

Contradictory results on environmental concern while re-visiting green purchase awareness and behavior

Green
purchase
awareness

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Abstract

Purpose – This paper aims to examine the mediating role of environmental concern in the relationship of green purchase awareness and purchasing behavior of fast food consumers keeping in view the theory of planned behavior.

Design/methodology/approach – A quantitative, cross-sectional design is used by collecting primary responses through a validated questionnaire. In all, 1,008 male and female buyers of fast food were sampled. Structural equation modeling is applied.

Findings – The results revealed that green purchase awareness has a positive relationship with green purchase behavior, and environmental concern has no mediation in the relationship. Upon having awareness, the respondents adopted green or pro-environmental behavior, but at the same time, they were found having least concern for the protection of environment.

Research limitations/implications – This is a cross-sectional study with questionnaire. Multiple sources of data collection results in weakening self-reporting bias.

Practical implications – Implications count toward individuals, enterprises and society at general.

Originality/value – The study highlights the issue of not having concern for the protection of the environment even after having green purchase awareness. This is the first time the environmental concern is examined as a mediator in the selected relationship. The contradictory results of having no environmental concern differentiate this study from others.

Keywords Pakistan, Environmental concern, Consumers, Green purchase behavior, Green product awareness

Paper type Research paper

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1. Introduction

A healthy environment is the outcome of educated society. Countries should devise and implement policies to increase environmental education for a sustainable environment. With the increase in population, vehicles and cutting of trees, the environment in Pakistan is becoming unhealthy. Pakistan, a developing country, is passing through an array of problems including environmental degradation. This degradation can be minimized by educating people about environmental health and cleanliness. For literacy, Pakistan is ranked at 113 out of 120 nations (Razaq, 2015), but the depletion in environmental conditions is caused by the increase in the carbon dioxide ratio in the atmosphere (Attari and Attaria, 2011). This is a clear indication that people are less likely to have knowledge about their environment. At the same time, the lack of awareness is leading to environmental degradation. Environmental degradation is the disintegration of the earth or deterioration of the environment via the misuse of air, water, and soil and the destruction of the environment, etc. (Jorgenson, 2003). Van der Werff *et al.* (2013) emphasized the adoption of pro-environmental behavior as a moral obligation of individuals. Dagher *et al.* (2015) reported that environmental awareness has increased in the western wing of the world (Walker, 2000).

Moreover, in Pakistani universities, the curriculum does not offer environmental awareness/orientation related subjects even at higher education level. Bhandari and Abe (2000) reported Federal Ministry of Education; Pakistan Environmental Council and Federal Ministry of Environment claiming that environmental education is being imparted via various modes including university education, training, education projects etc. However, these efforts are too less to meet the demand of the masses to be educated regarding the environment. Same is evident by the ever-increasing pollution in the country. Imparting education is an important means of developing behavior among people (Al Mamun and Fazal, 2018).

The difference between general purchase behavior (GNPB) and green purchase behavior (GRPB) is that the GNPB is triggered by an assessment of benefits and cost tagged with it that are totally relevant to the individual consumer performing the behavior and have no concern for others. Whereas environmentally conscious behavior is unlikely to deliver instant personal gains or gratification, but rather the future-oriented outcomes like cleaner and safer environment that has multiple benefits for society as a whole (McCarty and Shrum, 1993; Kim and Choi, 2005).

Jones *et al.* (2014) acknowledged that the global market for green product marketing is expected to rise to the US\$3.5tn by 2017 because of the alarming rise in awareness on environmental issues. However, in some developing countries, this trend is quite new as some regions are still in the dark, and low awareness about green products is an issue of concern (Synovate Survey, 2012). Limited evidence about awareness of the general public about environment encouraged researchers to make the current effort.

Young *et al.* (2010) developed a model that highlights five major components. The first component addresses the consumer's green values and knowledge that motivates the possibility of green criteria; the second component is choosing the green criteria for the particular purchase; the third component comprised barriers and facilitators that may help in enhancing or discarding, respectively, the green criteria and the influence of consumers during the whole process; the fourth component is the product purchase itself and lastly the purchase experience and knowledge gained from the process, or uncomfortable feeling for not purchasing the product. The argument developed here is that unless knowledge is gained the above-mentioned process cannot be started. That is why more importance is laid on awareness regarding green purchases.

The "green product" are products that strive to protect or improve the environment, conserve energy and/or natural resources and to reduce or eliminate the use of agent toxic

pollutants and waste (Juniora *et al.*, 2015) whereas the green purchase intentions are specific environmental friendly gestures displayed by the consumer indicating that they have a concern for the environment (Karatu, and Mat, 2014). It is the willful state of mind in which the person makes a choice (Farrukh *et al.*, 2018).

Environmental awareness does not only having knowledge about the environment but an individual's attitude, values, and necessary skills to solve problems related to the environment. Moreover, environmental awareness is the first step to carry out responsive behavior (Sengupta *et al.*, 2010). People are becoming conscious about their environment across the globe (Kim and Choi, 2005). This may stand true for the developed countries but conforming to the same for developing countries is still in question. Awareness about the environment is about letting people know about the things that are favorable and/or harmful to the environment and the ways to reduce the harmful effects causing things.

The study has two main objectives that are to ascertain the relationship of green awareness and GRPB and examine environmental concern as a mediator in the relationship of green purchase awareness and GRPB, for the reason that it is likely that people having concern for the environmental protection may have stronger tendencies towards adopting GRPB (Ramayah *et al.*, 2012) and vice versa.

2. Literature review

2.1 Awareness and green purchase behavior

Awareness about the environment protection, environment-friendly products and their availability and the recycling is low in the majority of the developing countries in comparison to the Asian countries like Malaysia and Singapore (Ramayah *et al.*, 2012). This motivated the researchers to examine this phenomenon in the context of Pakistan. For doing so, the team of researchers screened out thoroughly the list of references given at the end of each research paper reviewed to approach the relevant material related to Pakistan.

The researchers discovered that other research studies, considering Pakistani sample, have examined the relationship of various factors influencing green purchase intentions/behavior (Saleem *et al.*, 2015; Sheikh *et al.*, 2014; Sabir *et al.*, 2014; Saleem and Gopinath, 2013; Saeed *et al.*, 2013; Ali *et al.*, 2011), factors influencing environmental concern (Soni and Wehr, 2004) but this link was found missing in the context of Pakistan, the factors responsible for the non-adoption of GRPB (Vermeir and Verbeke, 2008), etc. looking at the bigger perspective, around the world, even the studies have found no linkage between the environment related knowledge and GRPB (Rahbar and Wahid, 2011; Ramayah *et al.*, 2010; Wolsink, 2007) and studies have traced lack of knowledge as an antecedent to the non-adoption of green purchase behavior (GRPB) (Connell, 2010).

Little evidence is traced to the linkage between environmental awareness and GRPB and the mediating role of concern. Therefore, the current study examined the linkage between environmental awareness and GRPB.

2.2 Environmental concern and green purchase behavior

Having concern for a healthy environment provides the base for environmental research (Hines *et al.*, 1987; Kim and Choi, 2005). Further Dagher *et al.* (2015) examined the moderating effect of gender in the relationship between environmental concern and GRPB. They posted that their study was based on socialization theory that suggested that individual behavior is shaped by gender expectations in relation to the cultural context. They collected responses from Lebanese respondents via an online questionnaire and found a significant role of gender in this relationship. They emphasized examination of related

linkages with enhanced sample size, the collection of data (responses) from other countries, the collection of data by relying on self-reported measures only.

A possibility is expected for not realizing the importance of changing purchase habits because they feel comfortable in their routine habits, thus having a low concern about their surroundings (Juniora, *et al.*, 2015). Issues regarding environmental concern are gaining importance on rapid speed in the business world but personal ethics regarding protecting the environment has its place and fluctuates with the awareness and prevailing social practices. It is realized that higher the environmental concern higher is the tendency to buy pro-environmental products (Braga Junior *et al.*, 2014). So far, the customers are not willing to adopt green behavior; thus, the environment cannot be successfully protected. In the light of literature, it is hypothesized that the people who are more concerned about the environment protection tend to adopt GRPB.

2.3 Research framework

Following are hypotheses based on Figure 1.

- H1. There is a positive relationship between green purchase awareness and GRPB.
- H2. There is a positive relationship between green purchase awareness and environmental concern.
- H3. There is a positive relationship between environmental concern and GRPB.
- H4. Environmental concern mediates the relationship between green purchase awareness and GRPB.

3. Methods

Population for the study remained all fast food customers from major cities of Pakistan. A convenience sample of 1,008 consumers was used. The university going students were selected as customers because they have more exposure and knowledge/awareness regarding green products than ordinary customers (Rizwan *et al.*, 2014).

In total, 2,500 questionnaires were distributed to gather handful responses, and received 1,008 responses for analysis. GRPB and environmental concern – (Kim and Choi, 2005) – five-point scale 1 = strongly disagree and 5 = strongly agree. Green purchase awareness – Ishaq *et al.* (2011) – five-point scale 1 = strongly disagree and 5 = strongly agree (See Appendix).

4. Results

4.1 Measurement model

The first-order factors' validity and reliability are examined. As suggested by Hair *et al.* (2017), we used the factor loadings, average variance extracted (AVE) and composite reliability (CR) to test the convergent validity followed by the discriminant validity. As

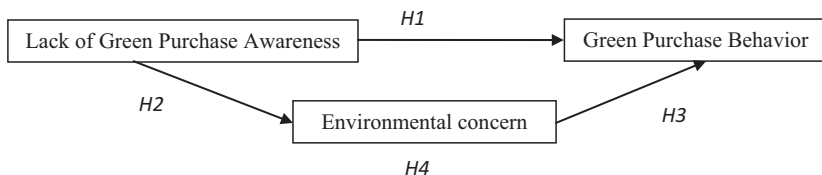


Figure 1.
Study model

shown in [Table I](#), all the first order factors showed loadings more than 0.7, $AVE > 0.5$ and $CR > 0.7$, thus allowing us to conclude the measures are reliable.

The discriminant validity was examined through [Fornell and Larcker \(1981\)](#) criteria. Discriminant validity is achieved if the square root of the AVE is greater than all the correlations in the same row and column of the particular construct ([Table II](#)).

4.2 Structural model

[Hair et al. \(2017\)](#) suggested examining R^2 , beta and the corresponding t -values via bootstrapping procedure. Looking at the effects of the independent variable on the dependent and the mediator on the dependent variable ([Table III](#)). Further, the R^2 was 0.40,

Constructs	EC	GPA	GPB	CR	AVE
EC1	0.7330			0.8285	0.5479
EC2	0.7839				
EC3	0.7685				
EC5	0.6704				
GPA1		0.7575		0.8398	0.5127
GPA2		0.6849			
GPA3		0.7650			
GPA6		0.7133			
GPA8		0.6532			
GPB2			0.6969	0.8140	0.5227
GPB3			0.7132		
GPB4			0.7512		
GPB5			0.7294		

Source: SmartPLS results

Table I.
Convergent validity

Constructs	EC	GPA	GPB
EC	<i>0.7402</i>		
GPA	0.4474	<i>0.7160</i>	
GPB	0.2539	0.4601	<i>0.7229</i>

Note: The figures in italics are the square root of the AVE's

Source: SmartPLS results

Table II.
Discriminant validity

Hypothesis	Relationship	Std. beta	Std. error	t -value	p -value
<i>H1</i>	GPA → GPB	0.433	0.033	13.300	0.000
<i>H2</i>	GPA → EC	0.447	0.028	15.925	0.000
<i>H3</i>	GPA → EC	0.060	0.036	1.675	0.095
<i>H4</i>	GPA → EC → GPB	0.027	0.016	1.658	0.098

Source: SmartPLS results

Table III.
Hypothesis testing

indicating that the Green purchase awareness ($\beta = 0.433, p < 0.01$) and environmental concern ($\beta = 0.060, p > 0.01$) together explained 21.4 per cent variance in GRPB. While Green purchase awareness ($\beta = 0.447, p < 0.01$) with an R^2 of 0.20 indicating Green purchase awareness can explain 20.0 per cent of the variance in environmental concern. Thus $H1, H2$ and $H3$ were fully supported.

Mediation effect of environmental concern on the Green purchase awareness \rightarrow Green purchase behavior relationship is examined. The $GPA \rightarrow EC \rightarrow GPB$ ($\beta = 0.027, p > 0.01$) was non-significant. In addition, as suggested by Preacher and Hayes (2004, 2008) the indirect effects did not straddle a 0 in between indicating there is mediation. Thus, $H4$ was not supported.

5. Discussion and conclusion

The results of the current study revealed that the awareness of the green products is positively related to green purchase intentions/behavior (Abid and Atif, 2015; Ali and Ahmad, 2012; Aman *et al.*, 2012; Chaudhary and Bisai, 2018). Further, the positive relationship existed between awareness and development of environmental concern (Dagher *et al.*, 2015; Kim and Choi, 2005; McClinchie, 2014) but the concern was weak enough to predict GRPB thus negating the existing evidence (Juniora *et al.*, 2015; Nguyen *et al.*, 2017). That is why the environmental concern failed to mediate the relationship between green awareness and green behavior.

Even after having informal awareness mechanisms, the people living in Pakistan are found least bothered about protecting their environment. This may be a result of weak awareness programs by the fast food selling companies because it is evident through observation and looking at the educational contents taught by the universities that there are no or very less formal awareness programs or courses available that make people "concerned" about the environment.

Green purchase intentions/behaviors are examined and published by many authors in Pakistan (see the references list), but somehow upon investigation, it is revealed that this phenomenon had weak patterns in the minds of people (Chen *et al.*, 2018). Furthermore, no or rare advertisements were observed by the researchers in print and/or electronic media.

It is argued that people will be concerned about the environment if they are aware of its importance (Dangelico, 2017). The environmental concern examined by researchers in their studies seems losing their argument value because of the reason that Pakistani customers are least aware of the environment in which they are living.

This situation makes Pakistan a big opportunity for green product marketing. However, lack of adequate information in terms of formal education on green product and environmental protection makes it a challenge for the implementers. The orientation in the universities is provided about the entrepreneurship by offering few subjects (Hussain, 2018) but green entrepreneurship and buying behaviors are still ignored.

5.1 Implications/suggestions

The development of environmental awareness can bring environmental harmony in society and help in saving the environment. On the other hand, education is needed to be provided to the manufacturing concerns that help in bringing environmental friendly products to the market. The environmental education can be imparted to customers via electronic media especially television (McClinchie, 2014). Looking at the results, it is suggested that awareness through media or selected sources is not an effective way of making people

concerned about the environment; rather, it should be channelized through formal education like offering courses at university level.

5.2 Conclusion

For promoting green fast food purchase behavior, it is necessary to develop concern regarding environment protection in the minds of people for which the awareness programs are the solution. The frequency of awareness programs needs attention that will help in promoting GRPBs.

5.3 Limitations and future directions

A single segment of products is considered for examination that our fast food, the other products such as electronics and retail products, considered for examination may produce healthy results. It is quite likely that the patterns of responses may differ on the basis of products like consumable products like switching from soft drinks to plain water, etc. along with consuming fast food and throwing the wrappers away. Increase in awareness regarding anything leads to better use of it. The level of education and green consumption behavior is another meaningful insight for future studies.

Further, the country-specific study in this regard will again be a positive contribution to the base of knowledge. Responses from different countries may follow different patterns. This will help diagnose whether awareness is at the same level across countries. Additionally, identification of the factors that hinder the adoption of GRPB is another area to be addressed in the context of Pakistani society.

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Appendix. Instrument for data gathering

Green purchase behavior (existing alpha = 0.83) five-point scale (never, rarely, sometimes, often and always)

GPB1. I make a special effort to buy products that are made from recycled materials.

GPB2. I have switched products for ecological reasons.

GPB3. When I have a choice between two equal products, I purchase the one less harmful to other people and the environment.

GPB4. I make a special effort to buy household items such as detergents and cleansing solutions that are environmentally friendly.

GPB5. I have avoided buying a product because it had potentially harmful environmental effects.

Green awareness

Perceived green purchase awareness and knowledge scale 1 (Source: Ishaswini, Datta, S.K. (2011). Pro-environmental concern influencing green buying: A study of Indian consumers. *International Journal of Business and Management*, 6(6), 124-133)

EW1 I have heard about eco-friendly products.

EW2 I am aware of such products.

EW3 I am aware that purchasing eco-friendly products will contribute to the sustainable future.

Environmental concern (existing alpha = 0.84) seven-point scale: strongly disagree to strongly agree

EC1. I am extremely worried about the state of the world's environment and what it will mean for my future.

EC2. Mankind is severely abusing the environment.

EC3. When humans interfere with nature, it often produces disastrous consequences.

EC4. The balance of nature is very delicate and gets easily upset.

EC5. Humans must live in harmony with nature to survive.

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