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Factors Influencing on Consumer's Decision on Vegetarian Diets in Vietnam

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Abstract

Recently, vegetarian diets have experienced a dramatic increase in popularity. The aim of the study is to explore and test the relationship between the factors influencing consumers' dietary decisions in Ho Chi Minh City, Vietnam. The questionnaire applied a five-point Likert scale to investigate factors that affect Ho Chi Minh City's citizens when they have a vegetarian diet. 497 respondents (68% female; 61.2% aged 18–22; 82.7% had regular vegetarian diets) living in Ho Chi Minh City took part in both online and offline surveys. The results were processed by SPSS 22.0 software. The reliability was checked by Cronbach Alpha and Exploratory factor analysis (EFA) to identify the underlying relationships between measured variables. The Correlation analysis was implemented to show how strong and degree of two variables are related to each other before the multivariate regression equation was analyzed. The result showed the Five factors that were motivating people in Ho Chi Minh City to decide on plant-based diets, such as Animal Welfare, Health, Religion, Mood, and Reference groups. The mood is the most influential variable that significantly influences people's food choices. Attitudes toward vegetarian diets are changing. Therefore, recognizing the trends in food consumption might help companies take advantage of investment opportunities and build their marketing strategies.

Keywords: Consumer Behaviour, Vegetarian Diet, Mood, Health, Animal Welfare

JEL Classification Code: M31, P46, I10, Q56, D12

1. Introduction

Meat is rich in proteins, vitamins, and minerals in our diet. However, evidence shows that there are many health risks associated with meat consumption. A study in the US and Europe indicates that the long-term consumption of red meat and processed meat is associated with an increased risk of total mortality, cardiovascular disease, colorectal cancer, and type 2 diabetes in both genders (Richi et al., & Keller, 2015). In 2016, Oxford Martin School researchers found that if the world went vegan, it could save 8 million human lives by 2050, reduce greenhouse gas emissions by two-thirds, lead to healthcare-related savings, and avoid climate damages of \$1.5 trillion.

In recent years, especially in developed countries, citizens have been reducing the amount of meat in their meals and choosing vegetarian food. According to Google Trends, interest in 'veganism' increased seven-fold between 2014 and 2019. There are now about 500,000 strict vegans living in South Korea. Approximately 1.5 million people pursue

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similar plant-based diets, reported by the Korea Vegetarian Union (KVU) in 2020. This number is surprising as, given the social importance placed on ordering and sharing similar meals in order to foster intimate relationships and emotional bonds in Korea, vegetarianism can be considered deviant social behavior discordant with the non-vegetarian norm (Taebum & In-Jin, 2015). Moreover, based on the market survey results of the organization which encourages vegan in England (2016), about 1,05% of British people never eat meat or products from animals, much higher than in 2007.

The report published in 2019, *Vegan Food Market by Product Type and Distribution Channel: Global Opportunity Analysis and Industry Forecast (2019-2026)*, reveals that veganism has been one of the mainstream trends in the food and beverages industry. The global vegan food market was valued at \$14.2 billion in 2018. According to Grand View Research, the world's vegan market is also expected to grow to \$24 billion in 2025, showing an average growth rate of 9.6 percent annually. Between 2012 and 2016, new vegetarians and vegan product launch increased by 140% and 440%, respectively, in Southeast Asia alone. The rising number of vegetarian restaurants reflects the fact that eating a vegetarian diet is increasingly popular in Vietnam, especially in Ho Chi Minh City. As a result, the demands for higher-quality vegetarian foods such as organic food are constantly growing worldwide (Lohr, 2001; Padel & Foster, 2005; Siderer et al., 2005) with the desire to protect the environment and health for themselves (Nguyen et al., 2020). Understanding the factors that influence vegetarian food behavior will provide platform managers with more appropriate marketing strategies.

2. Literature Review and Hypotheses

2.1. Definition

A vegetarian diet is defined as a diet “consisting wholly of vegetables, fruits, grains, nuts, and sometimes eggs or dairy products” (Merriam-Webster's Collegiate Dictionary, 2003). Semi-vegetarians avoid meat, poultry, and fish most of the time. While Lacto-Ovo vegetarians eat eggs and dairy products, semi- and pesco-vegetarians consume poultry and fish, respectively. Besides, vegans are also understood as avoiding all animal products for food, clothing, or other purposes (Kerschke-Risch, 2015; Phillips, 2005).

2.2. Motivations

According to recent comprehensive reviews, the four most common motivations people have for going vegetarian in descending order of prevalence include concerns related to the well-being of animals, health, ecology, and religion (Rosenfeld, 2018; Ruby, 2012). De Backer & Hudders (2014) suggest that animal rights and ecological concerns should be

considered under one category, and taste preferences are also a motivation to cut down meat consumption. In addition, the authors proved that Religion is not a factor motivating Belgian to go vegan. Worsley and Skrzypiec (1998) cited health, animal welfare, and environmental reasons to support teenage vegetarianism. There are also significant differences across generations in the reasons why they choose to live a vegetarian lifestyle. While younger generations support the moral and environmental reason, people aged between 41 to 60 agree more with the health reason (Pribis et al., 2010).

Hoffman et al. and Brooks (2013) find that ethical vegetarians could experience stronger commitment, consume fewer animal products, and may remain vegetarian longer than healthy vegetarians. Nevertheless, Health vegetarians choose to avoid meat to derive certain health benefits or lose weight (Key et al., 2006; Kim & Houser, 1999; Wilson et al., 2004), while ethical vegetarians consider meat avoidance as a moral imperative not to harm animals for food or other reasons (Fessler et al. 2003; Jabs et al., 1998).

2.2.1. Animal Welfare

Duncan (2005) cited that there were two distinct schools in the animal welfare research community. One group suggested that welfare is mainly to do with the animal's physical health and well-being. The other group proposed that welfare is more to do with psychological health and how the animal feels. These two groups have become known as the ‘biological functioning’ school and the ‘feelings’ school. Therefore, any attempt to evaluate welfare must consider the scientific evidence available concerning the feelings of animals that can be derived from their structure and functions and from their behavior (Brambell, 1965; Rollin, 1993). If the animal is not given conditions to expose these properties, they will inevitably have negative feelings. Animals Welfare appears in various research relevant to the vegetarian decision (Rosenfeld, 2018; De Backer & Hudders, 2014; Ruby, 2012; Salonen & Helne 2012; Pribis et al. 2010; Lindeman and Väänänen, 2000; Worsley and Skrzypiec, 1998).

H1: Animal Welfare has a positive effect on Vegetarian Decision.

2.2.2. Health

Evidence from previous studies (Allen et al., 2000; Barr & Chapman, 2002; Jabs et al., 1998; Rozin et al., 1997) proves that health appears to be the most important motivation pursues people go vegan. Vegans had the lowest body mass index (BMI) (Bradbury et al., 2014; Tonstad et al., 2009), around 23.6kg/m². Tonstad et al. (2009) also reveals that mean BMI was incrementally higher in Lacto-ovo vegetarians (25.7 kg/m²), Pesco-vegetarians

(26.3 kg/m²), semi-vegetarians (27.3 kg/m²), and non-vegetarians (28.8 kg/m²).

H2: Health has a positive effect on Vegetarian Decision.

2.2.3. Religion

Some people state that their religion informs their ethical and moral choices relating to their food (Lindeman and Vaananen, 2000). They hardly support killing animals for human purposes. Several religions restrict certain foods' intake, especially meat (Kim et al., 2008; Ockerman & Nxumalo, 1998). Peek et al. (1997) believed that religious motivation is associated with more significant support for animal rights.

H3: Religion has a positive effect on Vegetarian Decision.

2.2.4. Mood

Studies about food choice behaviors have concluded that mood is also a considered variable in people's food choice motivation (Harker et al. & Reinhard, 2010; Steptoe et al., 1995). However, this variable is rarely considered in the vegetarian decision. Beezhold and Johnston (2012) seem to be the pioneer in examining the restricting meat, fish, and poultry that improved some domains of short-term mood state in modern omnivores. Also, in 2009, Beezhold and Johnston presented to the American Public Health Association Annual Meeting, the Preliminary evidence that a vegetarian diet improves mood. There is still limited research on the relationship between food and mood. The author group wants to examine whether a vegetarian diet improves people mood and predicted that:

H4: Mood has a positive effect on Vegetarian Decision.

2.2.5. Reference groups

The results study of Truong and Nguyen (2020) showed that these groups affected the intention of purchasing organic food of Kindergartens in Ho Chi Minh City, Vietnam. Ahmadi et al. and Melgar-quinonez (2017) prove that "general search on the Internet," "TV programs" and "family and friends" were referred to as the most common references for learning about healthy eating. According to an online survey conducted in 2012 by vinaresearch.net, top online research in Vietnam, 40.7% of 659 Vietnamese participants agreed with the statement that vegetarianism helped create peace in mind and be in a good mood. Also, 23.1% of surveyed participants said they followed a vegetarian diet as the other family members did. As a result, the group author is inspired to learn more if references such as family, friends, doctor, coworker, etc., affect a person's vegetarian decisions. The Author group wants to verify that Reference Groups will play an essential role in motivating Vietnamese people to follow a vegetarian diet and predicted that:

H5: Reference Groups have a positive effect on Vegetarian Decision.

2.3. Conceptual Model

From the results of previous studies, the group authors propose the following conceptual model (see Figure 1). Predicted all 5 variables have a positive effect on Vegetarian Decisions.

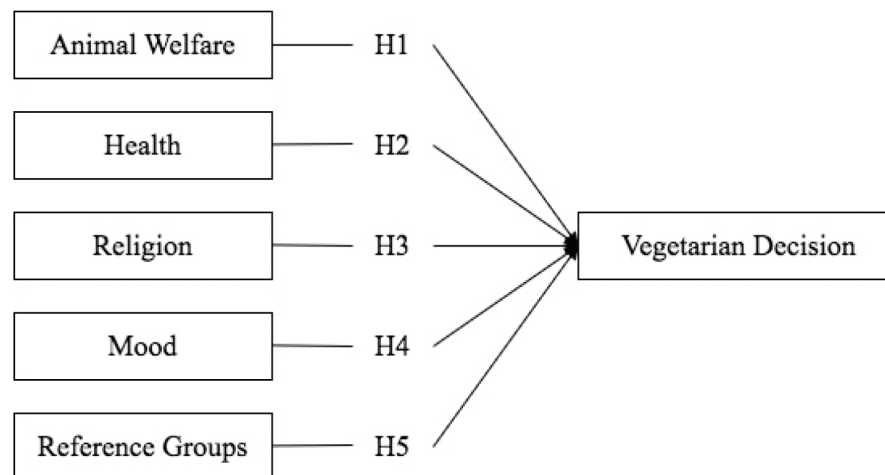


Figure 1: Conceptual Model

3. Research Methods

3.1. Design and Setting

This research selected and synthesized data of factors affecting participants' decisions to use vegetarian food from the theoretical basis and previous studies to design the questionnaire. Next, there is a qualitative by group discussion with a size of 10 aging from 18 to 55 living in Ho Chi Minh City having vegetarian diets periodically. The pilot test was conducted online with 30 respondents from 18–55 years old living in Ho Chi Minh City, having vegetarian diets periodically intended to evaluate the scale before conducting official research preliminarily. The original instrument includes a five-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5 = Strongly Agree). This quantitative study was conducted via an online survey using Google Forms and direct interviews in Ho Chi Minh City. The study was officially researched from February 2020 to March 2020 and aimed at testing scales and conceptual models.

Internet interviews are suitable for sensitive subjects that cannot be interviewed face-to-face (Glaser et al., 2002; Illingworth, 2001). Society still has biased toward people who have vegetarian diets. Some participants may be concerned about showing their opinions in front of researchers and outsiders. The anonymity of the Internet provided participants a comfort zone, to tell the truth. The Internet is also a cost-effective way to reach small or hard-to-find groups that interact in expert forums (Illingworth, 2001; Nosek et al., 2002). As a result, most of the surveys were conducted online, via member from vegetarian groups on Facebook due to the large number of visitors these social networking sites have.

3.2. Data Collection

The research consisted of three stages:

Conducting direct surveys at vegetarian restaurants. The researchers spent a week visiting some famous vegetarian restaurants in Ho Chi Minh City and asked the diners whether they feel comfortable doing the survey. There were 40 responses from direct surveys.

To access the study field thoroughly, the author group joined the vegetarian club on Facebook named “An chay trung song giua doi thuong Club “ with more than 171,000 members. This club attracts a large number of vegetarians who are willing to shares their beliefs and even recipes for simple vegetarian dishes or the benefits of having vegetarian meals. The author group encourages group members to participate in the survey and receive 141 responses.

Seeking other young citizens in Ho Chi Minh City, the researchers also wanted to know how factors affected

young citizens in having a vegetarian meal. Therefore, the researchers joined various university student communities in Ho Chi Minh City, which gather many young citizens willing to speak their voices. There were 316 respondents, aging 18–22 from these communities. Their opinions are a reliable source for predicting future society behaviors and attitudes toward the vegetarian decision.

3.3. Data analysis

SPSS 22.0 software was used to verify the scale, and $\alpha = 0.05$ was considered statistically significant. After the descriptive statistical data was processed, the scales were checked by Cronbach Alpha's reliability coefficients, the EFA discovery factors (the data were reduced and summarized, and the reliability of the variables was calculated), and correlation analysis (considering the suitability of factors before being included in the regression model). Finally, the multivariate regression equation was analyzed to find out the differences in Ho Chi Minh people's vegetarian choice decisions.

4. Results

4.1. Qualitative Study

The focus group discussion result shows that the five variables from the hypothesis are suitable for the Vietnamese concept. Questions' content is adjusted and supplemented to suitable for the Vietnamese culture and vegetarian behaviors, making sure that all the participants in the survey are fully understood each question. The questionnaire is designed with 24 measurement items under 5 variables.

4.2. Quantitative Study

4.2.1. Descriptive Analysis Results

Overall, the data was collected from 720 respondents. However, 223 questionnaires were excluded due to dissatisfaction with the survey requirements, leading to only 497 (68% female, 32% male) responses being used for data analysis. Over four-fifth (411, 82.7%) respondents having a periodic vegetarian diet; under one-tenth (46, 9.3%) respondents follow a vegan diet, and 8% (40 participates) chose vegan food depending on mood (do not have a particular plan). There are a small number of respondents under 18 years old (17, 3.4%); nearly two-third (304 respondents, 61.2%) of the participant aging between 18 and 22; 108 respondents from 23-35 years old, taking up 21.7%; 47 respondents aged from 36 - 49 years old, comprising of 9.5% and 21 respondents aged 50 and over, accounting for 4.2%.

Around two-third (316, 63.6%) respondents are students; 15.7% (78 respondents) are officers; 19 respondents are businessmen/managers, making up 3.8%; 5% (25 respondents) working as workers, 11 respondents working at home as a housewife, accounting for 2.2% and there are 48 respondents with other careers, accounting for 9.7%.

Over half of the participants (269, 54.1%) do not have any religion; the number of Buddhists is 150, accounting for 30.2%; 60 respondents are Catholics, taking up 12.1%; there are 14 (2.8%) respondents whose having Caodaism and a small number of respondents (4, 0.8%) having other religions.

4.2.2. Assessment of the Research Model

Cronbach’s Alpha

Animal Welfare, Health, Religion, and Mood have good Internal Consistency ($0.9 > \alpha > 0.8$). Reference groups Variable also have an acceptable Internal Consistency ($0.8 > \alpha > 0.7$). The Cronbach’s Alpha Coefficients of dependent variable Vegetarian Decision is 0.805, which indicates a high level of Internal Consistency. All 5 items in Vegetarian Decision are kept due to the high sum of the corresponding coefficients ($\alpha > 0.5$). Thus it can be concluded that this scale is reliable (see Table 1).

Exploratory Factor Analysis (EFA)

Initially, the factorability of the 24 items under 5 independent variables was examined to explore the underlying theoretical structure of the phenomena. Exactly 8 items are eliminated due to cross-loading factors appear in the rotation matrix. For the final stage, a principal components factor analysis of the remaining 16 items, using varimax rotations. The Kaiser-Meyer-Olkin (KMO) measure was 0.841, which above the commonly recommended value of 0.6. Bartlett’s Test of Sphericity was significant, presenting in Table 2 below.

Table 1: Cronbach’s Alpha Coefficients Test

Variable	Cronbach’s Coefficients	No. of Items
Animal Welfare	0.864	3
Health	0.860	6
Religion	0.836	5
Mood	0.888	5
Reference groups	0.764	5

Table 2: KMO and Bartlett’s Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.841
Bartlett’s Test of Sphericity	Approx. Chi-Square	4734.668
	Df	120
	Sig.	0.000

All items in this analysis had primary loadings > 0.5 . Total Variance Explained (Cumulation) = 71.799% $> 50\%$. The factor loading matrix for this final solution is presented in Table 3.

5 measurement items under Vegetarian Decision was also examined to explore the structure of this dependent variable. The KMO measure of sampling adequacy was 0.780, which above the commonly recommended value of 0.6, and Bartlett’s Test of Sphericity was significant ($\chi^2 (10) = 793.902, p < 0.05$). The matrix of the component coefficient of variable observations is greater than 0.4; as a result, five items are accepted, and no observable item is eliminated. Total Variance Explained (Cumulation) = 56.583 $> 50\%$.

Table 3: Rotate Component Matrix

	Component				
	1	2	3	4	5
AW1	0.936				
AW2	0.934				
AW3	0.628				
REF5		0.749			
REF2		0.737			
REF3		0.726			
REF4		0.648			
MOO4			0.827		
MOO3			0.784		
MOO2			0.780		
REL3				0.830	
REL4				0.826	
REL2				0.801	
HEL3					0.797
HEL5					0.768
HEL2					0.753

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Table 4: Pearson Correlations Among Vegetarian Decision

	1	2	3	4	5	6
Vegetarian Decision						
Animal Welfare	0.435**	-				
Health	0.542**	0.538**	-			
Religion	0.498**	0.180**	0.266**	-		
Mood	0.604**	0.375**	0.437**	0.485**	-	
Reference groups	0.521**	0.227**	0.299**	0.443**	0.423**	-

** , Correlation is significant at the 0.01 level (2-tailed).

Table 5: Multivariate regression equation factors affected Ho Chi Minh City's citizen in having a vegetarian diet

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF.
(Constant)	0.585	0.126		4.645	0.000		
Animal Welfare	0.095	0.029	0.119	3.268	0.001	0.685	1.460
Health	0.223	0.035	0.244	6.468	0.000	0.636	1.573
Religion	0.129	0.026	0.181	5.002	0.000	0.694	1.441
Mood	0.221	0.031	0.269	7.002	0.000	0.615	1.625
References	0.208	0.032	0.227	6.453	0.000	0.734	1.362

Pearson Correlations

Overall, according to Table 4, all correlations show a positive dimension. The strongest correlation is between Mood and Vegetarian Decision with $r = 0.604$, $n = 497$, and its 2-tailed significance. Increases in Mood correlated with increases in a rating of Vegetarian Decision.

Multivariate Regression Equation

Multiple regression was run to predict the Vegetarian Decision from Animal Welfare, Health, Religion, Mood, and Reference. These variables statistically significantly predicted Vegetarian Decision, $F(5,491) = 122.525$, $p < 0.0005$, $R^2 = 0.555$. All five variables added statistically significantly to the prediction; Tolerance coefficients are > 0.0001 , $p < 0.05$. There is no multicollinearity in this situation as $VIF < 10$.

Beta > 0 , showed the positively affected dimension between the independent and dependent variable. That means when a factor increases, it will increase the motivation of taking a vegetarian diet. The mood is the core variable ($\beta = 0.269$) that affects people on vegetarian decisions. Next, the Reference Groups variable ($\beta = 0.227$) is considered to be the second reason that motivates making a vegetarian diet. As previous surveys had proved, Healthy is still a weight variable ($\beta = 0.244$) affects people's food choices. Animal Welfare ($\beta = 0.119$) and Religion ($\beta = 1.81$) are not significant variables compared to others in the research model.

4.2.2.1. Animal Welfare

Humans are suffering from the consequences of population growth. Consequently, demands for cheaper food, in greater volumes, and with lower production costs are among a confluence of factors that have supported the rise of intensive agriculture methods that dominate much of the world today. Intensive agriculture aims to grow animals as fast as possible in as short a time as possible since it is costly to feed them. However, these farming methods result

in a serious reduction in animal welfare. Like humans, while dealing with severe stress, animals can succumb to disease or fail to reproduce or develop properly (Moberg, 1985).

According to Duncan (2019) indicated that keeping laying hens in battery cages exposes them to severe frustration for the two hours before they lay an egg. Battery cages are stacked upon one another, with feces falling through the grates onto other birds, driving the hens into extreme living conditions. It has also been shown that battery cages frustrate hens in many other ways, such as by crowding them too close together in a limited space, preventing them from performing some activities and adopting some natural postures. Although mastitis in dairy cows has a genetic basis, increased milk yield has been shown to have a detrimental effect on the mammary gland health condition (Zadoks et al., 2011). As a consequence, from a zoonotic standpoint of view, diseases such as tuberculosis, brucellosis, leptospirosis, etc., can transmit through milk to consumers (Moges et al., 2011).

4.2.2.2. Health

There is no doubt that health is still one of the important motivations in maintaining a vegetarian lifestyle. Pham (2020) reported that health awareness is the least significant motivation leading Vietnamese to purchase organic food. However, Nguyen et al. (2020) believed that raising society's health consciousness helps Vietnamese to enhance a positive attitude toward buying green products. Tran et al. (2020) believed that packaging with clear information about health consciousness convinces customers to make a buying decision. This is the key factor for sustained success in the fresh fruit field. In a study by Qian et al. (2019), a group of Harvard scientists, totaling over 300,000 participants, discovered that eating a vegan diet can cut the risk of developing type 2 diabetes by almost a quarter (23%). Another study conducted of more than 12,000 people found that those who had mostly plant-based diets were 32% less likely to face heart disease (Kim et al., 2019). Prostate cancer is the second most common cancer worldwide. Scientists at

Loma Linda University in California, USA, looked at over 26,000 men and found that a vegan diet reduces 35% risk of prostate cancer (Tantamango-Bartley et al., 2016).

4.2.2.3. Religion

The life of religious beliefs in Vietnam is quite vibrant, with many different forms of religious belief activities of different religious organizations. According to Asean Vietnam 2020 report, Viet Nam has recognized and granted permits to 37 religious associations and sects, and one devotional practice under 13 religions, encompassing over 24 million followers (accounting for 27% of national population), 83,000 dignitaries, 250,000 sub-dignitaries, 46 dignitary-training schools (equivalent to college and post-graduate levels), and 25,000 worshipping establishments. There are 06 major religions in Vietnam, namely Buddhism, Catholicism, Protestantism, Muslim, Caodaism, and HoaHao Buddhism.

According to the survey, with $n = 497$, the number of Buddhist religion participants account for 30%. Data in Asean Vietnam 2020 report about Religion and Beliefs indicate that there are currently about 11 million Buddhist followers, more than 17,000 pagodas, nearly 47,000 Buddhist monks, 04 Buddhist Institutes, 09 Buddhist Colleges, and 31 Buddhist training schools in Vietnam.

Central to Buddhist morality from the earliest teachings is the concept and practice of non-harming. Kaza (2015) indicated Southeast Asian Buddhist monks traditionally refrain from eating afternoon to train the senses to accept deprivation as conducive to spiritual attainment. Non-harming, in this context, means choosing eating disciplines to minimize harm and cultivate compassion for other beings. The assumption here is that plants suffer less than animals, so eliminating animal foods reduces overall suffering.

4.2.2.4. Mood

In general, the mood is considered a factor that affects people's food choices, but there is still limited research on motivated vegetarianism. A five-year study with the participation of 3,486 people in the middle age reported that individuals eating whole foods reported fewer symptoms of depression compared to those who consumed mostly processed foods (Akbaraly et al., 2009). White et al. (2013) suggest that fruit and vegetables may improve positive emotion on the next day, though more studies are needed.

Some vegetables are shown to help fight the blues. A recent study conducted by Tianjin Medical University suggests that a tomato-rich diet may have a beneficial effect on preventing depressive symptoms. (Niu et al., 2013). The researchers believe that the antioxidant called lycopene, which is found in tomatoes, might be the ingredient that helps protect against depression. Meanwhile, another

article published in Pharmacological Reports reveals that supplementing magnesium may ward off depression (Serefko et al., 2013). Magnesium can be found in all-vegan familiar ingredients such as vegetables, beans and peas, grains, soy, seeds, and nuts.

4.2.2.5. Reference groups

The survey result found that Ho Chi Minh's citizens' vegan decision can affect the surrounding people. According to the survey, people agree with the statement "I go vegan because my surroundings do," "I was advised to go vegan," "I go vegan to please people who care about my health," and "I feel impolite to eat meat while eating together with vegan people."

5. Discussion

This research gives the vegan industry an interesting view of marketing strategies to satisfy the maximum satisfaction of customers' benefits.

According to the research results, there is a connection between mood and a vegetarian diet. Besides, focus on Animal Right and Health motivation, media messages can also focus on food that good for emotions and increase positive energy. Society is living at a faster pace of life, which is associated with greater stress. A vegetarian diet can be considered to be a new way to deal with stress.

Besides, respondents are inspired by other people in making decisions about having vegetarian meals. Helped to establish vegetarian communities can be an effective way to promote business brands. That would be a great opportunity for those interested in a vegetarian diet to exchange their experiences and inspire each other to build an appropriate diet. At the same time, businesses can provide products that meet their needs.

On the other hand, there are still limitations during the survey process.

Firstly, with 497 research samples, respondents at the age of 18–22 account for 61.2%; the sample size is not large enough to represent the entire Ho Chi Minh City population.

Secondly, in the implementation process, the research is limited in time and resources. That the complicated situation of the COVID-19 pandemic leads to the fear of doing face to face interviews. Most of the surveys effected via an online form made a gap between the respondents. It is an excellent way to approach the 18–22 age groups, but it is not easy to reach the other age groups. As the group aged 50 and over are not familiar with online surveys. Simultaneously, doing online surveys cannot observe respondents' expressions and behaviors when they respond, so it is difficult for authors to understand the study deeper, possibly leading to unreliable data.

Thirdly, there are issues of validity in Internet-based research. Anonymity increases the potential for intentional or unintentional deception (Glaser et al., 2002, P.191) and identity manipulation (Hewson et al., 2003; Nosek et al., 2002). Internet samples will underrepresent poor and minority groups (Nosek et al., 2002). Participants need access to hardware, typing skills, and motivation to participate in what can be lengthy online interviews (Chen & Hinton, 1999).

6. Conclusions

The research explores 5 factors orientating people in Ho Chi Minh City towards vegetarian decision making. They are Animal Welfare, Health, Religion, Mood, and Reference groups. Future studies may consider adding Mood and Reference groups variables to the factors affecting vegetarian diets. Health is still a factor that has a significant influence on a vegetarian decision. In the early 21st century, earlier stereotypes about vegetarianism leading to malnutrition have been replaced by scientific evidence that a reasonable vegetarian diet still provides adequate nutrients. Nowadays, vegetarian diets are increasingly accepted for their benefits. The remaining factors (Animal Welfare and Religion) have a lower impact on people's vegetarian diets in Ho Chi Minh City.

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