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Message involvement and attitude towards green advertisements

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Abstract

Purpose – Previous green research shows conflicting results regarding the relationship between environmental concern and persuasion. It has also largely overlooked the role of situational involvement. The purpose of this paper is to aim to show that message involvement influences attitude towards green advertisements.

Design/methodology/approach – To test the proposed model, an experimental study based on a sample of young adults in an emerging economy was used to investigate if situational involvement can produce favourable attitudes towards green advertisements.

Findings – Using PLS, it was found that fear and response efficacy increased message involvement which in turn was a significant predictor of attitude towards the advertisement. The findings show that advertisers can use these variables to increase message involvement.

Originality/value – This research extends previous studies on message involvement and expands current knowledge by showing that situational involvement predicts attitude towards green advertising.

Keywords Fear, Involvement, Protection motivation theory, Green advertising, Response efficacy

Paper type Research paper

Most green marketing studies encourage the eco-friendly consumer to make pro-environmental choices. However, targeting a specific set of consumers is restrictive and amounts to “green marketing myopia” (Ginsberg and Bloom, 2004). Other researchers state that green marketing should match the aspirations and needs of the lay consumer rather than focusing only on the green niche (Rex and Baumann, 2007). There is another reason to look beyond the green niche. The environmentally concerned consumer who belongs to this niche does not seem to make a green product purchase at all times (Newton *et al.*, 2015).

Encouraging green consumption among lay people in developing countries is essential as these economies face huge environmental threats (McMichael, 2000). Yet, research on green marketing in developing Asian countries like India is limited (Khare, 2014). Hence, this study tries to fill this gap by examining the Indian consumer. We propose that increasing these consumers’ involvement with the advertising message will persuade even lay consumers to consider green product purchases irrespective of their environmental concern.



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Literature review and motivation for research

Green advertising and environmental concern

Several green marketing studies concentrate only on the green consumer who reports high environmental concern. While some early studies demonstrate that environmental concern has a direct impact on brand perceptions (Minton and Rose, 1997), some researchers contend that the consumers' environmental concern does not seem to significantly influence green purchase behaviour (Newell *et al.*, 1998; Chang, 2011).

Hence, current green advertising studies have started to look beyond environmental concern to promote pro-environmental consumption by considering lay consumers, rather than just the green consumer. Factors like the country of origin of the advertiser (Chan, 2000), claim credibility (Chan, 2004) and consumers' product involvement (Kong and Zhang, 2013) seem to influence green consumption intention.

Green consumption intentions are influenced by social benefits too. The influence of friends, social relationships and the opinion of referent others can increase consumers' green purchase intentions (Lee, 2008; Costa Pinto *et al.*, 2014; Khare, 2015). Consumers believe visible issues are more important and pursue visible environmental activities as this "conspicuous" consumption signals their social status (Griskevicius *et al.*, 2010; Wang, 2014). Apart from such social recognitions and acceptance, personal benefits also seem to increase green consumption.

Connecting green attributes with personal benefits like financial savings and the future welfare of their children presents a "win-win" situation to the consumer (Ginsberg and Bloom, 2004). Combining personal health and environmental concerns derive favourable responses to a green message. Hence, underlining the personal benefit along with the environmental benefit provides better synergy (Kareklas *et al.*, 2014). Self-benefit appeals work well with privately seen green messages too (e.g. e-mail) (Green and Pelozo, 2014). Therefore we extend these studies and propose that green messages emphasizing personal relevance will be successful with lay consumers.

Green advertising and involvement

Involvement is typically defined as the extent of consumer interest in a product or product category based on the consumer's need and goals (Dholakia, 2001). It can also be aroused by an advertising message (Lee, 2000). The elaboration likelihood model describes the processing of a message based on the receiver's level of involvement. Highly involved recipients elaborate information via the "central" route. This means that the message recipient thinks extensively about a message. Such extensive thinking about the message facilitates attitude change via the central route to persuasion. Attitude changes caused by the central route are more persistent and endure over time. Message involvement has been shown to increase elaboration and systematic processing of messages through the central route (Petty and Cacioppo, 1986). It is a type of situational involvement and defined as the "motivational construct that influences consumers' motivation to process information at the time of message exposure" (Baker and Lutz, 2000).

"Enduring involvement" (long term) and "situational involvement" (temporary) are used to indicate the temporal duration of involvement. Enduring involvement is a long term permanent concern with an issue or product, whereas situational involvement is temporary in nature. Situational involvement is evoked by external stimuli and is goal directed (Richins and Bloch, 1986). For instance, consumers who have an enduring involvement with mobile phones will always pay attention to related events/issues (e.g. ads, reviews). However, other consumers who do not have enduring involvement with a mobile phone may sometimes need to purchase one. In such instances, they

would scrutinize phone advertisements or reviews because of the current need. When the product purchase is complete, involvement levels will decline to previous levels. This temporary involvement is termed situational involvement. In green marketing, environmental concern is usually treated as enduring involvement with the environment and most studies investigate the effect of this variable.

Both enduring and situational involvement have similar outcomes like information search and increased attention to messages (Celsi and Olson, 1988). Yet, very few green advertising studies have used situational involvement (e.g. Tucker *et al.*, 2012). Perceived risk can increase message involvement as it is an important antecedent of situational involvement (Kapferer and Laurent, 1993).

Perceived risk

Perceived risk is related to the uncertainty and the negative consequences (or losses) associated with a decision. These can either be financial, performance related, physical, psychological or social losses (Jacoby and Kaplan, 1972). Physical risk is only rarely investigated.

Perceived physical risk is typically conceptualized as perceived severity (seriousness of the risk or threat) and perceived susceptibility/vulnerability (likelihood or probability of being affected by the threat) to the threat (Maddux and Rogers, 1983; Witte, 1992). Protection motivation theory (PMT) – a framework for using fear appeals in health messages – includes these constructs.

PMT

Rogers (1975) proposed PMT to explain fear appeals. It focuses on the cognitive processes that make the fear appeal effective (Witte, 1992). PMT posits that an individual evaluates options to reduce risk/threat using two processes namely the threat appraisal process and the coping appraisal process (Maddux and Rogers, 1983). Advertisements and messages that communicate threats can be used to initiate these processes.

The cognitive components of the threat appraisal process are perceived severity and perceived vulnerability. Perceived severity refers to the perception of intensity of the threat or the degree to which the threat is treated as serious. Perceived vulnerability or perceived susceptibility refers to the individual's perception of the likelihood of being affected by the threat. For instance, in order to effectively convey the threat of smoking by highlighting the effects of smoking, the intended message recipient should view the consequences of smoking (e.g. lung cancer) as severe. He should also feel that there is a chance of him being personally affected by the advertised threats in order to perceive vulnerability. Perceived severity and perceived vulnerability (cognitive components) stimulate fear, an affective response to the threat.

Response efficacy and self-efficacy are the key coping appraisal components. Response efficacy refers to an individual's belief that the recommended response effectively reduces the threat. Self-efficacy is concerned with the individual's belief regarding his capability in performing the recommended response (Rogers and Prentice-Dunn, 1997). For instance, to perceive response efficacy, the threat message recipient should believe that the recommended response of quitting smoking would lower his chances of contracting lung cancer. He should also believe that he is capable of performing the advocated behaviour like stopping/reducing smoking to perceive self-efficacy.

PMT is also used in promoting pro-environmental behaviour like climate change (Cismaru *et al.*, 2011), water conservation (Mankad *et al.*, 2013) and greenhouse gas emissions (Hornig *et al.*, 2014).

We find two main gaps in extant literature. One, most green advertising studies focus essentially on green consumers and ignore the rest of the consumer base. Two, most green research has not considered highlighting personal relevance by creating situational involvement. Therefore, our major research question is:

RQ1. Can highlighting personal relevance using message involvement influence attitudes towards green products?

Elements in the PMT framework have significant individual effects on message involvement (Cauberghe *et al.*, 2009). Hence, our next research question is:

RQ2. Can the PMT components increase consumer's message involvement with the green advertising message?

Conceptual framework and hypotheses development

The experimental factors, green advertisements with varying message threat levels (high/low) and goal framing (positive/negative) are used to initiate the threat appraisal process of the PMT. The conceptual model is shown in Figure 1.

Main and interaction effects of the experimental factors on PMT variables

Message threat levels. Most PMT studies use threats with different intensities (levels) to activate the threat appraisal process. For example, in the low severity conditions, the threat is operationalized as a minor medical problem and in the high severity conditions the threat would be portrayed as a mortality risk. Correspondingly, manipulating the

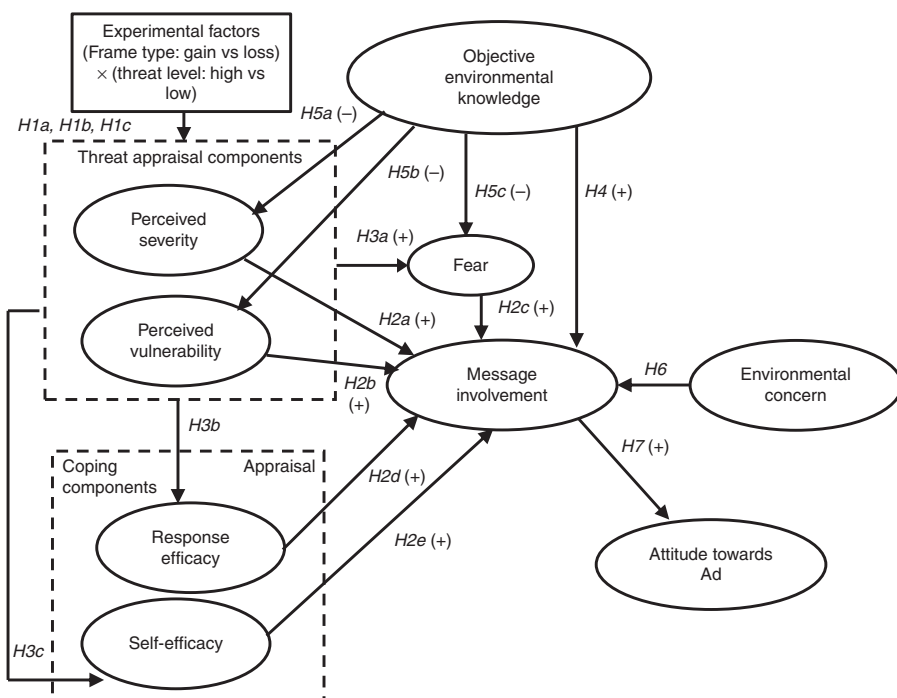


Figure 1.
Conceptual model

probability of the occurrence of the risk significantly increases perceived vulnerability to the threat. Threat levels are therefore shown to significantly affect perceptions of severity and vulnerability in several studies, such that higher levels of threat produce perceptions of higher severity and vulnerability (de Hoog *et al.*, 2005). For instance, Cauberghe *et al.* (2009) create a low threat message that implies that accidents could be the result of speeding whereas they add extra audio-visual images to emphasize bodily harm in a high threat message. Higher threat levels (higher intensity of threat) will therefore produce heightened levels of perceived severity and vulnerability. Hence:

H1a. There is a positive relationship between threat levels and perceived severity and vulnerability.

Goal framing. Goal framing is popular in persuasive communication. They are used to stress the positive consequences of following a recommended behaviour (e.g. preventing health hazards) or the negative outcomes of not following the behaviour (e.g. suffering from health hazards) (Levin *et al.*, 1998). Negative goal framing produces stronger effects when compared to positive goal frames (Meyerowitz and Chaiken, 1987). Negative information was found to be more successful in increasing threat perception in risk education (Cox and Cox, 2001). When messages are negatively framed, they are thought to constitute higher risk when compared to positively framed messages (Meyers-Levy and Maheswaran, 2004). Therefore:

H1b. Consumers who view negative frames will report higher levels of perceived severity and vulnerability when compared to consumers who view positive frames.

Perceived risk is considered a moderator of framing effects (Apanovitch *et al.*, 2003) and is known to interact with frames to produce required behaviour and intentions (Polyorat *et al.*, 2007). In the case of health-detection behaviour, loss frames are shown to be more effective (Block and Keller, 1995). Alternatively, in the case of the risky preventive behaviour studies gain frames work more successfully. For example, positive frames are more useful in promoting sunscreen usage (Rothman *et al.*, 2006) than negative frames. Therefore:

H1c. Positive frames will lead to higher levels of perceived severity and perceived vulnerability when the threat level is high.

PMT variables and message involvement

Perceived risk is an important antecedent of situational involvement (Dholakia, 2001). The threat appraisal components of the PMT (perceived severity and perceived vulnerability) are suitable for highlighting perceived physical risk (Block and Keller, 1995). Therefore, emphasizing perceived severity and vulnerability can induce situational involvement. Subsequently, higher levels of perceived severity and vulnerability of threat will lead to higher levels of involvement as they increase personal relevance. According to PMT, perceived severity and vulnerability positively influence fear arousal. Fear arousal is known to increase message elaboration and systematic processing of the message (de Hoog *et al.*, 2005). Fear has also been used in environmental communication studies (Meijnders *et al.*, 2001).

The coping appraisal components (response efficacy and self-efficacy) of the PMT framework also have significant individual effects on message involvement

(Cauberghe *et al.*, 2009). Response efficacy induces the belief that the prescribed action is helpful in successfully averting the threat (Floyd *et al.*, 2000). It is a key persuasive component in increasing message acceptance and reducing message rejection (Lewis *et al.*, 2010). When people perceive low levels of self-efficacy they tend to avoid the decision or choice as only higher levels of perceived self-efficacy increases their confidence in averting the threat (Bandura, 1982). Cauberghe *et al.* (2009) have shown that fear, threat and coping appraisal components have separate direct effects on message involvement. Hence all the PMT variables have separate direct effects on message involvement. Therefore:

- H2. Higher levels of: (a) perceived severity, (b) perceived vulnerability, (c) fear, (d) response efficacy, (e) self-efficacy will lead to higher levels of message involvement.

According to PMT, perceived severity and perceived vulnerability of the threat are cognitive components that cause fear arousal (Floyd *et al.*, 2000). If both these components are judged sufficiently high then fear and coping appraisal are triggered (Milne *et al.*, 2000). Therefore:

- H3. Perceived severity and perceived vulnerability positively influence: (a) fear arousal, (b) response efficacy, (c) self-efficacy.

Environmental knowledge, threat perception and message involvement

Researchers either use measures of subjective (Manrai *et al.*, 1997) or objective environmental knowledge (Bartiaux, 2008). Some researchers feel that subjective knowledge might be incorrect as this self-assessed report may not enable people to make correct ecological decisions (Ellen, 1994). When the consumer is knowledgeable on a specific issue (e.g. air pollution), he develops a favourable attitude towards purchasing green products (Polonsky *et al.*, 2012). Objective knowledge reflects what is stored in memory and is an actual measure of what an individual knows (Brucks, 1985) and therefore it can positively influence purchase intentions (Paladino and Ng, 2013). Hence this research uses objective environmental knowledge.

Consumers with low levels of knowledge or awareness have a low ability to process green advertisements. People with higher levels of knowledge tend to scrutinize the message carefully to judge it (Maheswaran and Meyers-Levy, 1990). Prior product knowledge is shown to be an important determinant of message involvement (Laczniak *et al.*, 1999). Consumers with low levels of knowledge rely on heuristic cues whereas knowledgeable consumers have higher levels of elaboration (Alba and Hutchinson, 2000). Hence:

- H4. Consumers' objective environmental knowledge will positively influence message involvement.

Consumers who have low levels of knowledge perceive higher levels of risk in decision making (Klerck and Sweeney, 2007) as knowledge is negatively related with perceived risk (Laroche *et al.*, 2003). Prior knowledge is therefore known to lower the effect of fear arousal (Averbeck *et al.*, 2011). Therefore:

- H5. Consumers' objective environmental knowledge will negatively influence: perceived severity of threat, perceived vulnerability of threat, evoked fear.

Enduring involvement with the environment (environmental concern), message involvement and attitudes

Enduring involvement induces the central route to processing (Petty and Cacioppo, 1986). When consumers are highly involved with the message, they elaborate it (Maheswaran and Meyers-Levy, 1990). Enduring involvement also increases situational involvement as the consumer feels that the object under scrutiny is related to his self-concept (Moorman *et al.*, 2012). Consumers with high levels of environmental concern are motivated to process green advertising (Schuhwerk and Lefkoff-Hagius, 1995).

However, consumers' involvement with the environment does not mean that they intend purchasing green products (Newell *et al.*, 1998). The "attitude action gap" is well documented in environmental psychology (Moraes *et al.*, 2012) and thus the consumer's environmental concern may not always translate to consumer attention. Likewise, green consumers can also be skeptical about green advertisements (do Paço and Reis, 2012). When consumers are skeptical they do not pay attention to the advertisement (Obermiller *et al.*, 2005) and will therefore not expend resources to process the message. Hence:

H6. Environmental concern will not be related to message involvement.

Message involvement and attitudes

Involvement is known to increase elaboration and serve as the mediating variable that determines the extent of influence of the advertisement on an individual (Petty and Cacioppo, 1986). Message involvement is known to influence attitude towards advertisement in the positive direction. When message involvement is high, individuals increase their processing effort (Laczniak *et al.*, 1989) and involvement in turn predicts attitudes as thoughts are evaluated in a detailed manner (Maheswaran and Meyers-Levy, 1990). Therefore:

H7. Message involvement positively influences attitude towards the ad (Aad).

Study

Design

A 2 (frame type: gain vs loss) × 2 (threat level: high vs low) factorial design was employed to test the hypotheses. In total, 190 undergraduate engineering students from a large South Indian University (52.4 per cent male, median age = 20) were randomly assigned to the four conditions. The participants were exposed to the stimulus and data were collected through a paper/pencil questionnaire.

Stimulus materials

A pre-test based on the procedure followed in Traylor and Joseph (1984) was conducted to identify products that were familiar and of interest to the study population. Mobile phones ($M = 17.45$, $SD = 7.949$) were chosen for the experiment from a list of ten products. The advertisements listed the features of a green mobile phone. Please refer Appendix 1 for details regarding manipulations in the advertisements.

Measures

We used scales from existing literature. Please refer Table AI in Appendix 2 for details about scales used to measure PMT variables, fear, message involvement and attitude towards ad. Objective environmental knowledge was measured using a set of 15 questions similar to the MEAK subscale on environmental knowledge (Maloney *et al.*, 1975).

The questions were based on combination of general questions about environmental awareness (e.g. impact of climate change, pollutants) and issues specific to India (e.g. Bhopal disaster). Some of the questions were taken from an online quiz (Quiz, 2007). The scale is in a quiz format and the correct answers are summed to form the objective environmental knowledge score[1]. Higher scores reveal a high degree of factual knowledge about the environment and vice versa. The indicators for objective environmental knowledge define the construct. They are not interchangeable and do not covary with each other. They also have different themes and the direction of causality is from the items to construct. Hence objective environmental knowledge is treated as a formative construct (Jarvis *et al.*, 2003).

All the scales had adequate reliabilities except response efficacy which had a moderate reliability of 0.56. However, other PMT studies have also used this variable despite achieving such moderate reliability scores (e.g. Milne *et al.*, 2002). Hence, this variable was retained in the study.

Data analysis

SmartPLS version 2.0.M3 was used to test the proposed model. The choice of PLS-SEM was guided by three major considerations: the major research goal was identifying message involvement as a “driver” construct for attitude towards ad, the research uses a formative indicator index (environmental knowledge) and the structural model is complex as it has many constructors and many indicators (Hair *et al.*, 2011).

Results

Hypotheses tests of the experimental effects on perceived severity and perceived vulnerability

The hypothesized effect of goal frames and threat levels on the threat appraisal variables was analyzed using MANOVA. The groups did not differ based on threat levels (Pillai's trace = 0.20; Wilks' λ = 0.980; Hotelling's trace and Roy's largest root = 0.020, $F(2,178) = 1.782$, $p > 0.05$) or frame type (Pillai's trace = 0.010; Wilks' λ = 0.990; Hotelling's trace and Roy's largest root = 0.010, $F(2,178) = 0.872$, $p > 0.05$). The proposed interaction between threat levels and frames was also not supported (Pillai's trace = 0.011; Wilks' λ = 0.989; Hotelling's trace and Roy's largest root = 0.011, $F(3, 175) = 0.630$, $p > 0.05$). Hence *H1a-H1c* were not supported.

Structural model. Measurement, convergent and discriminant validity of the constructs were assessed first. Indicator loadings ranged from 0.40 to 0.94 and most of them exceeded 0.70 (Fornell and Larcker, 1981). Composite reliability scores ranged from 0.76 to 0.95 and therefore exceeded the 0.7 cut-off (Hair *et al.*, 2011, 2012). The AVE of the latent constructs was greater than the latent construct's highest squared correlation with other constructs (Fornell and Larcker, 1981). Items loaded more on their constructs when compared to other constructs. The analysis shows that the reflective measurement model for the (both first-order and second-order) variables used in this research was reliable and valid.

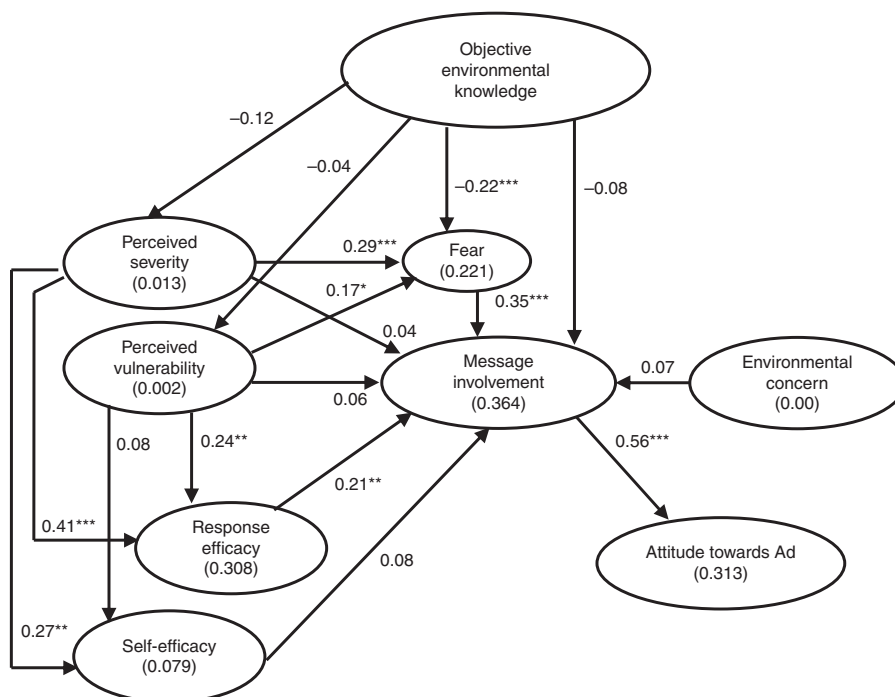
Since objective environmental knowledge is a formative construct, the weight of the indicators was examined by resampling using bootstrapping (181 observations per subsample, 5,000 subsamples and no sign changes) in SmartPLS (Hair *et al.*, 2012). Four indicators whose *t*-values were not significant were removed from the model. The results show minimal collinearity among the indicators as the variance inflation factor of all the items was below the common cut off value of 5.

Common method variance was not a serious threat to the study as Harman's one-factor test showed the presence of multiple factors. The major factor accounted for only 29 per cent of the total variance (Fuller *et al.*, 2015).

Path analysis of the proposed model and hypotheses

The structural model was tested with 5,000 sub-samples generated using bootstrapping to evaluate the significance of the path coefficients (181 observations per subsample, 5,000 subsamples and no sign changes). The result is shown in Figure 2. The inner model loadings and path coefficients show that the hypothesized path relationships between perceived severity, perceived vulnerability and fear are statistically significant. Perceived severity has a comparatively stronger effect (0.29) on fear when compared to perceived vulnerability (0.17). Perceived severity (0.41) and perceived vulnerability (0.24) significantly predict response efficacy. Unlike perceived vulnerability and self-efficacy (0.05), the relationship between perceived severity and self-efficacy was significant (0.26). Among the PMT variables, fear (0.35) and response efficacy (0.22) alone have a significant influence on message involvement.

As hypothesized, objective environmental knowledge had a significant negative relationship with fear, whereas perceived severity and vulnerability were not influenced by knowledge. Surprisingly, environmental knowledge did not have an effect on message involvement. Environmental concern was not related to message involvement as hypothesized. Message involvement (0.56) is a significant predictor of attitude towards ad. Table I summarizes the hypotheses tests.



Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Figure 2.
PLS test of
research model

Table I.
Hypotheses
and results

Hypothesis	Proposed model		
	Path coefficient	t-value	Result
<i>H2a</i> Perceived severity → Message involvement	0.04	0.5564	Not supported
<i>H2b</i> Perceived vulnerability → Message involvement	0.06	0.8349	Not supported
<i>H2c</i> Fear → Message involvement	0.35	4.9266***	Supported
<i>H2d</i> Response efficacy → Message involvement	0.21	2.6194**	Supported
<i>H2e</i> Self-efficacy → Message involvement	0.08	1.1994	Not supported
<i>H3a</i> Perceived severity → Fear	0.29	3.9515***	Supported
<i>H3a</i> perceived vulnerability → Fear	0.17	2.0361*	Supported
<i>H3b</i> Perceived severity → Response efficacy	0.41	6.0124***	Supported
<i>H3b</i> Perceived vulnerability → Response efficacy	0.24	3.2033**	Supported
<i>H3c</i> Perceived severity → Self efficacy	0.27	2.6244**	Supported
<i>H3c</i> Perceived vulnerability → Self efficacy	0.08	0.8023	Not supported
<i>H4</i> Objective environmental knowledge → Message involvement	−0.08	1.3928	Not Supported
<i>H5a</i> Objective environmental knowledge → Perceived severity	−0.12	1.4749	Not supported
<i>H5b</i> Objective environmental knowledge → Perceived vulnerability	−0.04	0.6451	Not supported
<i>H5c</i> Objective environmental knowledge → Fear	−0.22	3.5294***	Supported
<i>H6</i> Environmental concern → Message involvement	0.07	1.0729 ^a	Supported
<i>H7</i> Message involvement → Attitude towards ad	0.56	9.6116***	Supported

Notes: *n* = 181. Estimates represent 5,000 bootstrapping testing. ^aThis was the expected result as we hypothesized that environmental concern will not have a relationship with message involvement.
p* < 0.05; *p* < 0.01; ****p* < 0.001

The model's predictive relevance was analyzed using the blindfolding procedure in SmartPLS and the Stone-Geisser test criterion Q^2 (Chin, 2010; Hair *et al.*, 2011). The Q^2 values for all the endogenous constructs were greater than zero as required. Next, the effect size (f^2) was calculated to measure the impact of a predictor on the three endogenous constructs. Message involvement had a medium effect on attitude towards the ad (0.26). The effect size of fear on message involvement was 0.14 which is very close to the medium threshold (0.15).

Test of message involvement as a mediator

Bootstrapping method, a nonparametric technique (Castro and Roldan, 2013) was used to test if message involvement played a significant role as a mediator. The indirect effects were tested using bootstrapping (181 observations per subsample, 5,000 subsamples and no sign changes). Only fear and response efficacy were considered (as the other PMT variables and environmental concern were not significant). First, the model was tested without the mediator and the significance of the direct effect of fear and response efficacy on attitude towards the ad was assessed. The direct effect was significant for both these variables. Then, message involvement – the mediator variable – was included and the significance of these two variables was assessed. The indirect effects for each path were significant and hence there was evidence of mediation as seen in Table II.

The variance accounted for VAF indicated partial mediation by message involvement for the effect of fear (54 per cent) and response efficacy (41 per cent) on attitude towards ad (Sarstedt *et al.*, 2014).

Discussion

The results showed that situational involvement significantly improved attitude towards the advertisement. This finding confirms earlier research on situational involvement and message involvement (Celsi and Olson, 1988; Muehling *et al.*, 1991; Cauberghe *et al.*, 2009) which indicate the effect of these variables on attitude. The results therefore show that situational involvement is a significant predictor of attitudes in the context of green advertising.

As expected it was found that environmental concern (enduring involvement with the environment) was not significantly related to message involvement. Therefore even lay consumers can be persuaded by increasing their situational involvement with the advertising message. We also found that knowledge did not affect the levels of message involvement. This shows a conflicting view to Rucker and Petty's (2006) observation that ability increases message processing. A low level of awareness is cited as one of the reasons for failure of green marketing tools like eco-labels in developing countries (Mehta, 2007). Therefore in addition to extensive environmental education programs (which may not result in the desired action), focusing on increasing situational involvement using moderate fear appeals can be used to develop positive attitudes towards green advertising. Among the PMT variables, fear and response efficacy alone significantly predicted message involvement in this study. This finding confirms that higher levels of health risk increase involvement with the message (Keller and Block, 1996). Fear can therefore be used to increase message involvement in environmental communication (Meijnders *et al.*, 2001). Response efficacy significantly increased consumer's message involvement. The results are in contrast to the finding by Block and Keller (1995) who find that low efficacy promotes more effortful processing. The results also contradict the findings of Cauberghe *et al.* (2009) who found that both self-efficacy and response efficacy influenced message involvement. Despite this contradiction, the results support Lewis' *et al.* (2010) argument that response efficacy is a key to message elaboration and acceptance. Therefore fear and response efficacy emerge as the key variables among PMT variables in influencing involvement.

Perceived severity and vulnerability motivate consumers to defensively process the message. Hence, these variables significantly influenced fear arousal and coping appraisal as proposed by PMT (Floyd *et al.*, 2000). While objective environmental knowledge did not decrease the levels of perceived severity or vulnerability, it had a negative effect on fear (Averbeck *et al.*, 2011).

Theoretical implications

Our work contributes significantly to the growing body of literature on green marketing and green advertising in developing countries (e.g. Khare, 2015). First, this research adds

	Path	Path coefficients	t-value
Model 1 (without message involvement)	Fear → Attitude towards ad	0.1628	2.0069*
	Response efficacy → Attitude towards ad	0.1693	2.1896*
Model 1 (with message involvement)	Fear → Message involvement	0.353	4.8474***
	Response efficacy → Message involvement	0.2125	2.5445*
	Message involvement → Attitude towards ad	0.5625	9.6491***

Notes: $n = 181$. Estimates represent 5,000 bootstrapping testing. * $p < 0.05$; *** $p < 0.001$

Table II.
Summary of
mediating effect tests

to the new line of thought that argues for including “self-interest” based appeals to target all consumers and not restrict marketing only to the green consumer niche (Lindenberg and Steg, 2007). It is better to improve situation specific cognitions by increasing personal relevance (Ottman *et al.*, 2006) and appealing to consumers’ self-interest while promoting environmental benefits (Ginsberg and Bloom, 2004) rather than focusing on environmental concern alone. This study adds to this line of research by demonstrating that an emphasis on personal health benefits raised advertisement message involvement which in turn positively influenced attitudes towards the green advertisement.

Second, most green advertising studies have scrutinized the effect of environmental concern or the enduring involvement with the environment (Newell *et al.*, 1998; Bickart and Ruth, 2012) and have largely ignored other categories of involvement. Of late, few studies have started to look beyond environmental concern to motivate green purchase intentions (Chang, 2011; Tucker *et al.*, 2012). This study adds to this line of research by demonstrating the importance of message involvement.

Third, very few green advertising studies have investigated the effect of affective appeals in green advertisements. This research extends studies that use fear appeals in green advertising (Hine and Gifford, 1991; Meijnders *et al.*, 2001) to promote attitude and behaviour change. The study confirms that fear appeals are suitable for improving attitudes of young consumers towards green advertisements.

Finally, this research also extended the application of PMT to a commercial context as suggested in recent research (Janssens *et al.*, 2010).

Managerial implications. This paper demonstrates that advertisers can (instead of targeting the green niche) focus on engendering positive attitudes towards green advertising by raising involvement. Many companies in India and across the world profess to care for the environment and aim to popularize either green movements (e.g. Green Ganesha campaigns) or green products (e.g. solar energy). However, they are not making much headway on these initiatives. For example, Clorox Green Works and S.C. Johnson had to cut their advertising budgets due to declining consumer demand for green products (Gleim and Lawson, 2014).

It is suggested that these and other companies may focus on rendering attitudes more positive. Specifically, managers may consider using fear appeals by highlighting perceived vulnerability and perceived severity. For instance, in a recent campaign, Indian company Syska LED uses a mild fear appeal in India by implying that CFL bulbs might be hot and therefore harm the skin before going on to discuss the energy saving benefits. Therefore, fear appeals highlighting health threats combined with response efficacy can promote green consumerism. Another advantage with this suggestion (highlighting perceived vulnerability and perceived severity) is that it not just contributes to enhancing fear, but also in positively impacting response efficacy. For example, in a recent social media campaign, Neutrogena incorporates response efficacy by clearly explaining the environmental benefit of using the product – using Neutrogena’s wipes for a week will help a person save 35 gallons of water (Johnson, 2015). Such campaigns may render consumer attitudes towards the brand positive.

Targeting the green consumer (advocated by prior research) in practice is difficult, more so in a diverse country such as India. Hence, the implementation of our suggestion is possibly easier from a practical standpoint. For example, Indian companies like Godrej have started highlighting the economic benefit of saving energy in an effort to raise involvement, rather than focusing on the green niche. This approach has been

used successfully by Toyota. The brand has mostly stressed on the benefits of space and miles in their advertisements rather than emphasizing the eco-friendly nature of the Prius (Ottman, 2008). This works well for the marketer as they target a wider customer base and the message is customer-centric. Another advantage with our suggestion is that the effect of advertising message involvement lasts for an extended period of time (Muehling and Lacznia, 1988). Although we do not demonstrate it, firms may work on raising involvement through other avenues like humour, sound effects, celebrities and visual imagery.

Policy implications. The findings have implications for policy makers as well. Climate change is a real threat in today's world. The Government of India has recently launched a "Swachh Bharat" (clean India) campaign. One way of getting lay citizens to participate in initiatives like these is to raise involvement. Again, based on the results obtained, using fear appeals by specifically highlighting perceived severity and perceived vulnerability is advocated. In general, lay consumers in emerging economies are indifferent to environmental issues. Hence, making these issues relevant is the need of the hour. This research makes a useful beginning on raising involvement for them.

Future research and limitations

Perceived risk was considered as a significant antecedent to message involvement in this study. Other antecedents like personal relevance can be used to increase message involvement. Since message involvement was shown to be a key variable, other studies can investigate if affective appeals like humour appeals can influence message involvement. This research also shows that PMT can be applied in a commercial context (Janssens *et al.*, 2010). Hence this framework can be explored in future studies to "nudge" ethical consumer behaviour.

This study has its own limitations. We used student subjects for our experiment. India is a young country with a median age of 24, close to that of our sample. However, future research may also consider the use of field experiments. Conducting this research in different geographies will also help consolidating the results.

Note

1. The scale is available on request.

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Further reading

- Huang, Y.-C., Yang, M. and Wang, Y.-C. (2014), "Effects of green brand on green purchase intention", *Marketing Intelligence & Planning*, Vol. 32 No. 3, pp. 250-268.

Appendix 1. Stimulus ad copy

Message
involvement
and attitude
towards

High threat level

Electronic waste can kill. You could be one of the many people in India who breathes in a dangerous mixture of toxins released by open burning of e-waste. These toxins may cause cancer or respiratory illness.

Gain frame

Choose recyclable products and save yourself from health hazards caused by e-waste.

Low threat level

Electronic waste cannot be easily disposed. E-waste disposal is a growing problem caused by increasing population and life-style changes.

Scientific ways need to be explored to dispose e-waste efficiently as we use electronic products everyday.

Loss frame

If you do not choose recyclable products you miss out on the chance to save yourself from health hazards caused by e-waste.

Scale	Items	Cronbach's α
Perceived severity (Witte <i>et al.</i> , 1996)	I believe that plastic waste pollution is a serious threat to human health I believe that plastic waste disposal may cause severe health issues I believe that plastic waste pollution is extremely harmful	0.84
Perceived vulnerability (Witte <i>et al.</i> , 1996)	It is possible that I might get affected by diseases caused by plastic waste pollution It is probable that I will suffer from various diseases caused by plastic waste pollution I am at risk for getting health problems caused by plastic waste pollution	0.71
Response efficacy (Witte <i>et al.</i> , 1996)	Purchasing biodegradable products is a highly effective way of preventing diseases due to plastic pollution Buying biodegradable products will significantly lower my risk of being affected by diseases caused by plastic pollution Buying biodegradable products is an effective method of reducing threats caused by plastic pollution to human health	0.64
Self-efficacy (Witte <i>et al.</i> , 1996)	I am capable of identifying and purchasing biodegradable products I can easily switch over to biodegradable products to prevent future health problems It is not difficult for me to check if products contain plastic or not	0.56
Fear (Hartmann <i>et al.</i> , 2013)	Afraid Scared Fearful Anxious Worried	0.92
Message involvement (Cox and Cox, 2001).	I got involved in what the advertisement had to say The ad's message seemed relevant to me This ad really made me think This ad was thought-provoking The ad was very interesting I felt strong emotions while reading this ad	0.80
Environmental concern (Schultz (2001)	Please rate each of the following items from 1 (not important) to 7 (supreme importance) in response to the question I am concerned about environmental problems because of the consequences for Plants, my lifestyle, my health, children, my children, people in my country, birds, animals, marine life, me, my future, all people	0.78
Attitude toward the ad (Mackenzie and Lutz, 1989)	Good/bad, pleasant/unpleasant, favourable/unfavourable	0.86

Table A1.
Scale summary

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