Factors Influencing Young Consumers of Organic Food Products to Lead a Healthy Lifestyle

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Abstract

Our society's concept of healthy lifestyle is limited to eating fruits and vegetables regularly ; however, when these items are filled with pesticides, rather than having a positive impact, it will adversely affect our health in the long run. Therefore, it is vital to know the attitude of young consumers towards organic food products. There is a high chance for beliefs and habits developed at a young age to prolong, thus giving this study its impetus to take place. Using the purposive sampling technique, 112 respondents (young college students) between the age group of 20 - 24 years participated in the study. Throughout the literature on buying of organic food products, the concept of fear and food safety concern has been treated as one construct, however, there are studies which stated that they can be treated as different. Along with that, a positive attitude does not lead to positive behaviour due to various influences from the environment. The present study found that both fear and food safety concern acted as a catalyst to motivate individuals to form a positive attitude towards organic food products to lead a healthy lifestyle. However, the interaction effect of social pressure had a higher chance of increasing the healthy lifestyle of an individual.

Keywords : **fear, food safety concern, organic food products, healthy lifestyle**

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Across the globe, one in 10 people fall victim of food-borne diseases and 4, 20,000 people die as a result of it every year (World Health Organization, 2015). Food-borne illnesses are defined by the World Health Organization as diseases, usually either infectious or toxic in nature, caused by agents that enter the body through the ingestion of food. However, compared to the food borne illnesses caused by microbial origin, consumers are more fearful about the chemical residue in their food products (Uyttendaele, Franz, & Schlüter, 2016). In 2009, the National Centre for Disease Control reported that 51% of food commodities in India were contaminated with pesticide residues (Srivastava, 2009) and in 2014 and 2017, studies conducted in Kerala found high amount of pesticides and insecticides in fruits, vegetables, and spices (John, 2017 ; Pillai, 2014). Along with this, ban on Maggi due to high amount of monosodium glutamate (MSG) and lead have heightened the consumers' fear and concern over conventional food which they are consuming (Pai, 2018).

According to Angelis (2013), the organic food industry's growth is predicted at a compound annual growth rate (CAGR) of 21.34%. This clearly depicts a shift in the consumers' attitude towards health. The present study takes into account young consumers, who belonged to the age category of 20-24 years as they are the future consumers and building block of our society.

By 2020, India will become the youngest country in the world, making 430 million Indian youth, the potential consumers (Prakash & Patel, 2013). As youth's purchasing power increases over time, it is imperative to

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understand their attitude towards sustainable products. Even though their purchase power is limited at present, their influence in family decision making cannot be ignored (Wray - Lake, Crouter, & McHale, 2010). Moreover, the habits which they develop in their late teen/ early adulthood will continue to their later stages of life (Plante, 2012).

In the present scenario, we are loaded with lots of information regarding the ill effects which conventional farming has on an individual's health as well as upon the environment (Jayanthi, 2015). The traditional approach such as medical camps, media campaigns, etc., provide information and advices directly ; however, their purpose is only confined to educating the individual rather than creating a behavioural change (European Food Information Council Review, 2014; Kennedy, Beckley, McFarlane, & Nadeau, 2009). Stern's ABC theory has mentioned that behaviour is a function of internal factors and contextual (environmental) factors (Duan, Chou, & Cheng, 2015). Therefore, for this study, internal factors such as fear and food safety concern and contextual factors such as social pressure are taken into consideration.

Various fear appeal theories such as drive reduction model (Hovland, Janis, & Kelley, 1953; Janis & Feshbach, 1953), parallel response model or parallel process model (PPM) (Leventhal, 1970), protection motivation theory (PMT) (Rogers, 1975) etc. all state that fear is the driving element which motivates individuals to take action. In addition, fear has the persuasive power to make an individual change his/her lifestyle even when they don't want to (Eide & Toft, 2013). Likewise, food safety concern which creates anxiety, drives an individual to change his/her behaviour (Zhu, Jackson, & Wang, 2017). However, focusing only on individual level factors such as fear and food safety concern can limit this study, therefore, contextual factors, such as social pressure, are also taken into consideration.

The main purpose of this study is to report that fear and food safety concern are two individual constructs which can motivate an individual to change his/her lifestyle by forming a positive attitude towards organic food products. However, the positive attitude of an individual always does not lead to a positive behaviour, as his/her environment also plays a key role. Therefore, the study also tries to gain an insight into the effect of contextual factors such as social pressure on an individual's healthy lifestyle. In addition, as limited organic consumer studies have been carried out in India, this study will be able to contribute to the existing body of literature (Balaji & Injodey, 2017 ; Nandi, Bokelmann, Gowdru, & Dias, 2014).

Literature Framework and Hypotheses Development

Lifestyle is a way of living which an individual develops by adapting a particular set of behaviour, which manifest in their day to day living (Chen, 2009; Ping, Cao, Tan, Guo, Dou, & Yang, 2018). It is influenced by both tangible and intangible factors such as culture, family, reference groups, and social class along with an individual's attitude, interest, opinion, and values (Solomon, Bamossy, Askegaard, & Hoog, 2009). Lifestyle practices of young adults are very important as there is a high chance that their habits will continue to their adulthood also. According to the health belief model (HBM), improvement in lifestyle or behaviour changes are possible only if an individual believes in the possibility of change and the benefit which he/she can acquire overrides the cost, which furthur explains that consumers can consider their diet as healthy by avoiding addictive, processed, and high salt foods, and by increasing the amount of fruits and vegetables, however, when these food items are filled with pesticides, it won't be healthy in the long run (Roberts & Marvin, 2011; Soliman, Elsayied, & Shouli, 2018).

Realization that one's way of living is healthy/ unhealthy is formulated by the attitude which consumers have towards their diet and physical activity. Avoiding a particular food due to the fear and concern for food safety is not a healthy diet. Thus, consumers who have a positive healthy eating attitude will be motivated to lead a healthy diet and have a healthy lifestyle (Naughton, McCarthy, & McCarthy, 2013) by including organic food products. Furthermore, we postulate that fear and safety concern act as a driving force to form an attitude towards organic food products which in turn motivate consumers to lead a healthy lifestyle. Therefore, healthy lifestyle is treated as an outcome variable in this study.

(1) Fear and Concern : Fear is a negatively - valence emotion, which formulates a high level of stimulation. It is induced by a threat that is considered to be significant and personally relevant (Easterling & Leventhal, 1989 ; Lang, 1984). It can also be defined as a physical and emotional response to a perceived threat or danger (Daddis, 2004). On the other hand, food safety concern refers to the feeling of anxiety or worry with blended interest, uncertainty, and apprehension (Merriam - Webster, 1997) due to pesticide residue in food products and also due to various food scare scandals (Pham, Nguyen, Phan, & Nguyen, 2018) .

For several decades, extensive studies and theories were developed regarding how fear acts as a catalyst to change consumer behaviour (Ruiter, Kessels, Peters, & Kok, 2014 ; Scarpa & Thiene, 2011). According to the drive model, when an individual is confronted by danger, he/she will be fearful and will be motivated to protect himself/herself and when fear is eliminated, there is no longer a drive for action (Janis & Feshbach, 1953). Likewise, the driving element of protection motivation theory is that fear arouses a cognitive process which induces a change in behaviour.

Food safety concern represents consumers' anxiety or worry with regard to residues in food resulting from fertilizers, chemical sprays, preservatives, and artificial additives (Pham et al., 2018 ; Xie, Wang, Yang, Wang, & Zhang, 2015) along with genetically modified food. Apart from fear, food safety concern has motivated consumers to buy organic food products (Michaelidou & Hassan, 2008 ; Shafiea & Rennieb, 2012). However, there are other studies which stated that food safety concern cannot be considered as the main motivating factor by consumers for purchase of organic food products (Shaharudin, Jacqueline, Suhardi, & Shamsul, 2010).

Generally, fear and concern are treated as a similar physiological response ; however, studies have found that these two constructs are separate human emotional behaviour (Perkins, Kemp, & Corr, 2007; Tuccitto, Giacobbi, & Leite, 2010). An individual who is fearful can sidestep the cognition process in a severe situation (fight or flee) but when an individual is only concerned, his/her cognitive process is ignited as he/she doesn't feel any life - threatening situation (Tucker - Ladd, 1996). For instance, when a person is fearful of pesticides, he/ she either avoids buying pesticide filled products or switches to organic buying, however, if a consumer is just concerned or anxious, he/she will first analyze the situation and try to reduce the pesticide effect by soaking the vegetables and fruits in water and in the future, the consumer may or may not convert to buying organic. Thus, formation of attitude towards a particular situation depends on the individual's evaluation and emotional feelings (e.g., fear, concern, joy, and anger), which in turn influences their buying behaviour (Colom - Gorgues, 2009).

Hence, we propose the following hypotheses for verification :

- **H1:** Consumers' fear towards conventional food products has a positive impact on their healthy lifestyle.
- **H1a:** Consumers' fear towards conventional food products has a positive impact on their attitude towards organic food products.
- **H2:** Consumers' food-safety concern has a positive impact on their healthy lifestyle.
- **H2a:** Consumers' food safety concern has a positive impact on their attitude towards organic food products.

(2) Attitude : By keeping the basic concept of attitude, many researchers have defined attitude differently. Pride and Ferrell (1991) defined attitude as "knowledge and positive or negative feelings about an object or activity" (p. 244). This same concept was defined in a different way by Eagly and Chaiken (1998), as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour" (p. 269). Thus for this study, we can operationalize attitude as generating a positive or negative feeling towards organic food products after evaluating it. Researchers have stated that belief helps to formulate attitude in an individual along with value (Lee, 2016; Shafiea & Rennie, 2012). The belief that conventional food products and farming practices are not safe and fear that they can affect the health and environment in the long run motivates consumers to form a positive attitude towards organic products (Kumar & Ali, 2011 ; Sutherland, 2011). Thus, there is a high chance for

an individual with a positive attitude towards organic food products to comply with the guidelines to lead a healthy life (Heartya, McCarthya, Kearney, & Gibney, 2007). Furthermore, an individual's fear and concern over conventional food products can motivate consumers to buy organic (Tucker - Ladd, 1996), thereby leading to a healthy lifestyle. Based on the above review, the following hypotheses are formulated :

↳ **H3 :** The relation between consumers' fear and healthy lifestyle is mediated by attitude towards organic food products.

↳ **H4 :** The relation between food-safety concerns and healthy lifestyle is mediated by attitude towards organic food products.

(3) Contextual Factors : Hines, Hungerford, and Tomera (1987) stated that there is a high chance for contextual factors to interrupt the behaviour even though individual factors play a crucial role in forming an attitude. This attitude-behaviour gap has been studied by various researchers (eg: Carrington, Neville, & Whitwell, 2010; Kuchinka, Balazs, Gavriletea, & Djokic, 2018). In the context of consumer behaviour, the contextual factor represents "momentary encounters with those elements of the total environment which are available to the individual at a particular time" (Belk, 1975, p. 157). It has been operationalized in this study as factors which either motivate or hinder an individual's behaviour after an attitude is formulated. Previous researchers found that an individual with a positive attitude need not necessarily buy organic food products due to the barriers such as economic constraints, availability, social pressure, etc. (Carrington et al., 2010 ; Klöckner, 2012). In this study, we focus on social pressure as the respondents were still dependent upon their parents ; however, they had the capability of generating strong influence on the present and future buying.

Today's generation are in an environment where over abundance of food exists. Teen and the early adolescents group are in a period where social pressure from peers is high (Adedeji & John, 2015). Researchers have stated that social pressure can influence an individual's behaviour. Azjen (1991) in his theory of planned behaviour (TPB) model conceptualized social pressure as an act of performing or not performing behaviour according to the social norms and the fear of exclusion from the society is what motivates an individual to abide by the expectations. Thus, even though individual factors such as fear and food safety concern formulate a positive/negative attitude towards organic food products, social pressure can either strengthen or weaken the relation between the attitude towards organic products and healthy lifestyle. Thus, from the literature review, it is not difficult to imagine that if there is a positive pressure towards organic food products, positive evaluation formed by individuals will ultimately lead to a healthy lifestyle as they will be motivated to buy organic products, however, if the pressure is negative, even if the evaluation of organic food products is positive, they will not be motivated to buy organic food products. Based on the above review, the following hypothesis is formulated :

↳ **H5 :** Social pressure moderates the relationship between attitude towards organic food products and healthy lifestyle such that increased levels of social pressure should strengthen an individual's attitude towards organic food products to lead a healthy lifestyle.

Methodology

(1) Data Collection and Samples : For this study, the target population was post graduate students in the age group of 20 - 24 years, who will be joining the workforce within 1 or 2 years. Around 150 questionnaires were given out. After the elimination of invalid responses, a useable sample of 112 respondents was considered for this study. Out of the total usable sample, 60 valid responses were obtained from Management and 52 from Science backgrounds. The students were grouped based on their educational background and we assumed that there existed significant

attitude differences between the two groups based on their subject of study. In order to avoid researcher's bias, no previous information regarding organic food products was provided. The purposive sampling technique was used to collect the data. The survey was conducted in late 2015 and early 2016.

(2) Measures : Scales of six constructs used in this study were adapted from existing validated scales. Fear is measured using a 6-item scale adapted from Scarpa and Thiene (2011) to assess the degree of threat which motivates individuals to lead a healthy life. Food safety concern is measured using a 3-item scale adapted from Michaelidou and Hassan (2008), which is a modified scale taken from Roddy, Cowan, and Hutchinson (1996). The mediating variable, 'attitude' and the outcome variable, 'healthy lifestyle' is measured using a scale developed by Gil, Gracia, and Sanchez (2000). The attitude scale consisted of nine items, which included both positive and negative aspects of organic food products. Positive aspects took account of quality and health aspects and external appearance, while negative aspects probed inside the consumer to know whether they considered organic as 'fraud,' 'worse,' 'expensive,' and 'fashion.' The healthy lifestyle scale consisted of 11 items, which included three dimensions : natural food consumption, life equilibrium, and health care. Finally, the moderating variable, social pressure is measured with a 3 - item scale, and it is adapted from Ajzen (2002). The social pressure scale took into account the opinion of family/friends/shopkeepers, etc. All these scales are measured using a 7- point Likert agreement scale.

Data Analysis and Results

In order to analyze whether the educational background of young adults has any effect on their healthy lifestyle practices, *t*-test has been conducted. However, no significant difference can be seen. Furthermore, to fulfil the objectives of the study, mediated hierarchal regression analysis was used to determine whether attitude is able to explain a significant proportion of the variance in the healthy lifestyle of young adults. It was agreed on by previous researchers that attitude may account for all or some of the relationships between the independent and dependent variables. In addition, direct and indirect mediation will be tested for this model. To analyze the moderation effect of social pressure, moderated regression analysis (MRA) will be performed.

Before conducting any analysis, reliability of scales used in this study was tested. In order to improve the internal consistency of the attitude scale, one item which measured 'fashion' is deleted and one item from fear which measured, 'I fear that the environment suffers under conventional agricultural practices' is also deleted, thereby meeting the general reliability criterion (which is greater than 0.7) (Cronbach, 1951). The Table 1 reports the mean and Cronbach's α value.

In addition, Pearson's correlations between independent variables - intervening and interaction and dependent variable were checked to undermine whether there existed any multicollinearity between the predictors. However, none of the items reached 0.70, which is the cut off level to check whether two items explain the same concept.

Table 1. Correlations and Means for the Model Constructs

	Fear	Food Safety Concern	Attitude	Healthy Lifestyle	Social Pressure	Mean
Fear	(.72)					25.68
Food Safety Concern	.25	(.74)				19.98
Attitude	.52	.30	(.70)			40.06
Healthy Lifestyle	.52	.32	.48	(.83)		44.76
Social Pressure (M2)	.12	.68	.68	.21	(.82)	15.52

Note : Cronbach's α value for each construct is shown in parentheses.

Thus, the possibility of multicollinearity present in the study is rejected. Further, hypotheses analysis is carried out using Statistical Package for Social Sciences (SPSS-Version 20).

(1) Sample Description : The total sample composed of 58 men and 54 women. The number of respondents who had heard about organic food products was high (100%). However, their concept about organic food slightly deviated from the correct definition of "without chemicals" (23%). Around 36% of the respondents claimed it as "natural/pure" while 22% responded as "healthy food". Majority of the subjects garnered this information from newspapers (41%), TV programmes (24%), and family members (13%). Even though the respondents' level of awareness about organic food products was high, their knowledge was comparatively less as only 10% were able to identify the "Organic India" label.

(2) Testing for Mediation : The most widely used method for testing for mediation is the causal step approach developed by Baron and Kenny (1986). The following conditions need to be fulfilled :

- The independent variable(s) predict the dependent variable (Model 1) ;
- The independent variable(s) predict the mediator variable (Model 2) ; and
- The effect of independent variable(s) on the dependent variable either needs to reduce or become insignificant when the mediator variable is introduced (Model 3).

The results of the mediated hierarchal regression analysis are shown in the Table 2. The results of Model 1 reveal that fear and food safety concern account for 29% of explained variances for the consumers' healthy lifestyle practices. H1 and H2 predict that consumers' fear and food safety concern towards conventional food products has a positive impact on their healthy lifestyle. The standardized regression coefficents of the independent variables are significantly greater than zero (b = 0.40 ; $\rho < 0.0001$; b = 0.20 ; $\rho < 0.05$) and in the expected direction. Therefore, H1 and H2 are supported.

Furthermore, H1a and H2a predict that consumers' fear and food safety concern towards conventional food products has a positive impact on their attitude towards organic food products. The results of the Model 2 standardized regression coefficient of the independent variables in the regression model is significantly greater than zero (b = 0.47, $\rho<0.0001$; b = 0.18, $\rho < 0.0001$) and in the expected direction. Therefore, H1a and H2a are supported. The results are in line with the previous research studies which stated that fear and food safety concern are important factors for a change in an individual's behaviour (Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009 ; Michaelidou & Hassan, 2008; Scarpa & Thiene, 2011 ; Wier, O'Doherty, Andersen, & Millock, 2008).

However, the standardized regression coefficient of fear is greater than that of food safety concern, which shows that consumers who are more fearful have higher chances of changing their lifestyle than consumers who are concerned. This is in line with the findings which argued that fear can bypass the cognition process, while

Table 2. Mediated Hierarchal Regression Analysis

	Healthy Lifestyle (Model 1)		Attitude Towards Organic Food (Model 2)		Healthy Lifestyle (Model 3)	
	β	ρ	β	ρ	β	ρ
Fear	0.46	<0.0001	0.47	<0.0001	0.34	<0.0001
Food Safety Concern	0.20	<0.05	0.18	<0.0001	0.15	<0.05
Attitude					0.25	<0.0001
R^2	0.31		0.30		0.35	
Adjusted R^2	0.29		0.29		0.23	

concern ignites the process, which clearly shows that compared to safety concerns, fear acts as a catalyst to motivate an individual to change his/her behaviour (Janis & Feshbach, 1953 ; Tucker-Ladd, 1996).

After deriving a significant relation in between the two models, the potential mediator attitude is added to Model 1. The results of Model 3 indicate that the standardized coefficient of attitude is greater than zero, which validates that attitude towards organic foods has a positive effect on an individual's healthy lifestyle. However, the regression coefficient of fear and food-safety concern reduces its magnitude when the mediating variable attitude is added, indicating the existence of partial mediation. The standardized regression coefficient of fear and food safety concern reduce from b = .46 to b = .34 and b =.20 to b =.15, respectively, when the effect of attitude as a mediating variable is considered. This shows that attitude towards organic food products has some mediating effects on the healthy lifestyle practices of individuals and their concern for food safety and fear. It is seen that attitude mediates 26% (.46 - .34/.46 =.26) of fear effect and 25% (.20 -.15/.20 =.25) of the safety concern effect, which supports H3 and H4 hypotheses. This implies that fear and food safety concern have a role in motivating an individual to lead a healthy lifestyle.

(3) Testing for Moderation : To test the hypothesis whether contextual factors moderate the relationship between attitude towards organic food products and healthy lifestyle, a moderation regression analysis was conducted (Aiken & West, 1991). Two MRAs were conducted separately to test the moderating effect of social pressure on an individual's healthy lifestyle. The results of the moderated regression analysis are shown in the Table 3. The first step is to predict the outcome variable by introducing the two variables, attitude towards organic food products and the moderating variable - social pressure (Model 1s). These variables account for a significant amount of variance in the healthy lifestyle of an individual, R^2=.24, F(2,109) = 17.52, ρ = <.001. The interaction term - social pressure is created after centering these variables. Centering of the interaction variables is created to avoid multicollinearity (Cohen, Cohen, West, & Aiken, 2003).

Further, in the Model 2s, the interaction term, that is, the product of attitude and social pressure is added to the Model 1s, which accounts for a significant proportion of the variance in an individual's healthy lifestyle, ΔR^2=.04, ΔF (1,108) = 6.17, ρ = <.05, b =.20, t(108) = 2.48, ρ = <.05. In this study, it can be interpreted that the interaction term adds significantly beyond the main effects (R^2 Change = .04, p <.05), indicating that there is a statistically significant interaction between social pressure and attitude in predicting a healthy lifestyle. Therefore, H5 is supported.

Thus, this result is in line with the findings of previous studies which stated that an individual's behaviour varies with the amount and direction of social pressure which his/her surroundings influences upon him/her (Fishbein & Ajzen, 2010 ; Penman & McNeill, 2008). From the Cohen's effect with respect to size of social pressure (f^2= 0.44), we can estimate that social pressure moderates 44%. This is in line with the findings of studies which confirmed the

Table 3. Moderation Regression Analysis

	Healthy Lifestyle			
	Model 1s		Model 2s	
	β	ρ	β	ρ
Attitude	0.47	<0.0001	0.47	<0.0001
Social Pressure	0.06	ns	0.09	ns
Attitude * Social Pressure			0.25	<0.0001
R^2	0.24		0.30	0.26
Adjusted R^2	0.22		0.28	
Incremental F	17.31		15.481	

importance of social pressure on an individual's behaviour (Ding, Newman, Buhs, & Shell, 2018 ; Ruiter et al., 2014 ; Vermeir & Verbeke, 2008; Voon, Sing, & Agrawal, 2011).

Discussion and Conclusion

Throughout this study, a better understanding of what motivates an individual to lead a healthy lifestyle is ascertained. The results indicate that fear and food safety concern of an individual play a vital role in forming a positive attitude toward organic food products. This finding is in line with the findings of previous research studies (e.g. Colom - Gorgues, 2009 ; Michaelidou & Hassan, 2008 ; Pino, Peluso, & Guido, 2012). However, when compared among these two items, individuals who are more fearful have better chances of having a positive attitude toward organic food products than people who are only concerned. Protection motivation theory also supports this concept of fear being a catalyst to ignite a cognitive process, thereby motivating an individual to change his/her behaviour. In addition, it is found that a positive attitude generated by fear and safety concern toward organic food products encourages individuals to lead a healthy lifestyle. Thus, the mediated role of attitude in forming a behaviour is established, which is in accordance with the previous research findings (Heartya et al., 2007). However, the study ascertains the existence of attitude - behaviour gap, where positive attitude towards organic food products does not always lead to healthy behaviour, therefore, an external factor such as social pressure has a greater influence on an individual's healthy lifestyle.

Managerial Implications

The findings from this study would benefit the producers, NGOs, and government agencies who promote the organic food industry in India rather than creating a general awareness about organic food products. However, it is very essential to make individuals comprehend the chronic effects which pesticide residue in food products can have on their health. The study provides a clear perception about the young generation of India. Even though young adults are aware about the organic food products, their knowledge about its concept is limited. Therefore, more awareness campaigns have to be undertaken through newspapers and TV as more number of young adults gather information through these media.

These young adults are concerned about the ill effects of conventional food products and they are also fearful towards these products. The information and knowledge about conventional food products should be nurtured as young adults have a great influence on parents and their buying behaviour ; furthermore, they are the future of our society. Therefore, there is a high chance that the positive attitude they develop in the early stages of life can continue in the later stages of their lives.

As fear towards conventional food products emerged as the most important factor in the current study, it is very essential for stakeholders of organic products to capture the already existing fear to promote organic buying. Fear appeal advertisements not only create an awareness about the ill effects of conventional food products, but also motivate consumers who are looking for substitutes to buy organic food products.

The study further demonstrates the importance of social pressure as young adults are easily influenced by their peer groups, opinion leaders, etc. It is very essential to focus and formulate strategies to gain the attention of these groups. In order to gain direct access to these groups, apart from newspapers and TV, seminars/conferences/workshops, and so on should be conducted to promote awareness about the benefits of consuming organic food products.

Limitations of the Study and Scope for Further Research

As the focus of the study was mainly young adults, there are constraints in generalizing this study to a larger group.

So, future researchers should study the same constructs in the adult group and try to understand how these constructs will motivate them to lead a healthy lifestyle. The non-probability sampling method used in the study may also constrain the generalizability of the study. A longitudinal study which helps to understand these young consumers' actual buying in the future will be able to examine the attitudinal changes that occur over the period. Furthermore, there might be other factors which may influence the healthy lifestyle of young adults which we have overlooked, so the future researchers can look into these factors as well.

References

Adedeji, O. A., & John, U. I. (2015). Food environment and unhealthy eating habits among adolescents in tertiary institutions. *American International Journal of Research in Humanities, Arts and Social Sciences, 9* (1), 72 - 77.

Aertsens, J., Verbeke, W., Mondelaers, K., & Huylenbroeck, G. V. (2009). Personal determinants of organic food consumption: A review. *British Food Journal, 111* (10), 1140 - 1167.

Aiken, L. S., & West, S. G. (1991). *Multiple regression : Testing and interpreting interactions.* Newbury Park, London : Sage Publications.

Ajzen, I. (1991). The theory of planned behaviour. *Organisational Behaviour and Human Decision Processes , 50* (2), 179 - 211.

Ajzen, I. (2002). Residual effects of past on later behavior: Habituation and reasoned action perspectives. *Personality and Social Psychology Review , 6* (2),107-122.

Angelis, A. D. (2013, June 6). Food and drink. Retrieved from http://www.companiesandmarkets.com/News/Food-and-Drink/Indian-organic-food-market-driven-by-the-increasing-number-of-health-conscious-consumers/NI7306

Balaji, V., & Injodey, J. I. (2017). Organic food products: A study on perceptions of Indian consumers. *Indian Journal of Marketing, 47* (1), 26 - 40. doi:10.17010/ijom/2017/v47/i1/108808

Baron, R., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173 - 1182.

Belk, R. (1975). Situational variables and consumer behavior. *Journal of Consumer Research , 2* (3), 157-164.

Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2010). Why ethical consumers don't walk their talk : Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded. *Journal of Business Ethics, 97*(1), 139 -158.

Chen, M.F. (2009). Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle. *British Food Journal , 111* (2), 165-178.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ : Lawrence Erlbaum Associates.

Colom - Gorgues, A. (2009). The challenges of organic production and marketing in Europe and Spain : Innovative marketing for the future with quality and safe food products. *Journal of International Food & Agribusiness Marketing, 21* (2-3), 166 -190.

Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika , 16* (3), 297-334.

Daddis, G. A. (2004). Understanding fear's effect on unit effectiveness. *Military Review, July - August,* 22-27. Retrieved from http://www.2ndbn5thmar.com/coh/daddis.pdf

Ding, L., Newman, I. M., Buhs, E. S., & Shell, D. F. (2018). Influence of peer pressure and self efficacy for alcohol self-regulation on Chinese University physical education students' drinking behaviour. *Advances in Physical Education , 8* (1), 46 - 57.

Duan, X.Y., Chou, H.J., & Cheng, S.R. (2015). Recognition and empirical research on key influencing factors of low carbon development for logistics company. *Discrete Dynamics in Nature and Society, Volume 2015,* 1-9. DOI : https://doi.org/10.1155/2015/851492.

Eagly, A. H., & Chaiken, S. (1998). *Attitude structure and function.* Englewood Cliffs, NJ: McGraw-Hill.

Easterling, D., & Leventhal, H. (1989). Contribution of concrete cognition to emotion: Neutral symptoms as elicitors of worry about cancer. *Journal of Applied Psychology, 74* (5), 787-796.

Eide, B., & Toft, M. B. (2013). *Consumer behavior theories - Purchasing organic food* (Bachelor Thesis). Department of Business Administration, Aarhus University. Retrieved from https://pdfs.semanticscholar.org/ff23/b09d6f62a6b5ff7a6901dc4772087ce2af07.pdf

European Food Information Council Review. (2014). *Motivating behaviour change.* Europe: European Food Information Council Review.

Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior : The reasoned action approach*. New York : Psychology Press.

Gil, J., Gracia, A., & Sanchez, M. (2000). Market segmentation and willingness to pay for organic products in Spain. *The International Food and Agribusiness Management Review , 3* (2), 207 - 226.

Heartya, A. P., McCarthya, S., Kearney, J., & Gibney, M. (2007). Relationship between attitudes towards healthy eating and dietary behaviour, lifestyle and demographic factors in a representative sample of Irish adults. *Appetite , 48* (1), 1-11.

Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behaviour : A meta - analysis. *The Journal of Environmental Education, 18* (2), 1- 8.

Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). *Communication and persuasion : Psychological studies of obvious change* . New Haven, CT: Yale University Press.

Janis, I. L., & Feshbach, S. (1953). Effects of fear-arousing communications. *The Journal of Abnormal and Social Psychology , 48* (1), 78 - 92.

Jayanthi, M. (2015). Consumers' awareness towards organic food products in Coimbatore District. *Indian Journal of Marketing, 45* (12), 7 - 23. doi:10.17010/ijom/2015/v45/i12/83996

John, H. (2017, May 09). Kerala beware : Study finds high levels of banned pesticides in spices and condiments. *The News Minute.* Retrieved from https://www.thenewsminute.com/article/kerala-beware-study-finds-high-levels-banned-pesticides-spices-and-condiments-61776

Kennedy, E., Beckley, T., McFarlane, B., & Nadeau, S. (2009). Why we don't "walk the talk" : Understanding the environmental values/behavior gap in Canada. *Human Ecology Review , 16* (2), 151 - 160.

Klöckner, C. A. (2012). Should I buy organic food ? A psychological perspective on purchase decisions. In M. Reed (ed.), *Organic food and agriculture - New trends and developments in the social sciences* (pp. 39 - 62). Retrieved from https://www.intechopen.com/books/organic-food-and-agriculture-new-trends-and-developments-in-the-social-sciences/should-i-buy-organic-food-a-psychological-perspective-on-purchase-decisions

Kuchinka, D. G., Balazs, S., Gavriletea, M. D., & Djokic, B.-B. (2018). Consumer attitudes toward sustainable development and risk to brand loyalty. *Sustainability , 10* (4), 1-25.

Kumar, S., & Ali, J. (2011).*Analyzing the factors affecting consumer awareness on organic foods in India.* 21st Annual IFAMA World Forum and Symposium on the Road to 2050: Sustainability as a Business Opportunity (pp. 1-12). Frankfurt, Germany.

Lang, P. (1984). Cognition in emotion: Concept and action. In C. Izard, J. Kagan, & R. Zajonc (eds.), *Emotion, cognition, and behaviour* (pp. 196 - 226). Cambridge: Cambridge University Press.

Lee, H. J. (2016). Individual and situational determinants of U.S. consumers' buying behavior of organic foods. *Journal of International Food and Agribusiness Marketing, 28* (2), 117-131.

Leventhal, H. (1970). Findings and theory in the study of fear communications. In L. Berkowitz (ed.), *Advances in experimental social psychology* (Vol. 5). New York: Academic Press.

Merriam-Webster. (1997). *The Merriam-Webster dictionary*. Springfield : Merriam-Webster, Inc.

Michaelidou, N., & Hassan, L. M. (2008). The role of health consciousness, food safety concern and ethical identity on attitudes and intentions towards organic food. *International Journal of Consumer Studies , 32* (2), 163 - 170.

Nandi, R., Bokelmann, W., Gowdru, N. V., & Dias, G. (2014). Consumer preferences and influencing factors for purchase places of organic food products : Empirical evidence from South India. *Indian Journal of Marketing, 44* (5), 5 - 17. doi:10.17010/ijom/2014/v44/i5/80374

Naughton, P., McCarthy, S., & McCarthy, M. (2013). Healthy eating attitudes and healthy living: An examination of the relationship between attitudes, food choices and lifestyle behaviours in a representative sample of Irish adults. *Proceedings of the Nutrition Society,72* (OCE4), E221. doi: 10.1017/S0029665113002462.

Pai, V. (2018). Challenges MNCs face in emerging markets: The Nestlé experience. *The Journal of Business Perspective , 22* (2), 222 - 231 .

Penman, S., & McNeill, L. S. (2008). Spending their way to adulthood : Consumption outside the nest. *Young Consumers , 9*(3), 155 - 169.

Perkins, A. M., Kemp, S. E., & Corr, P. J. (2007). Fear and anxiety as separable emotions: An investigation of the revised reinforcement sensitivity theory of personality. *Emotion , 7*(2), 252 - 261.

Pham, T. H., Nguyen, T. N., Phan, T. T., & Nguyen, N. T. (2018). Evaluating the purchase behaviour of organic food by young consumers in an emerging market economy. *Journal of Strategic Marketing,* 1-17. doi: 10.1080/0965254X.2018.1447984

Pillai, R. (2014, January 12). High pesticide content found in vegetables across Kerala. *The Hindu*. Retrieved from https://www.thehindu.com/news/national/kerala/high-pesticide-content-found-in-vegetables-across-kerala/article5569659.ece

Ping, W., Cao, W., Tan, H., Guo, C., Dou, Z., & Yang, J. (2018). Health protective behaviour scale : Development and psychometric evaluation. *PLoS ONE , 13* (1), 1-12.

Pino, G., Peluso, A. M., & Guido, G. (2012). Determinants of regular and occasional consumers ' intentions to buy organic food. *The Journal of Consumer Affairs , 46* (1), 157-169.

Plante, T. G. (2012, May 29). Health habits develop early and are hard to change. *Psycology Today*. Retrieved from https://www.psychologytoday.com/us/blog/do-the-right-thing/201205/health-habits-develop-early-and-are-hard-change

Prakash, P., & Patel, V. (2013). *State of the urban youth, India 2012: Employment, livelihoods, skills*. Mumbai: IRIS Knowledge Foundation.

Pride, W. M., & Ferrell, O. (1991). *Marketing: Concepts and strategies* (7th ed.). Houghton: Mifflin Company.

Roberts, K., & Marvin, K. (2011). *Knowledge and attitudes towards healthy eating and physical activity : What the data tell us*. Oxford: National Obesity Observatory.

Roddy, G., Cowan, C., & Hutchinson, G. (1996). Consumer attitudes and behaviour to organic foods in Ireland. *Journal of International Consumer Marketing , 9* (2), 41 - 63.

Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change. *Journal of Psychology, 91* (1), 93 - 114.

Ruiter, R. A., Kessels, L. T., Peters, G.-J. Y., & Kok, G. (2014). Sixty years of fear appeal research : Current state of the evidence. *International Journal of Psychology , 49* (2), 63 - 70.

Scarpa, R., & Thiene, M. (2011). Organic food choices and protection motivation theory : Addressing the psychological sources of heterogeneity. *Food Quality and Preference, 22* (6), 532 - 541.

Shafiea, F. A., & Rennie, D. (2012). Consumer perceptions towards organic food. In, *Procedia - Social and Behavioral Sciences* (Vol. 49, pp. 360 - 367). Malaysia: Elsevier Ltd. DOI : https://doi.org/10.1016/j.sbspro.2012.07.034

Shaharudin, M., Jacqueline, J., Suhardi, W., & Shamsul, J. (2010). Purchase intention of organic food ; perceived value overview. *Canadian Social Science , 6* (1), 70 - 79.

Soliman, N. M., Elsayied, H. A., & Shouli, M. M. (2018). Application of health belief model among youth at high risk for obesity in West Bank (Palestine). *American Journal of Nursing Science , 7* (3 -1), 86 - 96.

Solomon, M., Bamossy, G., Askegaard, S., & Hoog, M. (2009). *Consumer behaviour*. Harlow : Financial Times Prentice Hall.

Srivastava, R. K. (2009). Food-borne diseases. *CD Alert - Monthly Newsletter of National Centre for Disease Control*, *13*(4), 1-12.

Sutherland, L.-A. (2011). "Effectively organic": Environmental gains on conventional farms through the market ? *Land Use Policy, 28* (4), 815 - 824.

Tuccitto, D. E., Giacobbi, P. R., & Leite, W. L. (2010). The internal structure of positive and negative affect : A confirmatory factor analysis of the PANAS. *Educational and Psychological Measurement , 70* (1), 125-141.

Tucker-Ladd, C. E. (1996). *Psychological self-help*. Mental Help Net. Retrieved from https://www.psychologicalselfhelp.org/

Uyttendaele, M., Franz, E., & Schlüter, O. (2016). Food safety, A global challenge. *Environmental International Journal of Research and Public Health , 13* (1), 1- 6.

Vermeir, I., & Verbeke, W. (2008). Sustainable food consumption among young adults in Belgium : Theory of planned behaviour and the role of confidence and values. *Ecological Economics, 64* (3), 542 - 553.

Voon, J. P., Sing, K., & Agrawal, A. (2011). Determinants of willingness to purchase organic food : An exploratory study using structural equation modeling. *International Food and Agribusiness Management Review , 14* (2), 103 - 120.

Wier, M., O'Doherty, K. J., Andersen, L. M., & Millock, K. (2008). The character of demand in mature organic food markets : Great Britain and Denmark compared. *Food Policy , 33* (5), 406 - 421.

World Health Organization. (2015, December 3). *WHO's first ever global estimates of food borne diseases find children under 5 account for almost one third of deaths*. Retrieved from http://www.who.int/mediacentre/news/releases/2015/foodborne-disease-estimates/en/

Wray-Lake, L.,Crouter, A. C., & McHale, S. M. (2010). Developmental patterns in decision-making autonomy across middle childhood and adolescence : European American parents' perspectives. *Child Development, 81*(2), 636 - 651.

Xie, B., Wang, L., Yang, H., Wang, Y., & Zhang, M. (2015). Consumer perceptions and attitudes of organic food products in Eastern China. *British Food Journal , 117* (3), 1105 - 1121.

Zhu, H., Jackson, P., & Wang, W. (2017). Consumer anxieties about food grain safety in China. *Food Control , 73*(B), 1256 - 1264.

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