



Transition into Veganism: Drivers of Vegan Diet Consumption

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Received: 18 April 2021

Accepted: 20 June 2021

DOI: <https://doi.org/10.32479/irmm.11519>

ABSTRACT

Health and environmental impacts of toxins, genetically modified organisms and other non-natural compounds used to boost crop productivity have stimulated consumer and marketer interest in organic food. Organic ingredients are generally viewed as more nutritious, cheaper, cleaner and more environmentally sustainable. Society is currently witnessing a revolution in food intake and habits as people grow more health-conscious. Plant-based diets (vegan diet) are expected to become the next organic food for healthy living. The purpose of the study is to understand the impact of personal factors (health consciousness, subjective norms and perceived value) and product attributes on attitudes towards veganism and vegan diet consumption. The data for this research were collected from 377 students within the Generation Y cohort at an institution of higher learning within the Johannesburg metropolitan area in South Africa. A descriptive and exploratory analysis using quantitative techniques was performed using structured questionnaires. A structural equation modelling (SEM) procedure was applied to achieve the hypotheses testing using the AMOS (version 25.0) package. The findings demonstrated the role of motivational and marketing influences in shaping customer consumption patterns. Social influence, health consciousness, perceived value, product attributes, and attitudes towards veganism positively influence vegan food consumption among millennials in South Africa. The results suggest that the attitude towards veganism depends on both personal and social values. Motivations to preserve the environment and reverence for life forms seem to be mainly driven by personal values.

Keywords: Veganism, Social Influence, Consumption

JEL Classifications: M3, M30, M31

1. INTRODUCTION

Healthier diets are an emerging societal trend that directly affect global marketing (Lamb et al., 2015). Studies have shown that the increasing number of people who take an interest in their well-being strives to sustain a healthier lifestyle by using products that enhance their optimal health (Kim and Chung, 2011; Ismail and Mokhtar, 2016). Avoiding all products obtained from animals has become a growing phenomenon in modern life-styles (Davis and Melina, 2000; Radnitz et al., 2015). Veganism is an extreme type of vegetarianism that prescribes abstention from eating or using animal products and animal by-products (Marcus, 2001). Given the growing demand for organic food, identifying the critical factors that influence vegan food purchasing behaviour is essential for vegan

product producers, retailers, marketing specialists, policy makers and restaurant owners in executing effective marketing strategies.

An analysis of extant literature on organic food consumption reveals that several re-searches have examined rationales for the purchase of vegan food (Honkanen et al., 2006 Phua et al., 2020; Christopher et al., 2018). For instance, Hughner et al. (2007) established that vegan food consumers' motivations include health concern, environmental concern, and animal welfare. However, there has been limited re-search on variables influencing vegan food consumption, notably among the generation Y cohorts from an African context. Generation Y is a dominant consumer segment demanding alternative healthy lifestyles than earlier generations (Valentine and Powers, 2013).

Prior research into food consumption identified that beliefs and subjective norms had been described as critical factors in fostering an understanding of human behaviour (Ha, 1998). It is, however, crucial to consider personal and social considerations (attitudes, subjective norms) in developing a systematic model for a deeper understanding of vegan diet consumption. Most studies have identified health benefits, food safety and nutritional value as key drivers of consuming (Massey et al., 2018).

The present research explores the impact of subjective norms, values that underlie vegan-ism, social influence on consumers' attitude towards veganism and behavioural intention to consume vegan diet. This research offers insight into key factors and frameworks that determine vegan diet consumption, contribute to existing theories, and provide innovative strategies for the development of the vegan food industry.

2. LITERATURE REVIEW

2.1. Vegan Food Consumption and Millennial Cohort

Despite the valuable knowledge of food consumption in the extant literature, little attention to millennials is evident. It appears that consumers rely on an identity to guide their purchasing decisions. Millennials are among the most significant market segments for vegan foods and represent a dominant consumer sector demanding alternative healthy eating habits than past generations (Massaglia et al., 2018). Millennials, also referred to as Generation Y, are consumers born between 1982 and 2000 (Corodeanu, 2015). Generally, the millennial cohort is very sensitive to social values, concerns about environmental issues, has higher incomes, and consumes more sustainable food products than other generations. Several researches highlight a significant influence of environmental concerns, health consciousness, and perceived value on young consumers' food consumption (Yadav, 2016). On the contrary, Ayyub et al. (2018) found that health consciousness and social influence have no effect on consumption intention. Previous research's conflicting findings call for a more detailed study of the effect of factors such as health consciousness, subjective norms, product attribute, and attitude towards veganism on vegan diet consumption.

2.2. Health Consciousness, Perceived Value and Attitude towards Veganism

Health consciousness refers to customers' willingness to consider and undertake health behaviours (Hansen et al., 2018). Conscious vegans are primarily concerned with animal welfare. They display the strictest degree of dietary limits and have extreme emotional responses to meat intake. Motivated to increase their physical well-being, health vegans are conscious of their diet's nutritional value (Hansen et al., 2018). While there is continuing controversy about whether natural food is more nutritious than conventional food (Has-selbach and Roosen, 2015), numerous reports point to the high value of well-being as a motivator for organic/natural food customers (Kriwy and Mecking, 2012). Embracing a vegan lifestyle involves avoidance of animal products or products tested on animals. Understanding consumer attitudes towards the consumption of a vegan diet may explain consumer's transition to veganism. Extant literature argues that attitudes are predictive of consumer behaviour and influence consumption. For example,

Gumpo, Chuchu, Maziriri and Madinga (2020) have discovered that consumer attitudes have an effect on their decision-making. However, understanding consumer attitudes and behaviours is critical to connect with markets and consumer consumption trends effectively. The theory of planned behaviour (Ajzen, 2005) describes how consumers make their choices. Attitude affects the perception and selection of a product in the context of the 'consumer's appraisal of the product's properties; while in the same vein, it has a direct effect on the 'consumer's purchasing preferences and decisions. Perceived value is a significant factor in the consumption decision of consumers, strengthens the intention to consume and indicates a link between the product and the consumer (Hur et al., 2013; Wang and Yu, 2016).

2.3. Conceptual Framework

The conceptual framework for this research is based on critical drivers adopted from the Theory of planned behaviour Ajzen (2001) as well as Zanolli and Naspetti (2002) (Figure 1). It is proposed that the attitude toward veganism has a direct impact on vegan diet consumption. It is also assumed that subjective norms, health consciousness, perceived value, and product attributes all have an impact on veganism's attitude.

Based on the literature provided and proposed conceptual model the following hypothesis statements are proposed. Later the study's research methodology is discussed.

- H₁: Subjective norms is significantly and positively related to veganism's attitude.
- H₂: Health consciousness is significantly and positively associated with the attitude towards veganism
- H₃: Perceived value is significantly and positively related to attitude towards veganism.
- H₄: Product attributes is significantly associated with the attitude towards veganism.
- H₅: Attitudes towards veganism is significantly and positively associated with vegan diet consumption.

3. METHODOLOGICAL ASPECTS

The research was carried out within a positivist framework, which holds that human knowledge is achieved through reasoning and the creation of an objective meaning of their experiences and perceptions (Khan, 2014). Therefore, this study was quantitative in nature and the design allowed for soliciting information relating to vegan diet consumption, subjective norms, health consciousness, perceived value, product attributes and veganism's attitudes.

3.1. Sample and Data Collection

The research model hypotheses were tested with millennials' data from an institution of higher learning in South Africa. Data were collected through a survey conducted in May-July 2019. In total, 277 students responded to the study. To eliminate differences in response patterns due to different reference points, all respondents were asked to respond to the questionnaire concerning the vegan diet. Of the respondents, 48.3% were male, 44.1% were female. Most of the respondents were 18–24 years (73.9%), 13% were 25–29 years, 26% were above 30 years. As to educational background, 85.8% were undergraduates, and 14.2% were post-

graduate candidates. In terms of their income (allowances), 92.4% had between 100 and 4000rands per month.

3.2. Measures

Research scales were operationalised based on previous work. Proper modifications were made to fit the current research context and purpose. A minimum of three items per construct were used to ensure adequate reliability. 'Subjective norms' measure used a four-item scale from Chan (1998). 'Health consciousness' measure used a three-item scale adapted from Michaelidou and Hassan (2008). 'Perceived value' and 'product attribute' used a four-item scale, each adapted from Song et al. (2016). 'Attitude towards veganism' used a four-item measure adapted from Lockie et al., 2004. Vegan diet consumption used a three-item scale adapted from Bredahl (2001). All items based on 5-point Likert-type scales anchored by 1=strongly disagree to 5=strongly agree.

3.3. Data Analysis

The data were analysed using statistical software SPSS, version 25.0 and AMOS Graphics version 25 using the Maximum Likelihood approach. SPSS was used to collect the descriptive statistics for the survey. Structural equation modelling (SEM) using AMOS Graphics was used to analyse latent variables within their causal structure. Consistent with the two-stage approach by Anderson and Gerbing (1988), assessment of the measurement model and evaluation of the structural model.

3.4. Descriptive Statistics

The descriptive statistics of the constructs are provided in Table 1. Table 1 shows that, with the exception of the mean value for Health

consciousness, all mean values are higher than the median (2.77 to 3.33). The standard deviations ranged between 0.96 and 1.14, indicating that the data points are close to the mean, and thus the data for this research is reasonably normal for further analysis. The measuring instrument's internal accuracy was tested using Composite Reliability (CR) and the Cronbach's α value. Nunnally (1978) states that Cronbach's alpha of 0.7 indicates that a measure is reliable. The Cronbach's α values for all constructs in the study were above the threshold (0.7), as shown in Table 1, verifying the constructs' reliability (Hair et al., 2009). The CR scores ranged from 0.61 to 0.89, showing that each construct had high internal consistency (Hair et al., 2009).

To ensure convergent validity, items were tested whether they loaded into their respective (a priori) constructs with loadings ≥ 0.5 . In contrast, discriminant validity was checked using the average variance extracted (AVE) value and ensuring that there were no significant variable cross-loading (Chin, 1998). To affirm the existence of discriminant validity, the square root of the AVE scores for all variables was greater than the inter-construct correlation scores (Fornell and Larcker, 1981). The individual items' reliability was validated by observing the standardised coefficient value of each item (>0.5). The least factor loadings value for the research constructs is 0.551 after deleting items with poor factor loading estimates (Anderson and Gerbing, 1988) (Table 2). This indicates that all the measurement instruments are acceptable and reliable because all the individual items converged well, with more than 50% of each item's variance shared with its respective construct (Fraering and Minor, 2006) (Table 2). Analysis using the construct correlation matrix indicates the presence of

Figure 1: Conceptual framework

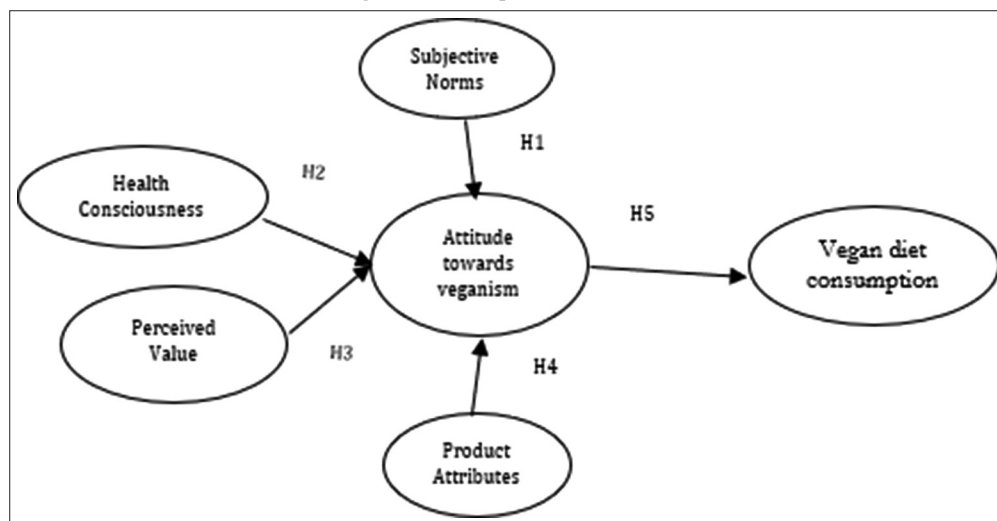


Table 1: Scale accuracy analysis and correlation of construct

Construct	Mean	SD	Cronbach's α value	CR value	AVE Value	1	2	3	4	5	6
1. Subjective Norms	2.25	1.08	0.704	0.69	0.38	(0.616)	-	-	-	-	-
2. Health Consciousness	3.02	1.14	0.893	0.89	0.80	0.407**	(0.89)	-	-	-	-
3. Perceived Value	3.33	1.09	0.802	0.82	0.62	0.444**	0.718**	(0.787)	-	-	-
4. Product Attributes	3.16	0.96	0.756	0.61	0.49	0.472**	0.477**	0.558**	(0.7)	-	-
5. Attitude towards veganism	2.77	1.11	0.829	0.82	0.54	0.499**	0.677**	0.750**	0.657**	(0.735)	-
6. Vegan diet consumption	3.17	1.10	0.742	0.73	0.36	0.504**	0.327**	0.470	0.436**	0.480**	(0.6)

The square roots of AVE for discriminant validity italicized along the diagonal. **Correlation significant at 0.01 level (2-tailed). * Correlation significant at 0.05 level (2-tailed)

Table 2: Measurement items and factor loadings

Construct and source	Items	Factor loadings
Subjective Norms (CFI=0.905; Chan, 1998)	My family suggest I should eat vegan foods	0.760
	My friends suggest I should eat vegan foods	0.756
Health Consciousness Michaelidou and Hassan (2008).	I reflect a lot on my well-being	0.888
	I'm really self-conscious about my well-being	0.901
Perceived Value Song et al. (2016)	Vegan food is safe and it does not contain any animal bi-products	0.765
	Vegan foods are of higher nutritional value	0.848
	Continuous intake of vegan food will promote my long-term health benefits	0.898
	Vegan food is a status symbol and an affluent lifestyle	0.571
	Vegan food makes a positive contribution to an environmentally friendly world and protects animal rights	0.865
Product Attributes Song et al. (2016)	Vegan food is better than non-vegan food	0.556
	Vegan food is of better quality	0.745
	Vegan food is safe for consumption since it is free from animal products and animal bi-products	0.685
Attitude towards consumption of vegan foods. (Lockie et al., 2004)	Vegan food tastes better than traditional food	0.766
	Vegan food is better to consume than regular food	0.850
	Vegan food is healthier to eat than regular food	0.856
Purchase Intention of Vegan Foods (Bredahl, 2001)	vegan foods taste better than conventional foods	0.598
	vegan foods have superior quality than conventional food	0.599
	I plan to consume vegan products	0.551
	I am ready to consume vegan food at any expense	0.761
	The likelihood that I will buy organic food is very high	0.725

discriminant validity, all inter-correlation values are less than 0.8 (O'Rourke and Hatcher 2013) (Table 1).

4. STRUCTURAL MODEL ASSESSMENT

The goodness of fit of the hypothesised model was assessed using confirmatory factor analysis to validate the structural model. The computed indices for the hypothesised research model were $\chi^2=2.537$; comparative fit index (CFI) =0.905; goodness-of-fit index (GFI) =0.879; adjusted goodness-of-fit index (AGFI) =0.821; Root mean of squared error of approximation (RMSEA) =0.074; Tucker Lewis index (TLI) =0.871; NFI=0.856; IFI=0.907 indicating a good model fit (Hu and Bentler, 1999). Therefore, the hypothesised model fits well with the data. Figure 2 below shows the study's structural model.

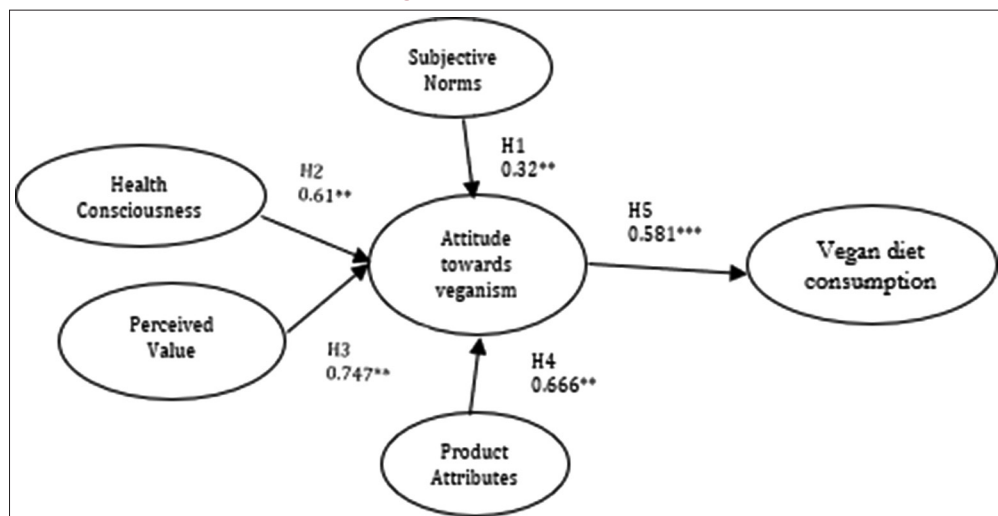
Subsequent to observing a good fit for the hypothesised model, the significance of each relationship in the conceptual model and the coefficient of determination (R^2) is calculated. Standardised

regression coefficients and path coefficients are shown on Figure 2. All six hypothesised paths were significant. Subjective norms were significantly and positively (0.320, $P < 0.01$) related to veganism's attitude. Thus, H1 is supported. The results further show that health consciousness was significantly and positively (0.610, $P < 0.01$) associated with the attitude towards veganism, providing support for H2. The results also indicate that perceived value was significantly and positively (0.747, $P < 0.01$) related to attitude towards veganism. H3 is thus supported. Similarly, product attributes (0.666, $P < 0.01$) were significantly associated with the attitude towards veganism. The findings show that subjective norms, health consciousness, product attributes and perceived value contribute to consumer attitude towards veganism. Equally, attitude towards veganism was positively and significantly (0.581, $P < 0.01$) related to vegan diet consumption. Thus, providing support for H4 and H5, indicating that attitude can influence involvement and consumption of vegan foods. Subjective norms, health consciousness, perceived value and product attributes together explained 51% of the variance in attitude towards veganism, with the perceived value being the more robust predictor of attitude towards veganism. In the same vein, attitude towards veganism explained 35% of the vegan diet consumption variance.

5. DISCUSSION AND IMPLICATIONS OF THE STUDY

The study examines the effects of subjective norms, health consciousness, perceived value and product attributes on young 'consumers' intention to consume vegan food in an African setting. The results indicated that both altruistic beliefs (health awareness, perceived values) and product attributes significantly influence millennial attitudes towards vegan and vegan dietary consumption. The perceived value has a more significant impact on the attitude towards veganism than all other research variables. Veganism is a function of belief and attitudes towards nature, animals and the environment. In contrast to Tunçay and Bulut (2019), this study discovered that individual values such as one's health and social influence appear to influence vegan attitudes. The majority of the respondents felt that vegan diets were natural and of good quality, fresher, tastier and more nutritious than conventionally manufactured food items. This result is consistent with earlier research, which stated that, generally, organic food is considered by consumers to be more healthy and better than traditional food items (Shafie and Rennie, 2012). Furthermore, the results indicate that one's attitude toward veganism has a strong influence on one's consumption of vegan diet. According to Dean et al. (2008), there is a strong positive connection between consumer attitudes toward organic food consumption and the intention to consume organic food. Vegans relate their value system to attitudes, linking values and consuming a vegan diet (Ruby, 2012).

The theory of planned behavior recognizes that attitudes and preferences for a good or service extend beyond belief-value relationships (Ajzen, 1991). Overall, our results show that personal factors influence vegan diet consumption, and the presence of food attributes (e.g. naturalness and vegan nutritional

Figure 2: Structural model

CFI=0.905; NFI=0.856; TLI=0.871; RMSEA=0.074; GFI=0.879; AGFI=0.821. ***P<0.01

requirements) is considered key in the consumption decision. The Theory of Planned Behavior provides a foundation for investigating the impact of behaviors, beliefs, subjective norms, health consciousness, and product characteristics on vegan diet consumption/adoption.

This study contributes to the growing body of knowledge by widening the list of vegan dietary consumption drivers beyond attitude - behaviour influences to include consumer perception on food attributes essential in consumption decisions. The information generated will inform decision-makers and organic food marketers as the vegan food industry evolve. A vegan lifestyle entails not consuming either animal or animal by-products. Globally the number of people embracing veganism is rising. However, there is a lacuna in the extant literature on vegan diet consumption. The current study contributes to the body of knowledge on antecedents and outcomes of attitude towards veganism and its influence on vegan diet adoption. This research makes two main contributions: (1) The first contribution is based on a distinction of a more individual nature, such as health consciousness and subjective norms, and variables of a more ideological nature, namely, perceived value. (2) The study offers a more systematic perspective on attitudes, creating a chain of effects between the determinants and consequences of vegan attitudes and the impact on vegan dietary intake.

However, due to the nature of the survey findings, this study was unable to analyze all of the food characteristics that consumers are likely to value. The interacting impact of respondents' socioeconomic status was not included in this study. Future research should focus widely on other factors affecting vegan dietary adoption, with a broader target segment.

6. CONCLUSION

The objective of this research was to determine the impact of personal factors (health consciousness, subjective norms and perceived value) and product attributes on attitudes towards veganism and vegan diet consumption. The study authenticates

those factors such as health consciousness, subjective norms, perceived value and product attributes are instrumental in stimulating attitudes towards veganism. It is also imperative to state that attitudes towards veganism had a positive and a significant impact on vegan diet consumption. It was discovered that perceived value has a stronger impact on attitudes towards veganism when compared to health consciousness, subjective norms and product attributes. Theoretically, this study made a noteworthy progression in marketing management theory and consumer behaviour by methodically examining the interplay between health consciousness, subjective norms, perceived value, product attributes, attitudes towards veganism and vegan diet consumption. In this manner, the study is an important contributor to the existing literature on this subject. On the practical front, health consciousness, subjective norms, perceived value and product attributes were exerted as having a strong positive influence on attitudes towards veganism. Hence, improvements in each of these factors could stimulate higher attitudes towards veganism and vegan diet consumption.

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