| Heard about companies/people that sell vegan products (such as milk, meat, etc.) | 52\% | 58\% | 51\% | 55\% | 61\% NO | 58\% n0 | 50\% 0 | 38\% |
| Aware of any organisations promoting veganism? | 40\% | 39\% | 30\% | 45\% J | 52\% MNO | 44\% NO | 33\% 0 | 19\% |
| Know of any Indian celebrity (sportsperson, film star, other public figure) who is a vegan | 47\% | 52\% | 49\% | 48\% | $\begin{aligned} & \text { 61\% } \\ & \mathrm{mNO} \end{aligned}$ | 53\% NO | 41\% 0 | 30\% |

Table 8: Knowledge of Vegan Food Substitutes, Vegan Celebrities and Businesses -
By Education - \% That Says 'Yes

|  | Education |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Class XII (A) | Diploma (B) | Graduate (C) | Postgraduate/PhD (D) |
| Base | $\mathbf{1 6 0}$ | $\mathbf{1 4 6}$ | $\mathbf{5 4 5}$ | $\mathbf{1 4 9}$ |
| Heard about vegan milk substitutes <br> (such as soy or almond milk, for <br> example) | $53 \%$ | $61 \%$ | $69 \% \mathrm{Ab}$ | $79 \% \mathrm{ABC}$ |
| Heard about vegan substitutes for <br> meat or "mock meats" | $44 \%$ | $39 \%$ | $43 \%$ | $39 \%$ |
| Heard about meat grown in labs, <br> also called "clean" meat | $49 \%$ c | $49 \% \mathrm{c}$ | $41 \%$ | $42 \%$ |
| Heard about companies/people <br> that sell vegan products (such as <br> milk, meat, etc.) | $54 \%$ | $49 \%$ | $56 \% \mathrm{~d}$ | $47 \%$ |
| Aware of any organisations <br> promoting veganism? | $46 \% \mathrm{D}$ | $39 \%$ | $39 \% \mathrm{D}$ | $29 \%$ |
| Know of any Indian celebrity <br> (sportsperson, film star, other <br> public figure) who is a vegan | $49 \%$ | $45 \%$ | $47 \%$ | $52 \%$ |

Table 9: Attitudes to Food - For Health or Pleasure (Top 3 Boxes or 3 Highest Responses) By Gender and Age

|  | Gender |  | Age Groups |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men (A) | Women (B) | $\mathbf{1 8 - 2 4}$ <br> Years (C) | $\mathbf{2 5 - 3 0}$ <br> Years (D) | $\mathbf{3 1 - 4 0}$ <br> Years (E) | $\mathbf{4 1} \mathbf{- \mathbf { 5 0 }}$ <br> Years (F) | $\mathbf{5 1 - 6 0}$ <br> Years (G) |
| Base | $\mathbf{5 2 0}$ | $\mathbf{4 8 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{1 0 0}$ |
| A vegan diet is healthy and can solve <br> many health problems. | $71 \%$ | $68 \%$ | $68 \%$ | $72 \%$ | $74 \%$ Cg | $67 \%$ | $64 \%$ |
| A vegan diet is wholesome, with enough <br> protein and other nutrients essential for <br> health/ fitness | $61 \%$ | $61 \%$ | $62 \%$ | $62 \%$ | $66 \%$ Fg | $56 \%$ | $56 \%$ |
| A healthy diet should only be plant- <br> based, avoiding dairy, meat, fish, eggs and <br> other animal-based products. | $52 \% \mathrm{~B}$ | $44 \%$ | $45 \%$ | $50 \%$ | $49 \%$ | $49 \%$ | $48 \%$ |
| To be healthy/fit it is important to avoid <br> meat and eggs | $40 \%$ | $39 \%$ | $35 \%$ | $40 \%$ | $46 \%$ Cf | $38 \%$ | $39 \%$ |
| Milk and milk products (paneer, curd, ice <br> creams) are not good for health/fitness | $34 \%$ | $35 \%$ | $34 \% \mathrm{~g}$ | $35 \% \mathrm{~g}$ | $35 \% \mathrm{G}$ | $39 \% \mathrm{G}$ | $24 \%$ |
| Eating meat such as chicken tandoori, <br> mutton biryani and fish fry are one of the <br> joys of life | $50 \%$ | $51 \%$ | $52 \%$ | $54 \% \mathrm{e}$ | $44 \%$ | $57 \% \mathrm{EG}$ | $44 \%$ |
| Milk and milk products such as ice cream, <br> cakes and desserts are unnecessary <br> pleasures | $43 \%$ | $38 \%$ | $34 \%$ | $40 \%$ | $39 \%$ | $54 \%$ CDEG | $39 \%$ |

Table 10: Attitudes to Food - For Health or Pleasure (Top 3 Boxes or 3 Highest Responses) By Diet, Understanding of Veganism and Disposition to Becoming Vegan

|  | Diet |  | Understanding of Veganism |  | Disposition to becoming Vegan |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Non Vegetarian Only (H) | $\begin{aligned} & \text { Vegetarian } \\ & \text { Only (I) } \end{aligned}$ | Correct (J) | Others (K) | Very Likely <br> (L) | Somewhat <br> Likely (M) | Less Likely ( N ) | None (0) |
| Base | 700 | 179 | 409 | 591 | 285 | 291 | 236 | 188 |
| A vegan diet is healthy and can solve many health problems. | 67\% | 78\% H | 67\% | 71\% | 90\% MNO | 70\% 0 | 61\% 0 | 48\% |
| A vegan diet is wholesome, with enough protein and other nutrients essential for health/ fitness | 57\% | 76\% H | 61\% | 61\% | 84\% MNO | 67\% NO | 44\% | 39\% |
| A healthy diet should only be plantbased, avoiding dairy, meat, fish, eggs and other animal-based products. | 46\% | 55\% H | 45\% | 50\% | 71\% MNO | 44\% No | 35\% | 36\% |
| To be healthy/fit it is important to avoid meat and eggs | 39\% | 41\% | 36\% | 42\% j | 60\% MNO | 41\% n0 | 33\% 0 | 15\% |
| Milk and milk products (paneer, curd, ice creams) are not good for health/fitness | 33\% | 36\% | 34\% | 35\% | 50\% MNO | 34\% 0 | 31\% 0 | 15\% |
| Eating meat such as chicken tandoori, mutton biryani and fish fry are one of the joys of life | 58\% I | 30\% | 53\% | 49\% | 51\% | 45\% | 51\% | 59\% lM |
| Milk and milk products such as ice cream, cakes and desserts are unnecessary pleasures | 40\% | 41\% | 41\% | 40\% | 54\% MNO | 32\% | 37\% MO | 38\% |

Table 11 : Attitudes to Food - For Health or Pleasure (Top 3 Boxes or 3 Highest Responses)- By Education

|  | Education |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Class XII <br> (A) | Diploma <br> (B) | Graduate (C) | Postgraduate/ <br> PhD (D) |
| Base | $\mathbf{1 6 0}$ | $\mathbf{1 4 6}$ | $\mathbf{5 4 5}$ | $\mathbf{1 4 9}$ |
| A vegan diet is healthy and can solve many health <br> problems. | $68 \%$ | $73 \%$ | $68 \%$ | $72 \%$ |
| A vegan diet is wholesome, with enough protein and <br> other nutrients essential for health/ fitness | $50 \%$ | $64 \% \mathrm{~A}$ | $63 \% \mathrm{~A}$ | $63 \% \mathrm{~A}$ |
| A healthy diet should only be plant-based, avoiding <br> dairy, meat, fish, eggs and other animal-based products. | $51 \% \mathrm{~d}$ | $51 \% \mathrm{~d}$ | $48 \% \mathrm{~d}$ | $40 \%$ |
| To be healthy/fit it is important to avoid meat and eggs | $40 \%$ | $52 \% \mathrm{ACD}$ | $37 \%$ | $37 \%$ |
| Milk and milk products (paneer, curd, ice creams) are <br> not good for health/fitness | $34 \%$ | $36 \%$ | $34 \%$ | $33 \%$ |
| Eating meat such as chicken tandoori, mutton biryani <br> and fish fry are one of the joys of life | $49 \%$ | $51 \%$ | $49 \%$ | $53 \%$ |
| Milk and milk products such as ice cream, cakes and <br> desserts are unnecessary pleasures | $47 \% \mathrm{c}$ | $39 \%$ | $39 \%$ | $41 \%$ |

Table 12 : Food as Personal Choice and Speciesism (Top 3 Boxes or 3 Highest Responses) By Gender and Age

|  | Gender |  | Age Groups |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men <br> (A) | Women (B) | $\begin{gathered} 18-24 \\ \text { Years (C) } \end{gathered}$ | $\begin{gathered} 25-30 \\ \text { Years (D) } \end{gathered}$ | $\begin{gathered} 31-40 \\ \text { Years (E) } \end{gathered}$ | $\begin{gathered} 41-50 \\ \text { Years (F) } \end{gathered}$ | $\begin{gathered} 51-60 \\ \text { Years (G) } \end{gathered}$ |
| Base | 520 | 480 | 250 | 200 | 250 | 200 | 100 |
| I prefer to make my own food choices rather than someone telling me what to eat or not eat | 70\% | 68\% | 68\% | 68\% | 67\% | 75\% de | 68\% |
| Eating meat is a sign of modernity and global culture | 49\% | 47\% | 43\% | 51\% c | 46\% | 55\% Ce | 47\% |
| I am concerned about the welfare of animals raised for meat and dairy | 61\% | 60\% | 64\% G | 58\% | 62\% G | 65\% G | 48\% |
| People's food choices should be made based on larger concerns such as animal rights and environmental impact/climate change | 56\% | 61\% | 56\% | 62\% | 59\% | 58\% | 56\% |
| There is a big difference between killing animals and killing plants | 53\% | 50\% | 58\% D | 48\% | 52\% | 50\% | 49\% |
| It is okay to eat meat and dairy if the animals are raised and killed humanely | 44\% | 42\% | 40\% | 46\% | 44\% | 45\% | 39\% |
| All animals deserve to enjoy their natural habitat, free from captivity | 70\% | 72\% | 72\% | 72\% | 71\% | 72\% | 66\% |
| Morally, the lives of animals is equal to that of humans | 69\% | 70\% | 69\% | 69\% | 71\% | 72\% | 66\% |
| Humans do not have the right to use animals however they want | 67\% | 63\% | 68\% G | 69\% Eg | 61\% | 70\% eG | 56\% |
| I think it is wrong to exploit animals for food | 60\% | 56\% | 56\% | 62\% e | 54\% | 65\% cEg | 53\% |

Table 13: Food as Personal Choice and Speciesism (Top 3 Boxes or 3 Highest Responses) By Diet, Understanding of Veganism and Disposition to Becoming Vegan

|  | Diet |  | Understanding of Veganism |  | Disposition to becoming Vegan |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Non Vegetarian Only (H) | Vegetarian Only (I) | Correct (J) | Others (K) | Very Likely <br> (L) | Somewhat <br> Likely (M) | Less Likely ( N ) | None (0) |
| Base | 700 | 179 | 409 | 591 | 285 | 291 | 236 | 188 |
| I prefer to make my own food choices rather than someone telling me what to eat or not eat | 68\% | 70\% | 73\% K | 67\% | 77\% MNO | 64\% | 68\% | 67\% |
| Eating meat is a sign of modernity and global culture | 46\% | 54\% h | 47\% | 49\% | 68\% MNO | 46\% NO | 36\% | 34\% |
| I am concerned about the welfare of animals raised for meat and dairy | 56\% | 74\% H | 66\% K | 57\% | 82\% MNO | 53\% 0 | 59\% 0 | 51\% |
| People's food choices should be made based on larger concerns such as animal rights and environmental impact/climate change | 57\% | 61\% | 57\% | 59\% | 67\% NO | 64\% NO | 54\% 0 | 42\% |
| There is a big difference between killing animals and killing plants | 48\% | 70\% H | 57\% K | 48\% | 69\% MNO | 51\% N | 39\% | 45\% |
| It is okay to eat meat and dairy if the animals are raised and killed humanely | 45\% i | 38\% | 44\% | 43\% | 47\% 0 | 45\% 0 | 45\% 0 | 32\% |
| All animals deserve to enjoy their natural habitat, free from captivity | 70\% | 80\% H | 80\% K | 65\% | 91\% MNO | 68\% 0 | 62\% | 59\% |
| Morally, the lives of animals is equal to that of humans | 66\% | 80\% H | 77\% K | 65\% | 87\% MNO | 60\% | 63\% | 66\% |
| Humans do not have the right to use animals however they want | 62\% | 78\% H | 71\% K | 61\% | 90\% MNO | 60\% N | 50\% | 56\% |
| I think it is wrong to exploit animals for food | 54\% | 69\% H | 62\% K | 55\% | 85\% MNO | 49\% | 45\% | 47\% |

Table 14: Food as Personal Choice and Speciesism (Top 3 Boxes or 3 Highest Responses) - By Education

|  | Education |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Class XII (A) | Diploma (B) | Graduate (C) | Postgraduate/PhD (D) |
| Base | $\mathbf{1 6 0}$ | $\mathbf{1 4 6}$ | $\mathbf{5 4 5}$ | $\mathbf{1 4 9}$ |
| I prefer to make my own food choices rather <br> than someone telling me what to eat or not eat | $72 \%$ | $64 \%$ | $69 \%$ | $70 \%$ |
| Eating meat is a sign of modernity and global <br> culture | $41 \%$ | $50 \%$ | $50 \% \mathrm{~A}$ | $46 \%$ |
| I am concerned about the welfare of animals <br> raised for meat and dairy | $58 \%$ | $52 \%$ | $63 \% \mathrm{~B}$ | $64 \% \mathrm{~B}$ |
| People's food choices should be made based on <br> larger concerns such as animal rights and <br> environmental impact/climate change | $58 \%$ | $63 \% \mathrm{D}$ | $59 \% \mathrm{D}$ | $50 \%$ |
| There is a big difference between killing animals <br> and killing plants | $43 \%$ | $52 \%$ | $54 \% \mathrm{~A}$ | $53 \%$ a |
| It is okay to eat meat and dairy if the animals are <br> raised and killed humanely | $46 \%$ | $55 \% \mathrm{CD}$ | $40 \%$ | $38 \%$ |
| All animals deserve to enjoy their natural <br> habitat, free from captivity | $71 \% \mathrm{~B}$ | $58 \%$ | $75 \% \mathrm{~B}$ | $70 \% \mathrm{~B}$ |
| Morally, the lives of animals is equal to that of <br> humans | $55 \%$ | $77 \% \mathrm{~A}$ | $70 \% \mathrm{~A}$ | $75 \% \mathrm{~A}$ |
| Humans do not have the right to use animals <br> however they want | $63 \%$ | $60 \%$ | $67 \%$ | $66 \% \mathrm{AB}$ |
| I think it is wrong to exploit animals for food | $64 \% \mathrm{~B}$ | $50 \%$ | $59 \%$ | $56 \%$ |

Table 15: Awareness of Practices Followed in Dairy and Meat Industries -
By Gender and Age - \% That Says "True"

|  | Gender |  | Age Groups |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men (A) | Women (B) | $\mathbf{1 8 - 2 4}$ <br> Years (C) | $\mathbf{2 5 - 3 0}$ <br> Years (D) | $\mathbf{3 1 - 4 0}$ <br> Years (E) | $\mathbf{4 1} \mathbf{- 5 0}$ <br> Years (F) | $\mathbf{5 1 - 6 0}$ <br> Years (G) |
| Base | $\mathbf{5 2 0}$ | $\mathbf{4 8 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{1 0 0}$ |
| Animals raised for food are fed <br> antibiotics/hormones | $51 \% \mathrm{~B}$ | $42 \%$ | $43 \%$ | $52 \% \mathrm{c}$ | $44 \%$ | $52 \% \mathrm{c}$ | $42 \%$ |
| The dairy industry does not <br> involve any killing | $48 \%$ | $45 \%$ | $46 \%$ | $48 \%$ | $50 \% \mathrm{f}$ | $42 \%$ | $49 \%$ |
| Cows/buffaloes are artificially <br> inseminated to create <br> pregnancies and produce milk | $52 \%$ | $48 \%$ | $49 \%$ | $53 \%$ | $50 \%$ | $49 \%$ | $52 \%$ |
| The poultry industry kills male <br> chicks through drowning or <br> crushing | $34 \%$ | $33 \%$ | $29 \%$ | $32 \%$ | $34 \%$ | $40 \%$ Cd | $35 \%$ |
| Baby chicks are given <br> anaesthesia when cutting their <br> beaks | $29 \%$ | $30 \%$ | $28 \%$ | $31 \%$ | $31 \%$ | $29 \%$ |  |

Table 16: Percentage that Say Certain Practices Followed in Dairy, Meat and Fishing Industries are "Unacceptable" (Bottom 3 Box or 3 Lowest Responses) - By Gender and Age

|  | Gender |  | Age Groups |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men (A) | Women (B) | $\mathbf{1 8 - 2 4}$ <br> Years (C) | $\mathbf{2 5 - 3 0}$ <br> Years (D) | $\mathbf{3 1 - 4 0}$ <br> Years (E) | $\mathbf{4 1 - 5 0}$ <br> Years (F) | $\mathbf{5 1 - 6 0}$ <br> Years (G) |
| Base | $\mathbf{5 2 0}$ | $\mathbf{4 8 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{1 0 0}$ |
| Is it acceptable for dairy companies to <br> artificially breed and raise cows in <br> captivity to produce milk? | $44 \%$ | $46 \%$ | $49 \%$ | $43 \%$ | $45 \%$ | $42 \%$ | $46 \%$ |
| Is it acceptable that meat and poultry industries <br> breed and slaughter animals for meat? | $32 \%$ | $35 \%$ | $34 \%$ | $35 \%$ | $31 \%$ | $34 \%$ | $37 \%$ |

Table 17: Awareness of Practices Followed in Dairy and Meat Industries (Top 3 Box or 3 Highest Responses) - By Diet, Understanding of Veganism and Disposition to Becoming Vegan - \% That Says "True"

|  | Diet |  | $\begin{array}{c}\text { Understanding of } \\ \text { Veganism }\end{array}$ |  | Disposition to becoming Vegan |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{c}\text { Non } \\ \text { Vegetarian } \\ \text { Only (H) }\end{array}$ | $\begin{array}{c}\text { Vegetarian } \\ \text { Only (I) }\end{array}$ | Correct (J) | Others (K) | $\begin{array}{c}\text { Very Likely } \\ \text { (L) }\end{array}$ | $\begin{array}{c}\text { Somewhat } \\ \text { Likely (M) }\end{array}$ | $\begin{array}{c}\text { Less Likely } \\ \text { (N) }\end{array}$ |
| None (0) |  |  |  |  |  |  |  |$]$

Table 18: Percentage that Say Certain Practices followed in Dairy, Meat and Fishing Industries are "Unacceptable" (Bottom 3 Box or 3 Lowest Responses) - By Diet, Understanding of Veganism and Disposition to Becoming Vegan

|  | Diet |  | Understanding of <br> Veganism |  | Disposition to becoming Vegan |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Non <br> Vegetarian <br> Only (H) | Vegetarian <br> Only (I) | Correct (J) | Others (K) | Very Likely <br> (L) | Somewhat <br> Likely (M) | Less Likely <br> (N) | None (0) |

Table 19: Awareness of Practices Followed in Dairy, Meat and Fishing Industries (Top 3 Box or 3 highest responses) - By Education - \% That Says "True"

|  | Education |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Class XII (A) | Diploma (B) | Graduate (C) | Postgraduate <br> /PhD (D) |
| Base | $\mathbf{1 6 0}$ | $\mathbf{1 4 6}$ | $\mathbf{5 4 5}$ | $\mathbf{1 4 9}$ |
| Animals raised for food are fed <br> antibiotics/hormones | $51 \%$ B | $36 \%$ | $47 \%$ B | $51 \%$ B |
| The dairy industry does not involve any killing | $47 \%$ | $43 \%$ | $46 \%$ | $53 \%$ B |
| Cows/buffaloes are artificially inseminated to <br> create pregnancies and produce milk | $46 \%$ | $45 \%$ | $52 \%$ | $53 \%$ |
| The poultry industry kills male chicks through <br> drowning or crushing | $38 \%$ B | $29 \%$ | $32 \%$ | $38 \%$ |
| Baby chicks are given anaesthesia when <br> cutting their beaks | $29 \%$ | $34 \%$ | $29 \%$ | $26 \%$ |
| Fishing boats ensure that they only catch fish <br> meant to be eaten | $41 \%$ | $47 \%$ | $44 \%$ | $50 \%$ |

Table 20: Percentage that Say Certain Practices Followed in Dairy, Meat and Fishing Industries are "Unacceptable" (Bottom 3 Box or 3 Lowest Responses) - By Education

|  | Education |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Class XII (A) | Diploma (B) | Graduate (C) | Postgraduate/ <br> PhD (D) |
| Base | $\mathbf{1 6 0}$ | $\mathbf{1 4 6}$ | $\mathbf{5 4 5}$ | $\mathbf{1 4 9}$ |
| Is it acceptable for dairy companies to <br> artificially breed and raise cows in <br> captivity to produce milk? | $42 \%$ | $47 \%$ | $47 \%$ d | $39 \%$ |
| Is it acceptable that meat and poultry <br> industries breed and slaughter animals <br> for meat? | $31 \%$ | $27 \%$ | $37 \%$ B | $29 \%$ |

Table 21: Intention and Drivers to Adopt Veganism (Top 3 Boxes or 3 Highest Responses) By Gender and Age

|  | Gender |  | Age Groups |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men (A) | Women (B) | $\mathbf{1 8 - 2 4}$ <br> Years (C) | $\mathbf{2 5}-\mathbf{3 0}$ <br> Years (D) | $\mathbf{3 1 - 4 0}$ <br> Years (E) | $\mathbf{4 1 - 5 0}$ <br> Years (F) | $\mathbf{5 1 - 6 0}$ <br> Years (G) |
| Base | $\mathbf{5 2 0}$ | $\mathbf{4 8 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{1 0 0}$ |
| I have no desire to ever <br> change my current diet | $45 \%$ | $40 \%$ | $38 \%$ | $42 \%$ | $44 \%$ | $43 \%$ | $50 \% \mathrm{C}$ |
| I could think about <br> becoming vegan | $44 \%$ | $44 \%$ | $40 \%$ | $46 \%$ | $47 \%$ | $45 \%$ | $40 \%$ |
| I am willing to become <br> vegan if it improves my <br> health/fitness | $61 \%$ | $65 \%$ | $66 \% \mathrm{~g}$ | $63 \%$ | $65 \% \mathrm{~g}$ | $61 \%$ | $55 \%$ |
| I am willing to become <br> vegan if it is better for the <br> environment and helps <br> fight climate change | $58 \%$ | $61 \%$ | $62 \% \mathrm{~g}$ | $61 \%$ | $62 \% \mathrm{~g}$ | $58 \%$ | $51 \%$ |
| I am willing to become <br> vegan if vegan foods taste | $54 \%$ | $59 \%$ | $55 \%$ | $58 \%$ | $55 \%$ | $61 \% \mathrm{~g}$ | $50 \%$ |
| as good as real <br> meat/dairy |  |  |  |  |  |  |  |
| I am willing to become <br> vegan to prevent violence <br> towards animals raised <br> for food | $55 \%$ | $55 \%$ | $59 \%$ | $54 \%$ | $56 \%$ | $54 \%$ | $51 \%$ |

Table 22: Intention and Drivers to Adopt Veganism (Top 3 Boxes or 3 Highest Responses) By Diet, Understanding of Veganism

|  | Diet |  | Understanding of <br> Veganism |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Non Vegetarian <br> Only (H) | Vegetarian <br> Only (I) | Correct (J) | Others (K) |
| Base | $\mathbf{7 0 0}$ | $\mathbf{1 7 9}$ | $\mathbf{4 0 9}$ | $\mathbf{5 9 1}$ |
| I have no desire to ever change my <br> current diet | $43 \%$ | $48 \%$ | $47 \% \mathrm{~K}$ | $39 \%$ |
| I could think about becoming vegan | $42 \%$ | $54 \% \mathrm{H}$ | $46 \%$ | $42 \%$ |
| I am willing to become vegan if it <br> improves my health/fitness | $60 \%$ | $68 \% \mathrm{H}$ | $65 \%$ | $62 \%$ |
| I am willing to become vegan if it is better <br> for the environment and helps fight <br> climate change | $58 \%$ | $70 \% \mathrm{H}$ | $61 \%$ | $59 \%$ |
| I am willing to become vegan if vegan <br> foods taste as good as real meat/dairy | $55 \%$ | $64 \% \mathrm{H}$ | $61 \% \mathrm{~K}$ | $53 \%$ |
| I am willing to become vegan to prevent <br> violence towards animals raised for food | $53 \%$ | $65 \% \mathrm{H}$ | $56 \%$ | $55 \%$ |

Table 23: Intention and Drivers to Adopt Veganism (Top 3 Boxes or 3 Highest Responses) - By Education

|  | Education |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Class XII (A) | Diploma (B) | Graduate (C) | Postgraduate/ <br> PhD (D) |
| Base | $\mathbf{1 6 0}$ | $\mathbf{1 4 6}$ | $\mathbf{5 4 5}$ | $\mathbf{1 4 9}$ |
| I have no desire to ever change my <br> current diet | $35 \% \mathrm{C}$ | $34 \% \mathrm{C}$ | $19 \%$ | $42 \% \mathrm{C}$ |
| I could think about becoming vegan | $35 \%$ | $36 \%$ | $49 \% \mathrm{AB}$ | $41 \%$ |
| I am willing to become vegan if it <br> improves my health/fitness | $57 \%$ | $53 \%$ | $69 \% \mathrm{ABD}$ | $56 \%$ |
| I am willing to become vegan if it is <br> better for the environment and helps <br> fight climate change | $54 \%$ | $49 \%$ | $63 \% \mathrm{AB}$ | $63 \% \mathrm{~B}$ |
| I am willing to become vegan if <br> vegan foods taste as good as real <br> meat/dairy | $49 \%$ | $45 \%$ | $59 \% \mathrm{AB}$ | $64 \% \mathrm{AB}$ |
| I am willing to become vegan to <br> prevent violence towards animals <br> raised for food | $43 \% \mathrm{C}$ | $40 \% \mathrm{C}$ | $31 \%$ | $35 \%$ |

Table 24: Perceived Support for Adopting Veganism

|  |  | Diet |  | Understanding of Veganism |  | Disposition to becoming Vegan |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Non Vegetarian Only (H) | Vegetarian Only (I) | Correct (J) | Others (K) | Very Likely (L) | Somewhat <br> Likely (M) | Less <br> Likely (N) | None (0) |
| Base |  | 700 | 179 | 409 | 591 | 285 | 291 | 236 | 188 |
| Q46 | My family and friends will be upset or make fun of me if I become vegan | 40\% | 41\% | 44\%K | 37\% | 39\%0 | 46\%10 | 49\%LO | 18\% |
| Q47 | If I decide to turn vegan, I can rely on people around me for help. | 45\% | 58\%H | 50\% | 46\% | 79\%MNO | 51\%NO | 25\% | 21\% |

Table 25: Attitudes to Vegans (Top 3 Box or 3 Highest Responses) - By Gender and Age

|  | Gender |  | Age Groups |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men (A) | Women (B) | $\mathbf{1 8 - 2 4}$ <br> Years (C) | $\mathbf{2 5 - 3 0}$ <br> Years (D) | $\mathbf{3 1 - 4 0}$ <br> Years (E) | $\mathbf{4 1}-\mathbf{5 0}$ <br> Years (F) | $\mathbf{5 1 - 6 0}$ <br> Years (G) |
| Base | $\mathbf{5 2 0}$ | $\mathbf{4 8 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 0 0}$ | $\mathbf{1 0 0}$ |
| I admire vegans for not <br> consuming animals or products <br> derived from animals | $58 \%$ | $62 \%$ | $61 \%$ | $62 \%$ | $59 \%$ | $60 \%$ | $56 \%$ |
| Vegans are responsible citizens <br> concerned about climate change | $59 \%$ | $59 \%$ | $56 \%$ | $64 \% \mathrm{cE}$ | $54 \%$ | $65 \% \mathrm{cE}$ | $61 \%$ |
| Vegans are moralistic people, <br> passing judgments on personal <br> eating habits of others | $41 \%$ | $40 \%$ | $39 \%$ | $42 \%$ | $39 \%$ | $44 \%$ | $36 \%$ |
| Vegans are elitist people <br> promoting an impractical <br> lifestyle fashion | $56 \%$ | $52 \%$ | $48 \%$ | $56 \%$ | $57 \% \mathrm{C}$ | $59 \% \mathrm{C}$ | $51 \%$ |

Table 26: Attitudes to Vegans (Top 3 Box or 3 Highest Responses) By Diet, Understanding of Veganism and Disposition to Becoming Vegan

|  | Diet |  | Understanding of Veganism |  | Disposition to becoming Vegan |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Non-Vegetarian Only (H) | Vegetarian Only (I) | Correct (J) | Others (K) | Very Likely <br> (L) | Somewhat <br> Likely (M) | Less Likely <br> (N) | None (0) |
| Base | 700 | 179 | 409 | 591 | 285 | 291 | 236 | 188 |
| I admire vegans for not consuming animals or products derived from animals | 59\% | 70\% H | 61\% | 59\% | 91\% MNO | 63\% NO | 44\% 0 | 27\% |
| Vegans are responsible citizens concerned about climate change | 58\% | 66\% h | 60\% | 59\% | 95\% MNO | 57\% NO | 35\% | 38\% |
| Vegans are moralistic people, passing judgments on personal eating habits of others | 40\% | 47\% h | 38\% | 42\% | 24\% 0 | 40\% NO | 41\% NO | 13\% |
| Vegans are elitist people promoting an impractical lifestyle fashion | 52\% | 63\% N | 51\% | 57\% j | 20\% 0 | 34\% LNO | 25\% 0 | 7\% |

Table 27: Attitudes to Vegans (Top 3 Box or 3 Highest Responses) - By Education

|  | Education |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Class XII (A) | Diploma (B) | Graduate (C) | Postgraduate <br> /PhD (D) |
| Base | $\mathbf{1 6 0}$ | $\mathbf{1 4 6}$ | $\mathbf{5 4 5}$ | $\mathbf{1 4 9}$ |
| I admire vegans for not consuming animals or <br> products derived from animals | $56 \%$ | $55 \%$ | $62 \%$ | $62 \%$ |
| Vegans are responsible citizens concerned <br> about climate change | $64 \% \mathrm{D}$ | $58 \%$ | $60 \% \mathrm{D}$ | $51 \%$ |
| Vegans are moralistic people, passing <br> judgments on personal eating habits of others | $40 \%$ | $32 \%$ | $42 \% \mathrm{~B}$ | $40 \%$ |
| Vegans are elitist people promoting an <br> impractical lifestyle fashion | $55 \%$ | $51 \%$ | $56 \%$ | $50 \%$ |

Table 28: Exposure to Communication, Events and People Associated with Veganism - By Gender and Age

|  | Gender |  | Age Groups |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Men (A) | Women (B) | $\mathbf{1 8} \mathbf{- 3 0}$ <br> Years (C) | Above 30 <br> Years (D) |
| Base | $\mathbf{5 2 0}$ | $\mathbf{4 8 0}$ | $\mathbf{4 5 0}$ | $\mathbf{5 5 0}$ |
| Have you talked with your friends or family <br> members about veganism or vegan diet? | $70 \%$ | $67 \%$ | $73 \%$ D | $65 \%$ |
| Have you ever read a book, booklet, poster, or <br> any printed material (magazine, newspaper <br> article, ads) about veganism or vegan diet | $65 \%$ | $66 \%$ | $67 \%$ | $64 \%$ |
| Have you ever talked with someone who is a <br> vegan or consumes vegan diet? | $66 \%$ | $63 \%$ | $69 \%$ D | $62 \%$ |
| Have you ever received any messages on <br> veganism or vegan diet on social media <br> (Facebook, Twitter, Instagram, etc.) | $61 \%$ | $60 \%$ | $64 \% \mathrm{D}$ | $57 \%$ |
| Have you seen TV or film shows, or heard radio <br> programs on veganism or vegan diet | $58 \%$ | $61 \%$ | $64 \% \mathrm{D}$ | $55 \%$ |
| Have you attended meetings, workshops or <br> conferences on veganism or vegan diet? | $50 \%$ | $45 \%$ | $52 \% \mathrm{D}$ | $44 \%$ |

Table 29: Exposure to Communication, Events and People Associated with Veganism By Diet, Understanding of Veganism and Disposition to Becoming Vegan

|  | Diet |  | Understanding of Veganism |  | Disposition to becoming Vegan |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Non Vegetarian Only (H) | Vegetarian Only (I) | Correct (J) | Others (K) | Very Likely <br> (L) | Somewhat Likely <br> (M) | Less Likely <br> (N) | None (0) |
| Base | 700 | 179 | 409 | 591 | 285 | 291 | 236 | 188 |
| Have you talked with your friends or family members about veganism or vegan diet? | 66\% | 69\% | 63\% | 72\% J | 85\% MNO | 67\% 0 | 69\% 0 | 46\% |
| Have you ever read a book, booklet, poster, or any printed material (magazine, newspaper article, ads) about veganism or vegan diet | 64\% | 66\% | 64\% | 66\% | 73\% NO | 71\% 0 | 63\% 0 | 46\% |
| Have you ever talked with someone who is a vegan or consumes vegan diet? | 73\% i | 66\% | 56\% | 71\% J | 81\% MNO | 67\% 0 | 61\% 0 | 41\% |
| Have you ever received any messages on veganism or vegan diet on social media (Facebook, Twitter, Instagram, etc.) | 57\% | 66\% H | 55\% | 64\% J | 71\% NO | 68\% NO | 58\% 0 | 36\% |
| Have you seen TV or film shows, or heard radio programs on veganism or vegan diet | 54\% | 65\% H | 57\% | 61\% | 68\% NO | 67\% NO | 56\% 0 | 38\% |
| Have you attended meetings, workshops or conferences on veganism or vegan diet? | 47\% | 45\% | 34\% | 57\% J | 51\% 0 | 57\% NO | 44\% 0 | 31\% |

Table 30: Exposure to Communication, Events and People Associated with Veganism - By Education

|  | Education |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Class XII (A) | Diploma (B) | Graduate (C) | Postgraduate/ <br> PhD (D) |
| Base | $\mathbf{1 6 0}$ | $\mathbf{1 4 6}$ | $\mathbf{5 4 5}$ | $\mathbf{1 4 9}$ |
| Have you talked with your friends or family <br> members about veganism or vegan diet? | $79 \% \mathrm{CD}$ | $75 \% \mathrm{Cd}$ | $65 \%$ | $66 \%$ |
| Have you ever read a book, booklet, poster, or any <br> printed material (magazine, newspaper article, ads) <br> about veganism or vegan diet | $69 \%$ | $71 \%$ c | $63 \%$ | $62 \%$ |
| Have you ever talked with someone who is a vegan <br> or consumes vegan diet? | $72 \%$ CD | $71 \%$ cD | $63 \%$ | $58 \%$ |
| Have you ever received any messages on veganism <br> or vegan diet on social media (Facebook, Twitter, <br> Instagram, etc.) | $69 \%$ CD | $73 \% \mathrm{CD}$ | $59 \% \mathrm{~d}$ | $46 \%$ |
| Have you seen TV or film shows, or heard radio <br> programs on veganism or vegan diet | $56 \%$ | $71 \% \mathrm{ACD}$ | $58 \%$ | $56 \%$ |
| Have you attended meetings, workshops or <br> conferences on veganism or vegan diet? | $68 \% \mathrm{CD}$ | $65 \% \mathrm{CD}$ | $42 \% \mathrm{I}$ | $28 \%$ |

## APPENDIX C. DEMOGRAPHICS

Chart 14 - Break-up by Gender


Chart 15 - Break-up by Age


## APPENDIX D. NOTES ON FACTOR ANALYSIS AND REGRESSION ANALYSIS

## ABOUT FACTOR ANALYSIS

Factor analysis is a data reduction technique. In the table, for instance, the 21-item scale is reduced to five factors. Each factor is a collection of set of similar and meaningful items. Each factor explains an aspect or dimension of the phenomenon, called here, attitude toward veganism. We can therefore say, based on the content of the twenty-one items that the five factors - attitude toward vegan diet, attitude toward animals, attitude toward meat consumption, attitude toward milk and milk products, and attitude toward food consumption - together explain attitude toward veganism. Together, they explain 57.2 of the variance. Loosely put, they explain 57.2 percent of the phenomenon called attitude toward veganism. For an exploratory study (like this one), this is a decent amount of explanation. Once a meaningful factor is obtained, you examine the content of the items that constitute it, and name the factor, as has been done here.

Table 31: Factor Analysis (21 Attitude Statements Converted as 5 Categories for Analysis)

| Factor <br> Number | \% Of Variance Explained | Factor Name | Factor Items | Reliability |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 17.15 | Attitude toward vegan diet | A vegan diet is wholesome, with enough protein and other nutrients essential for health/ fitness | 0.824 |
|  |  |  | A vegan diet is healthy and can solve many health problems. |  |
|  |  |  | A healthy diet should only be plant-based, avoiding dairy, meat, fish, eggs and other animal-based products. |  |
|  |  |  | To be healthy/fit it is important to avoid meat and eggs |  |
|  |  |  | A vegan diet is best for the environment and climate change |  |
|  |  |  | We must avoid dairy because it is the biggest contributor to global warming |  |
|  |  |  | Producing meat is harmful for the environment and climate change |  |
| 2 | 15.5 | Attitude toward animal rights | Humans do not have the right to use animals however they want. | 0.815 |
|  |  |  | All animals deserve to enjoy their natural habitat, free from captivity |  |
|  |  |  | I am concerned about the welfare of animals raised for meat and dairy. |  |
|  |  |  | Morally, the lives of animals is equal to that of humans. |  |
|  |  |  | I think it is wrong to exploit animals for food. |  |
|  |  |  | There is a big difference between killing animals and killing plants |  |
| 3 | 9.73 | Attitude toward meat consumption | We must eat meat otherwise the world will be overrun by animals | 0.629 |
|  |  |  | It is ok to eat meat if animals are killed humanely |  |
|  |  |  | Eating meat is a sign of modernity |  |
|  |  |  | Eating meat is joy |  |
| 4 | 7.55 | Attitude toward milk and milk products | Milk and milk products such as ice cream, cakes and desserts are unnecessary pleasures | 0.618 |
|  |  |  | Milk and milk products (paneer, curd, ice creams) are not good for health/fitness |  |
| 5 | 7.22 | Attitude toward food consumption | I prefer to make my own food choices rather than someone telling me what to eat or not eat | 0.531 |
|  |  |  | People's food choices should be made based on larger concerns such as animal rights and environmental impact/climate change |  |

Table 32: Brief Explanation of Factor Analysis - Attitude to Veganism

| Factor <br> Number | Factor Name | Factor Items | Reliability |
| :---: | :---: | :---: | :---: |
| 1 | Attitude toward vegan diet | A vegan diet is wholesome, with enough protein and other nutrients essential for health/ fitness | Since he seven items refer to health and wholesomeness of vegan diet, the factor is termed attitude toward vegan diet. <br> The seven items explain 17.15 \% of variance; The factor's reliability is high ( 0.824 ) |
|  |  | A vegan diet is healthy and can solve many health problems. |  |
|  |  | A healthy diet should only be plant-based, avoiding dairy, meat, fish, eggs and other animal-based products. |  |
|  |  | To be healthy/fit it is important to avoid meat and eggs |  |
|  |  | A vegan diet is best for the environment and climate change |  |
|  |  | We must avoid dairy because it is the biggest contributor to global warming |  |
|  |  | Producing meat is harmful for the environment and climate change |  |
| 2 | Attitude toward animal rights | Humans do not have the right to use animals however they want. | Since the six items refer to animal rights and welfare, the factor is termed attitude toward animal rights. <br> The seven items explain $15.50 \%$ of variance; The factor's reliability is high (0.815) |
|  |  | All animals deserve to enjoy their natural habitat, free from captivity |  |
|  |  | I am concerned about the welfare of animals raised for meat and dairy. |  |
|  |  | Morally, the lives of animals is equal to that of humans. |  |
|  |  | I think it is wrong to exploit animals for food. |  |
|  |  | There is a big difference between killing animals and killing plants |  |
| 3 | Attitude toward meat consumption | We must eat meat otherwise the world will be overrun by animals- | Since the four items refer to not eating meat, the factor is termed attitude toward animal rights. <br> The seven items explain 9.73 \% of variance; The factor's reliability is modest (0.629) |
|  |  | It is ok to eat meat if animals are killed humanely |  |
|  |  | Eating meat is a sign of modernity- |  |
|  |  | Eating meat is joy |  |
| 4 | Attitude toward milk and milk products | Milk and milk products such as ice cream, cakes and desserts are unnecessary pleasures | Since the two items refer to consumption of milk and milk products such as paneer, etc., the factor is termed attitude toward milk and milk products. <br> They explain 7.55 percent of the variance. The factor's reliability is modest ( 0.618 ) |
|  |  | Milk and milk products (paneer, curd, ice creams) are not good for health/fitness |  |
| 5 | Attitude toward food consumption | I prefer to make my own food choices rather than someone telling me what to eat or not eat | Since the two items refer to food related choices of an individual., the factor is termed attitude toward food consumption. They explain 7.22 percent of the variance. The factor's reliability is modest $(0.531)$ |
|  |  | People's food choices should be made based on larger concerns such as animal rights and environmental impact/climate change |  |

## ABOUT REGRESSION ANALYSIS

A dependent variable (such as income, for example) is rarely explained by only one independent variable (education, for example). In such cases, an analyst uses multiple regression, which attempts to explain a dependent variable using more than one independent variable.

The model, however, assumes that there are no major correlations between the independent variables. If there is, it knocks off one of them. The logic here is why use two variables when one is enough. The idea is to offer parsimonious explanation.

To paraphrase, multiple regression (MR) uses several independent variables to predict the outcome of a dependent variable. When MR examines the relationship between one predictor variable and the dependent variable(s), it holds other variables constant (all else equal).
The dependent variable in the study was "Intention to adopt veganism." It was operationalized using a 5 -item scale (for example, I am willing to become vegan to prevent violence toward animals raised for food). Responses to the 7 -point scale were added to yield a summary index where the minimum a respondent could score was five and the maximum was thirty-five.

## FOR MORE INFORMATION CONTACT

## nirupama.sarma@gmail.com

Primary research conducted by Azul Research and Advisory Services


[^0]:    Suggested citation style: Sarma, Nirupama and Singh, Bhupesh (2023). Public Survey of Knowledge, Attitudes and Practices (KAP). Vegan Advocacy in India: All Creatures Great and Small.

[^1]:    ${ }^{1}$ Natiional Capital Region
    ${ }^{2} \mathrm{n}=(Z) 2 p q / d 2$ where $\mathrm{n}=$ desired sample size; $\mathrm{z}=$ standard normal deviation usually set at $90 \%$ significance level; $p=$ proportion in the target population estimated to have a particular probability (i.e., $p=0.28^{*}$ ); $q=1-p$; and degree of accuracy desired (set at 0.05 ) Accordingly, the minimum sample size. $\mathrm{G}(\mathrm{n})$ was calculated as: $\mathrm{N}=(1.65)^{2}(0.28)(0.72) /(0.05) 2$ where $\mathrm{n}=217$ per state (about $28 \%$ of Indian population is vegetarian based on the Sample Registration System Baseline Survey of 2014 (Office of the Registrar General, India, 2016).

[^2]:    ${ }^{3}$ This survey uses the terms "knowledge" and "awareness" somewhat interchangeably, with knowledge referring to a more advanced state of knowing than mere awareness (of milk substitutes, for example).
    4 "Perception" here is used to refer to a subjective assessment based on partial information - for instance, perception about vegan food in the absence of personal experience, while attitude refers to a more personal and fully-formed judgment on an issue, such as "I believe that animals should not be exploited for food."
    5 Speciesism refers to the belief that affords moral consideration only to humans and which serves as the fundamental bedrock for all forms of discrimination against non-human animals, including the belief that humans have the moral right to determine some non-human animals as "food."
    6 These were included since they are likely to influence Intention to adopt veganism given the sociocultural context of India

[^3]:    7 Practice followed to prevent them from pecking each other from excessive stress when confined in battery cages. The statement in the questionnaire reads: "Baby chicks are given anesthesia when cutting their beaks."
    8 Reference to the practice of killing male calves - or leaving them to die - as well as "spent" adult female bovines that are sent for slaughter (oftentimes covertly, since cow slaughter is banned in many states).

[^4]:    ${ }^{9}$ The other variables, such as age, education, occupation, and monthly household income were not significant. So were socio-cultural variables such as marrying within the religion and following traditional practices of community and its rituals.
    ${ }^{10}$ R2 is a measure of how well the regression model fits the data. It represents the proportion of the variation in the dependent variable (Intention to adopt veganism) that can be explained by the independent variables (gender, religion, etc). An R2 value of . 166 means that approximately $16.6 \%$ of

[^5]:    the variation in the Intention to adopt veganism can be explained by the independent variables. While we may perceive this as a low value, it is common occurrence in social and behavioural sciences due to the complex nature of human behaviour and the presence of numerous factors that influence human behaviour. Therefore it is important to understand the R2 value in conjunction with other statistical values that have been shown in the table.
    11 These were added to the instrument to measure if "personal identity" was traditional or modern

[^6]:    12 The VIF (Variance Inflation Factor) values for all the variables were between 1 and 2 throughout the model building process. This suggests that there was minimal collinearity among the independent variables, allowing for the use of multiple regression analysis. VIF stands for variance inflation factor.

[^7]:    ${ }^{13}$ Health is usually considered an "egoistic" driver for veganism, as it is based on the personal benefits to the individual; while environmental and animal rights drivers are described as "altruistic," based on concerns wider than one's personal sphere (See Phua et al., 2019 in the LR).
    ${ }_{14}$ This recommendation extrapolates data relevant for one/both of the two age subgroups of 18-24 years and 25-30 years, given that both subgroups show similar trends and have similar characteristics (barring the added dimension of purchasing power for the older age group).

[^8]:    15 In some instances, other age groups do better.
    16 The belief in meat-eating as part of a modern lifestyle partly contributed to the uptake of egg and meat-eating even among cultural upper-caste vegetarians with increased influence of globalisation, as detailed in the LR. This survey data suggests that perhaps a new norm is emerging with younger generations.
    ${ }^{17}$ R2 is a measure of how well the regression model fits the data. It represents the proportion of the variation in the dependent variable (Intention to adopt veganism) that can be explained by the independent variables (gender, religion, etc). An R2 value of . 166 means that approximately $16.6 \%$ of the variation in the Intention to adopt veganism can be explained by the independent variables. While we may perceive this as a low value, it is common occurrence in social and behavioural sciences due to the complex nature of human behaviour and the presence of numerous factors that influence human

[^9]:    behaviour. Therefore it is important to understand the R2 value in conjunction with other statistical values that have been shown in the table.

[^10]:    18 As indicated in the Content Analysis of Social Media.

