Ethical Response Behavior: A Study of Indian Consumers

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This paper was presented at the International Business Conference sponsored by the Center of Excellence in International Business of Northern State University, Aberdeen, South Dakota, USA. Questionnaires covering issues on the environment and marketing of products were collected from 374 respondents. The study reveals that respondent awareness of the extent of damage done as a result of economic activity is steadily growing. Consumers are becoming conscientious of adverse effects and are willing to pay more for eco-friendly products. Evidence exists that Asian Indians are aware and concerned about the environment but commitment to take proactive individual action is moderate.

INTRODUCTION

"Your planet needs you. Unite to respond to climate change." is a slogan from the World Environment Day celebrated in India on June 5, 2009. The President of India - Smt. Pratibha Devi Singh Patil on that eventful day at Vigyan Bhawan, New Delhi - said that this slogan "is a reminder of the need for collective effort to tackle the threats emanating from climate change, with a major global environmental concern of our time". She also said that "this challenge is global. It impacts each one of us in our habitats and affects our way of life. Hence, there is a responsibility of every citizen on the globe to contribute to the efforts to ensure the health and diversity of the planet as well as to protect and conserve its resources for future generations."

With the steady increase in air, water, and noise pollution came an increase in average global temperature, increased glacial melting, decreasing forests, over extracting of minerals, nuclear testing and armaments, which collectively affect the world's eco systems, agricultural industrial production, the availability of fresh water level, and forest life. With all this, the struggle of human beings to balance the environment for mere survival increases. In the end, consumers are becoming aware of environmental issues and are trying to change their lifestyles. As consumers are becoming aware of environmental issues, the challenge for business is to develop products and services that deliver environmental benefits, without compromising and even improving on quality, functionality, and performance at reasonable prices. Some industries might be struggling to face the challenge, while many industries in India have already carved out a niche for marketing environmentally friendly products. A number of businesses are

responding to this challenge by redesigning the business model and focusing on the service demanded rather than the product. This is creating new opportunities for the innovative business. The role of governments and media becomes very important. They should provide detailed information to end consumers and should invest in research and development of environmentally friendly products. Consumer behavior has been slow to adapt as there are still consumers buying paper produced directly from trees rather than recycled paper, consumers buying conventional bulbs instead of energy-efficient, consumers preferring to use air travel rather than ground transportation such as train service - even for short distance. The decisions of such consumers are based on utility maximizing behavior but there should be a trade-off between utility derived from preferred characteristics of a product vs. the moral behaviors of buying "green" which is becoming an expected trait of every member of society. So merely chanting mantras 'Go Green' will not help. What is required is active participation, especially by consumers.

It is our ethical duty to act properly in order to reduce the threat of climate change even if one assumes there is more scientific uncertainty about the causes and impacts of climate change. Nevertheless, there is a swell of scientific consensus most recently articulated by the Intergovernmental Panel on Climate Change (IPCC). In its fourth assessment in November of 2007, the IPCC made the following key conclusions:

- It is very likely that observed increases in global average temperatures since the mid-20th century have been caused by increases in anthropogenic greenhouse gas (GHG) emissions.
- Warming of the global climate system is clear.
- Anthropogenic warming and sea level rise would continue for centuries due to the timescales associated with climate processes and feedbacks, even if greenhouse gas concentrations were to be stabilized.
- The probability that this is caused by natural climatic processes alone is less than 5 percent.
- World temperatures could rise by between 1.1 and 6.4 °C (2.0 and 11.5 °F) during the 21st century.
- There is high confidence (greater than 90%) that there will be more frequent warm spells, heat waves and heavy rainfall.
- There is a 66 percent confidence level that there will be an increase in droughts, tropical cyclones and extreme high tides.
- Both past and future anthropogenic carbon dioxide emissions will continue to contribute to global warming and sea level rises for more than a millennium (IPCC, 2007).

In environmental controversies such as global warming where there is legitimate scientific concern, important ethical questions arise when scientific uncertainty prevents unambiguous predictions of human health and environmental consequences. This is so because decision-makers cannot duck ethical questions such as how conservative "should" scientific assumptions be in the face of uncertainty or who "should" bear the burden of proof about the collective harm. To ignore these questions is to decide to expose human health and the environment to a legitimate risk; that is, a decision to not act on a serious environmental threat could have consequences, particularly if waiting until all uncertainties are resolved could increase the overall adverse effects. Science alone cannot tell us what assumptions or concerns should be considered in making a judgment about potentially dangerous behavior. For this reason, environmental decisions in the face of scientific uncertainty must be understood to raise a combination of ethical and scientific questions.

From the standpoint of ethics, those who engage in risky behavior are not exonerated simply because they did not know that their behavior would actually cause harm (e.g. ignorance is not an excuse). As a matter of ethics, a relevant question in the face of scientific uncertainty about harmful consequences of human behavior is whether there is a reasonable basis for concluding that serious harm to others could result from the behavior. Yet, as we have seen, in the case of climate change, humans have understood the potential threat from climate change for over one hundred years and the scientific support for this concern has been building at a quickened rate over the last thirty years. In fact, for more than 18 years, the IPCC, a

scientific body created with the strong support of governments around the world to advise them about the conclusions of peer review climate change science, has been telling the world, with increasing levels of confidence, that the harm from climate change is not only possible but likely.

LITERATURE REVIEW

Various studies conducted on environmental degradation reveal that awareness is steadily growing concerning the extent of damage done through economic activity. Consumers are becoming conscious of adverse affects and are willing to pay more for eco-friendly products. For example, eight in ten Americans consider themselves to be environmentalists and half claim to be strongly so while acknowledging the need to modify their lifestyle (Gutfield, 1991). It appears that consumers are concerned about the environment and are ready to modify their purchasing behaviors (Polonsky et a1., 1995) to support a "green" brand (Oyewole, 2001). Environmentally conscious consumers were found to be very much willing to pay premium prices to purchase environmentally friendly products (Dunlap and Scarce 1991; Michael Peters Group, 1991). Many researchers suggest that consumers' concern for environmental issues is growing (Lee and Holden, 1999; Berger & Corbin, 1992; Lord, 1994; and Schwartz & Miller, 1991). However, there is little evidence that this has led to appropriate changes in pro-environmental consumer behavior (Schwartz & Miller, 1991). Lee and Holden (1999) suggested that in order to change consumer behaviors, it is important that producers understand the determinants of pro-environmental consumer behavior and appreciate the motivations underlying these conscious behaviors by examining 'attitude-behavior' consistency. However, using this model alone is not a good predictor of behavior (Heslop, Moran, & Cousineau, 1981; Ritchie, Gordon, McDougall, & Claxton, 1981). Other variables should also be considered including affect (Smith, Haugtvedt, Petty, 1994), cost-benefit (Wasik, 1992), perceived consumer effectiveness (Berger and Corbin, 1992; Ellen, Wiener, & Cobb-Walgren, 1991), faith in others (Berger and Corbin, 1992), and demographic characteristics (Granzin and Olsel, 1991; Soutar, Ramaseshan, & Molster, 1994). In an article titled "*Earth Island Journal, Global Marketplace"*, (2000), the most prominent environmental problem pertains to disposable diapers and plastic bottles. Diapers not only consume trees but also clog landfills. Chemically treated diapers are also linked to an increase in diaper rash which caused many parents to drop the use of disposable diapers soon after. However, producers like Procter & Gamble and Kimberley-Clark's improved their products and unleashed strategic advertisements to regain the trust of parents by treating the diapers with yet another chemical. Friends of the Earth (2002) reported that North Americans alone discard 1.5 million plastic bottles a day which mostly end up in landfills. Coca Cola was one of the major contributors to this problem. Coca Cola tried to use recycled plastics but stopped after only a few years and returned to virgin plastic – claiming that it was too costly to use recycled plastic. Innovators of these items seem to forget about environmental deterioration during the product development stage. Producers should consider redesigning their products in order to reduce these problems.

Based on detailed interviews, Wansink (2000) has outlined specific strategies to help consumers shop, use, and dispose of products more carefully and less wastefully. According to Wansink (as cited in Wansink & Despande, 1994), many consumers buy products they never actually use. It has been indicated that as many as 15% of non-perishable products are never used and eventually discarded. This is not an issue of wasting money but it is an issue of wasting increasingly limited resources. Attitudes seem to vary regarding what causes consumers to buy products they never use, and how consumers can change their purchase and usage habits to reduce product abandonment that finally leads to product disposal. This study is an attempt to analyze how attitude influences consumers' product purchase, use, and disposal (Rosli, Abdullah, Bertsch & Saeed, 2008). Questions germane to this study include: 1. Do Indian consumers prefer eco-friendly products?; 2. Do Indian consumers aware of the dangers of economic degradation?; 3. Are Indian Consumers proactive in solving the environmental problems?

METHODOLOGY

Instrument and Sample

Data was gathered using a questionnaire tested by Rosli, Abdullah, Bertsch & Saeed in their study of environmental awareness of Malaysian consumers; a replication of Lee and Holden (1999*)* and Wagner (1997). The questionnaire was used after incorporating several local variables suitable for the Indian environment. A convenience sample of 374 respondents included employed and unemployed students and retired people. The sample covered urban and rural areas with respondents ranging between 18 and 70 years of age. The questionnaire included the demographic background of the respondents; awareness variables (5 questions), and behavioral variables (23 items). The behavioral measures included inquiry into the respondents' participation in any programs that will ensure a safe environment such as the use of biodegradable products, public transportation, safe garbage disposal, or any such activities supporting the environment, a government program, or response to a lobbyist group. A Likert scale ('1' = not at all to '5' = very much) was used. The behavioral section also asked respondents whether they agree or disagree to a list of statements concerning steps to be undertaken by individuals, groups, and the government. A Likert scale ('1' = strongly disagree to '5' = strongly agree) was used.

Statistical Analysis

Awareness variables and behavioral variables were analyzed separately. A reliability analysis was run on both sets of variables. As discussed in Rosli, Abdullah, Bertsch & Saeed (2008), we have also considered variables deemed appropriate to the Indian context. Reliability and validity were tested.

To begin, factor analysis was applied on those awareness variables representing awareness level as shown in Table 1.

TABLE 1
AWARENESS VARIABLES
(Total Variance Explained: 35.87%)

Construct	Factor loading
Aware1: We are in serious danger of destroying the world environment in the very near future.	0.651
Aware2: Drastic change and reductions in mining and other's lifestyles are the only way we can save the environment.	0.701
Aware3: It's time for environment groups to get more radical/active.	0.696
Aware4: Protecting the natural environment should be more important than creating economic growth and employment in poor countries.	0.525
Aware5: I am capable of helping to solve the environmental problems.	0.363

Second, a reliability test was run and illustrated in Table 2. With a coefficient alpha of 0.74, the reliability test for the awareness variables was higher than the 0.70 threshold set Hair et. al., (1998).

TABLE 2
RELIABILITY TEST ON AWARENESS VARIABLES

Variables (1 –strongly disagree, 5 – strongly agree)	Item-to-total correlation	Coefficient α
Aware1: We are in serious danger of destroying the world environment in the very near future.	0.587	0.740
Aware2: Drastic change and reductions in mining and other's lifestyles are the only way we can save the environment.	0.687	
Aware3: It's time for environment groups to get more radical/active.	0.642	
Aware4: Protecting the natural environment should be more important than creating economic growth and employment in poor countries.	0.552	
Aware5: I am capable of helping to solve the environmental problems.	0.489	

Table 3 illustrates that the coefficient alpha for the behavioral variables was also high at 0.758. Twenty-two items measuring the behavioral variables indicated that the overall internal consistency was high except for items 1 and 20 which both had item-to-total coefficients less than 0.3. When these items were deleted and reliability test rerun, the coefficient alpha showed no significant improvement so these items were retained for the purpose of further analysis.

TABLE 3
RELIABILITY TEST ON BEHAVIORAL VARIABLES

Variables	Item-to-total correlation	Coefficient α
Scale: (1 = not at all, 5 = very much)		
Behav1: Participate in recycling program during the last year?	0.253	0.758
Behav2: Seek out biodegradable products?	0.464	
Behav3: Car pooled, walked, biked, or taken public transport?	0.512	
Behav4: Consciously avoid Styrofoam packaging?	0.394	
Behav5: Separate garbage for recycling?	0.446	
Behav6: Active member of environmental group?	0.451	
Behav7: Given monetary help to clean up environment?	0.398	
Behav8: Written to the government or lobby group about the environment?	0.305	
Behav9: Attended rallies or demonstration on environmental issues?	0.362	
Behav10: In the interest of protecting the environment, I am willing to pay five cents a liter more for gasoline to decrease air pollution.	0.517	
Behav11: In the interest of protecting the environment, I am willing to pay 10% more for groceries packaged and produced in an environmentally safe way?	0.438	
Behav12: In the interest of protecting the environment, I am willing to pay Rs. 1000 more for a car that emitted less air pollution?	0.373	
Behav13: In the interest of protecting the environment, I am willing to pay 50% more for garbage collection for safe long-term disposal?	0.435	
Behav14: In the interest of protecting the environment, I am willing to buy unbleached paper products such as toilet paper, and paper towels, which are kind of brown in color, in place of the bleached white paper products?	0.355	

Variables	Item-to-total correlation	Coefficient α
Behav15: In the interest of protecting the environment, I am willing to pay Rs. 250 a year more taxes to clean up your community's sewage system?	0.457	
Behav16: In the interest of protecting the environment, I am willing to pay 10% tax on all the energy that you use to promote conservation?	0.449	
Behav17: In the interest of protecting the environment, I am willing to support the environmental campaign? e.g. recycling campaigns.	0.484	
Behav18: In the interest of protecting the environment, I am willing to support the government doubling the amount of land designated as natural wilderness?	0.458	
Behav19: In the interest of protecting the environment, I am willing to support the law requiring all household garbage to be separated into different classes for recycling?	0.446	
Behav20: In the interest of protecting the environment, I am willing to support tax breaks and incentives to industry to encourage development and implementation of clean technology?	0.260	
Behav21: In the interest of protecting the environment, I am willing to support the government control to reduce packaging on consumer goods?	0.384	
Behav22: In the interest of protecting the environment, I am willing to support stiff penalties, jail sentences for polluters?	0.379	

The 22 behavioral items were collapsed into four variables as suggested by Rosli, Abdullah, Bertsch & Saeed (2008):

- Personal practice (PRAC): items 1, 2, 3, 4, and 5
- Support group (GRPSUP): items 6, 8, 9 and 17
- Monetary support (MONSUP): items 7, 10, 11, 12, 13, 14, 15 and 16.
- Support government (GOVSUP): items 18, 19, 20, 21, and 22.

The collective reliability test for the above four collapsed variables revealed a coefficient alpha of 0.758. The reliability coefficient for four collapsed variables is given in Table 4. The correlation matrix of the variables for the awareness and behavioral variables are given in Tables 5 and 6 respectively.

TABLE 4
RELIABILITY TEST ON COLLAPSED VARIABLES

Variables (1 –strongly disagree, 5 – strongly agree)	Item-to-total correlation	Coefficient α
Personal practice (PRAC):	0.513	0.758
Support group (GRPSUP)	0.440	
Monetary support (MONSUP):	0.555	
Support government (GOVSUP):	0.504	

ANALYSIS AND FINDINGS

Profile of Respondents

Table 5 illustrates the demographics of the sample. Interestingly, 82.4% of the respondents were in the age range of 18-40 years old which is a respectable demographic given the nature of the research. The

respondents were mostly educated with 96.3% having at least a certificate level education. In terms of income, 48.5 % of the respondents have a monthly total family income of less than Rs. 20,000 while 51.5% have a monthly total family income of more than Rs. 20,000. There were a similar number of respondents holding managerial and non-managerial positions (43.5% and 41.2% respectively). As was stated earlier, the sample was based on convenience; nevertheless, the authors feel the demographic makeup of the respondents is rather respectable likely allows the results to be generalized to the greater population.

TABLE 5
PROFILE OF RESPONDENTS

Items	**Frequency (374)**	**Percent 100**
Gender		
Male	209	55.9
Female	165	44.1
Age		
18 – 25	107	28.6
26 – 30	74	19.8
31 – 35	46	12.3
36 – 40	81	21.7
41 – 45	34	9.1
46 – 50	19	5.1
51 – 55	09	2.4
56 and above	04	1.1
Marital Status		
Married	153	40.9
Single	221	59.1
Education		
Ph.D.	33	8.8
Masters	84	22.5
Graduates	161	43.0
Primary Education	75	20.1
Certificate	7	1.9
Illiterate	14	3.7
Income		
Less Than Rs. 5000	26	7.0
Rs.5001 – Rs.10000	65	17.4
Rs. 10,001 – Rs. 20,000	90	24.1
Rs. 20,001 – Rs. 30,000	45	12.0
Rs. 30,001 – Rs. 40,000	43	11.5
Rs. 40,001 – Rs. 50,000	27	7.2
Rs. 50,001 – Rs. 60,000	24	6.4
More than Rs. 60,001	54	14.4
Employment		
Management	37	43.5
Non-management	35	41.2
Unemployed	5	5.9
Student	8	9.4

Items	Frequency (374)	Percent 100
Working Experience		
0 - 5 years	108	28.9
6 - 10 years	48	12.8
11 – 15 years	49	13.1
16 – 20 years	85	22.7
21 – 25 years	42	11.2
More than 25 years	42	11.2

Awareness Variables Analysis

Table 6 includes the means and standard deviations (SD) for the awareness variables.

TABLE 6
MEANS AND STANDARD DEVIATIONS OF AWARENESS VARIABLES

Items	Mean	Std Dev
Aware1: We are in serious danger of destroying the world environment in the very near future.	4.2086	0.85978
Aware2: Drastic change and reductions in mining and other's lifestyles are the only way we can save the environment.	3.6765	1.04824
Aware3: It's time for environment groups to get more radical/active.	4.2166	.92255
Aware4: Protecting the natural environment should be more important than creating economic growth and employment in poor countries.	3.8663	.94247
Aware5: I am capable of helping to solve the environmental problems.	3.9545	.95786

With the Likert scale of '1' (strongly disagree) to '5' (strongly agree), the results indicate that, taken as a whole, respondents' awareness on the environmental conditions are quite high. They agree that the environment is being destroyed (Aware1 mean > 4.00) and that environmental groups should be more active (Aware3 mean > 4.00). With a mean of nearly four (Aware mean = 3.955), respondents also feel that they can do something to help save the environment. Regarding the steps that should be undertaken to save the environment (Aware2 mean of 3.676) and that protecting the environment is important (Aware4 mean of 3.866), the response is moderate yet above the midpoint of this one to five scale. Thus Indian consumers have a moderate to high awareness level.

Behavioral Variables Analysis

In Table 7, it can be seen that the respondents are very supportive of government's efforts to solve environmental problems (GOVSUP mean 3.85); while on their own they are less willing to put into practice certain behaviors that could help save the environment (PRAC mean 2.843), less willing to give full support to environmental groups (GRPSUP mean 3.04), and less willing to give monetary support (MONSUP mean 3.60).

TABLE 7
MEANS OF BEHAVIORAL VARIABLES
(all p values where <0.001)

Variables (1 – not at all, 5 – very much)	**Mean**
Behav1: Participate in recycling program during the last year?	1.9251
Behav2: Seek out biodegradable products?	2.7674
Behav3: Car pooled, walked, biked, or taken public transport?	3.1684
Behav4: Consciously avoid Styrofoam packaging?	3.3021
Behav5: Separate garbage for recycling?	3.0535
Personal Practice (PRAC, mean of Behave1 thru 5)	**2.8433**
Behav6: Active member of environmental group?	3.0107
Behav8: Written to the government or lobby group about the environment?	2.9626
Behav9: Attended rallies or demonstration on environmental issues?	2.3048
Behav17: In the interest of protecting the environment, I am willing to support the environmental campaign? e.g. recycling campaigns.	3.9037
Support Group (GRPSUP, mean of Behave6, 8, 9, and 17)	**3.0454**
Behav7: Given monetary help to clean up environment?	2.6818
Behav10: In the interest of protecting the environment, I am willing to pay five cents a liter more for gasoline to decrease air pollution.	3.6417
Behav11: In the interest of protecting the environment, I am willing to pay 10% more for groceries packaged and produced in an environmentally safe way?	3.7620
Behav12: In the interest of protecting the environment, I am willing to pay RS. 1000 more for a car that emitted less air pollution?	3.7888
Behav13: In the interest of protecting the environment, I am willing to pay 50% more for garbage collection for safe long-term disposal?	3.8262
Behav14: In the interest of protecting the environment, I am willing to buy unbleached paper products such as toilet paper, and paper towels, which are kind of brown in color, in place of the bleached white paper products?	3.8102
Behav15: In the interest of protecting the environment, I am willing to pay RS. 250 a year more taxes to clean up your community's sewage system?	3.6364
Behav16: In the interest of protecting the environment, I am willing to pay 10% tax on all the energy that you use to promote conservation?	3.6658
Monetary Support (MONSUP, mean of Behave7, and 10-16)	**3.6016**
Behav18: In the interest of protecting the environment, I am willing to support the government doubling the amount of land designated as natural wilderness?	3.8128
Behav19: In the interest of protecting the environment, I am willing to support the law requiring all household garbage to be separated into different classes for recycling?	4.0000
Behav20: In the interest of protecting the environment, I am willing to support tax breaks and incentives to industry to encourage development and implementation of clean technology?	3.8690
Behav21: In the interest of protecting the environment, I am willing to support the government control to reduce packaging on consumer goods?	3.9920
Behav22: In the interest of protecting the environment, I am willing to support stiff penalties, jail sentences for polluters?	3.5829
Support Government (GOVSUP, mean of Behave18 thru 22)	**3.8513**

Thus, it can be deduced that the respondents in this study are aware of the worsening condition of the environment and realize that steps should be taken to protect and save the environment; however they are not fully committed to undertaking individual actions to remedy the situations. They would rather expect the government, industries, and environmental protection groups to undertake these responsibilities. The results are almost similar to the study conducted on Malaysian consumers (Rosli, Abdullah, Bertsch & Saeed, 2008) except that in India, there is a higher level of awareness. However, when it comes to behavioral tendencies and ownership of the issue, the Indian consumers are more dependent upon government rather than individual efforts compared to the Malaysian study (Rosli, Abdullah, Bertsch & Saeed, 2008).

Regression Analyses

In order to analyze possible relationships between the various awareness variables (Tables 1, 2, and 6 from above) and the collapsed behavioral variables (Tables 3, 4, and 7 from above), a series of regression analyses were completed. Results are discussed herein.

Awareness Variables to PRAC

A multiple regression analysis was run using all five Awareness variables as independent variables and the single collapsed PRAC variable as the dependent variable. Table 8 illustrates the correlation coefficients and significance of the awareness variables against the dependent variable PRAC. The results revealed three awareness variables that have no affect on the practices (PRAC) of the respondents. The awareness variables that had insignificant p-values (at the 0.05 level) were Aware1, Aware2, and Aware3.

TABLE 8
REGRESSION ANALYSIS #1: AWARENESS AND PRAC

Independent variable	Coefficient	p-Value
Aware1: We are in serious danger of destroying the world environment in the very near future.	0.015	0.74
Aware2: Drastic change and reductions in mining and other's lifestyles are the only way we can save the environment.	0.006	0.88
Aware3: It's time for environment groups to get more radical/active.	0.039	0.36
Aware4: Protecting the natural environment should be more important than creating economic growth and employment in poor countries.	0.079	0.049
Aware5: I am capable of helping to solve the environmental problems	0.108	0.005

A second multiple regression was run with the three insignificant variables removed from the analysis. Table 9 summarizes the results of this second regression analysis. The p-values for the two remaining awareness variables improved slightly from the first model in Table 9. This is not surprising as there was significant correlation between several of the five awareness variables.

TABLE 9
REGRESSION ANALYSIS #2: AWARENESS AND PRAC

Independent variable	Coefficient	P-Value
Aware4: Protecting the natural environment should be more important than creating economic growth and employment in poor countries.	0.089	0.021
Aware5: I am capable of helping to solve the environmental problems	0.116	0.002

As a result of the above regression, it is reasonable to conclude that the two awareness variables (Aware4 and Aware5) influence practices (PRAC) of the Indian respondents. Most importantly may be the correlation between Indian people feeling they are cable of helping to solve environmental problems (Aware5) and actually putting those beliefs into practice (PRAC). However, it is necessary to point out that the relationship described in Table 9 above is very weak (*R-squared = 0.04*) where the two awareness variables only explain 4% of the variance in practices.

Awareness Variables to GRPSUP

A multiple regression analysis was run using all five Awareness variables as independent variables and the single collapsed GRPSUP variable as the dependent variable. Table 10 illustrates the correlation coefficients and significance of the awareness variables against the dependent variable GRPSUP. The results revealed two awareness variables that have no affect on the environmental group support (GRPSUP) of the respondents. The awareness variables that had insignificant p-values (at the 0.05 level) were Aware1 and Aware3. A rather surprising result of this analysis was the negative correlation between awareness variable #2 and the dependent variable GRPSUP. Discussion of this interesting result will be reserved until the insignificant variables are removed from the model.

TABLE 10
REGRESSION ANALYSIS #1: AWARENESS AND GRPSUP

Independent variable	Coefficient	P-Value
Aware1: We are in serious danger of destroying the world environment in the very near future.	0.066	0.185
Aware2: Drastic change and reductions in mining and other's lifestyles are the only way we can save the environment.	-0.145	0.000
Aware3: It's time for environment groups to get more radical/active.	-0.016	0.725
Aware4: Protecting the natural environment should be more important than creating economic growth and employment in poor countries.	0.118	0.007
Aware5: I am capable of helping to solve the environmental problems	0.130	0.002

Table 11 summarizes the results of a second multiple regression which was ran after removing the insignificant variables Aware1 and Aware3. The p-values for the three remaining awareness variables remained relatively unchanged from the first model above. As stated earlier, a surprising finding is the negative correlation between Aware2 and the respondents' support of environmental group efforts. However after closer look, this seems rather reasonable as the Aware2 variable actually queries respondents' perceptions of things that can be done to help save the environment. If respondents feel there are other things that can be done (indicative of a negative response to this particular survey item), they may seek out environmental groups that are worthy of their support.

TABLE 11
REGRESSION ANALYSIS #2: AWARENESS AND GRPSUP

Independent variable	Coefficient	P-Value
Aware2: Drastic change and reductions in mining and other's lifestyles are the only way we can save the environment.	-0.135	0.001
Aware4: Protecting the natural environment should be more important than creating economic growth and employment in poor countries.	0.122	0.005
Aware5: I am capable of helping to solve the environmental problems	0.128	0.002

The 'Awareness vs. Group Support' regression analysis illustrates a correlation between Indian respondents feeling there are additional things that can be done to help save or improve the environment (beside those pointed out in Aware2) and a willingness to be supportive of environmental group efforts. Similar to the practices (PRAC) analysis performed earlier, Aware4 and Aware5 are two variables that significantly contribute to the respondents' willingness to support environmental group efforts. The two significant variables of 'environmental protection is important' (Aware4) and respondents seeing themselves as a part of the solution (Aware5) are significantly correlated to environmental group support (GRPSUP). However, like the PRAC model above, it is necessary to point out that the relationship described in Table 11 is very weak (*R-squared = 0.06*) where the three awareness variables only explain 6% of the variance in group support.

Awareness Variables to MONSUP

A multiple regression analysis was run using all five Awareness variables as independent variables and the single collapsed MONSUP variable as the dependent variable. Table 12 illustrates the results of this regression. Results reveal only two significant awareness variables (Aware2 and Aware5) that affect the monetary support variable (MONSUP) of the respondents.

TABLE 12
REGRESSION ANALYSIS #1: AWARENESS AND MONSUP

Independent variable	Coefficient	P-Value
Aware1: We are in serious danger of destroying the world environment in the very near future.	0.070	0.078
Aware2: Drastic change and reductions in mining and other's lifestyles are the only way we can save the environment.	0.105	0.001
Aware3: It's time for environment groups to get more radical/active.	-0.010	0.796
Aware4: Protecting the natural environment should be more important than creating economic growth and employment in poor countries.	0.057	0.105
Aware5: I am capable of helping to solve the environmental problems	0.089	0.008

A multiple regression was run again after removing the insignificant variables from the model above. Table 13 summarizes the results of this second regression analysis.

TABLE 13
REGRESSION ANALYSIS #2: AWARENESS AND MONSUP

Independent variable	Coefficient	P-Value
Aware2: Drastic change and reductions in mining and other's lifestyles are the only way we can save the environment.	0.133	0.00002
Aware5: I am capable of helping to solve the environmental problems	0.089	0.008

As a result of the 'Awareness vs. Monetary Support' analyses, it is reasonable to conclude that feelings of things that can be done to help save or improve the environment (beyond those listed in the Aware2 variable) and being part of the solution do, indeed, result in an increase in monetary support. This finding is similar to the previous two behavioral variables (PRAC and GRPSUP) where respondents feel they are capable of making a difference (Aware5) and are doing so through practices (PRAC) and group support (GRPSUP). However, the trend of weak yet significant relationships continues as the relationship described in Table 13 above is also very weak (*R-squared = 0.08*); whereby the two remaining awareness variables only explain 8% of the variance in monetary support.

Awareness Variables to GOVSUP

A multiple regression analysis was run using all five Awareness variables as independent variables and the single collapsed GOVSUP variable as the dependent variable. Table 14 summarizes the results of this regression where three awareness variables (Aware1, Aware2, and Aware5) have statistically significant affect on the respondents' support of governmental efforts to save or restore the environment (GOVSUP).

TABLE 14
REGRESSION ANALYSIS #1: AWARENESS AND GOVSUP

Independent variable	Coefficient	P-Value
Aware1: We are in serious danger of destroying the world environment in the very near future.	0.078	0.023
Aware2: Drastic change and reductions in mining and other's lifestyles are the only way we can save the environment.	0.156	0.00000009
Aware3: It's time for environment groups to get more radical/active.	0.015	0.644
Aware4: Protecting the natural environment should be more important than creating economic growth and employment in poor countries.	0.032	0.293
Aware5: I am capable of helping to solve the environmental problems	0.077	0.009

A multiple regression was run again after removing the insignificant variables from the model above. Table 15 summarizes the results of this second regression analysis.

TABLE 15
REGRESSION ANALYSIS #2: AWARENESS AND GOVSUP

Independent variable	Coefficient	P-Value
Aware1: We are in serious danger of destroying the world environment in the very near future.	0.086	0.0095
Aware2: Drastic change and reductions in mining and other's lifestyles are the only way we can save the environment.	0.165	0.000000004
Aware5: I am capable of helping to solve the environmental problems	0.079	0.0065

As a result of the 'Awareness vs. Government Support' regression analysis, it is reasonable to conclude that Indian respondents who feel the environment is in danger (Aware1) and feel that efforts must go beyond changes in mining and lifestyles (Aware2) are supportive of governmental efforts to save and restore the environment. Indians also see themselves as part of the solution through their support of governmental efforts. As has been a common theme to these regression models, the relationship described in Table 16 above, although the strongest of all the final regression models, is also very weak (*R-squared = 0.16*); whereby the three awareness variables only explain 16% of the variance in governmental support.

Awareness Variables to All Behavior

Regression was run on all five Awareness variables and the average of all the Behavioral variables. The only two significant awareness variables in this regression run were Aware4 ($p < 0.0005$) and Aware5 ($p < 0.00002$). However, these two variables only explain 8% of the total variance in the collective behavior of the respondents (*R-squared = 0.08*).

Although the above models were rather week (all R-squared values were below 20%), an encouraging finding can be taken away from this research effort. In all of the regression analyses described above, a significant contributor to each and every behavioral variable is the notion that Indian respondents do, indeed, see themselves as part of the solution. The awareness variable (Aware5) exists as a significant variable in each of the final four models - practices, group support, monetary support, and support of governmental efforts.

Demographic Variables to Awareness Variables

A final regression analysis was undertaken to determine if a relationship exists between any of the demographic variables (age, employment status, marital, education, income & working experience) and the four collapsed behavioral variables – Personal Practice (PRAC), Support Group (GRPSUP), Monetary Support (MONSUP), and Support Government (GOVSUP). Table 16 summarizes the significant (yet weak) findings. A weak yet significant relationship (negative) was found to exist between Income and Personal Practice (PRAC) (*R square = 0.014, p = .022)*. This was a rather odd finding due to the counter-intuitive outcome of an increase in income reducing the respondents' likelihood of modifying their personal practices. Also, a weak negative significant relationship was found to exist (*R square = .016, p=.015)* between age and Support Group (GRPSUP). This is not surprising as younger generations are more environmentally concerned and likely to find comfort in group support networks. A weak, yet statistically significant relationship was found between Employment status and Support Government (GOVSUP) (*R square= 0.014; p = 0.023)*.

TABLE 16
REGRESSION ANALYSIS: BEHAVIORS AND SELECT DEMOGRAPHIC VARIABLES

Dependent variable	Demographic variable	R-square	Standardized regression coefficient
Personal Practice (PRAC)	Income	0.014	- 0.119
Support Group (GRPSUP)	Age	0.016	-0.126
Support Government (GOVSUP)	Employment status	0.014	0.117

CONCLUSIONS AND RECOMMENDATIONS

Rise in literacy rates and exposure to the West, satellite television, newspapers, foreign magazines, and newspapers have all led to the accelerated rise of the knowledgeable Indian consumer. Today, more and more of Indian consumers have become choosy and demand quality products at competitive prices. They prefer to purchase from renowned retail stores, where accountability is evident. In India, big brand products are endorsed by celebrities to promote specific products and brands. Known as brand ambassadors, these stars are said to lend personality to products thereby building a perpetual presence in the minds of consumers. As visual media gains more popularity, the number of celebrities being employed in the TV media has also increased significantly. Celebrities help create hot-selling headlines. Their activities and movements are closely monitored by media outlets. Celebrity product endorsements are picked up by the common masses with consummate ease. Using celebrities in advertisements has become common place. Indians love their heroes and heroines. So if a consumer finds their lovable celebrity endorsing a particular brand, it becomes easier for them to relate to the product and therefore have more optimistic feelings towards the advertisement and the brand itself. Moreover, it is an established fact that marketing strategies that include celebrity endorsement has high recall rates. Celebrities also aid in repositioning of products. Products with dropping sales can be rescued by smart selling ads by leading celebrities. Thus, Indian consumers prefer eco-friendly products.

The responses in this study suggest that Indian consumers are concerned about the deteriorating environmental conditions, but they are not doing much to preserve or protect the environment (see the low R-squared values of the four regression models above). The research finds that Indians are very much concerned about environmental degradation but they are doing very little to save the environment. This conclusion is clearly evident from the low R-squared values in each of the regression models. Although they feel there is much that can be done (Aware4) and they also feel somewhat empowered (Aware5), these two variables only account for very little of the variance in the behavior of the sampled Indians (see above regression analyses). It is further established that the topic of environmental awareness is not included in school and college teachings. A regression analysis between the education level and behavior of the respondents shows an insignificant relationship indicating that education has yet to be able to influence the behavior of Indian consumers.

Our study also suggests that Indians are not proactive in taking the initiative to solve the problem of environmental degradation. However, in India's quest for continued high economic growth, the government is taking steps to ensure that environmental and social considerations are not neglected and are in line with the nation's philosophy of balanced and sustainable development. Article 21 of the Constitution of India has become an effective tool for preservation of the environment and ecological systems. For the preservation of the environment, the Central Government and State Governments have enacted many statutes such as the Wildlife Protection Act of 1972, the Environmental Protection Act of 1986, the Air (Prevention and control of Pollution) Act of 1981, the National Environment Tribunal Act

of 1995, among others. In hopes of educating the people, the Central Government has launched the National Environmental Awareness Campaign through the Ministry of Environment and Forest every year since 1986 with the objective of increasing the environmental awareness level throughout India. To achieve this, environmental and conservation considerations should increasingly be integrated with development planning.

In recent times, a lot of pressure has been exerted on the environment due to three factors: growing population; increased industrialization; and the persistence of poverty. These pressures have been exacerbated by the recent economic downturn in the region, which has had economic and social consequences on the capacity of some governments to implement planned activities relating to environmental protection and sustainable development. Developed countries are mostly industrial in nature, and have faced environmental problems much earlier. They have pioneered various environmental protection mechanisms to counter environmental problems. They have learned through their grave mistakes. Thus in order to protect their environment, education and information are provided during early childhood. There is much for the Indian government as well as Indian people to learn from the experiences and models of developed countries. Environmental awareness is currently not part of the education curriculum in India, and thus early exposure of environmental awareness does not take place. This contributes to the poor response toward environmental protection in India. Indians feel that it is the responsibility of the government to provide information and to educate the public toward environmental protection.

There is a need to change the mind set of younger generations. Environmental awareness education should be a part of early curriculum. In fact, the Indian Government has already started taking steps in this regard and many Universities are including environmental awareness education in their curriculum. It is hoped that the younger generations will become supportive of preserving the environment and bringing about an awareness revolution. India is predominantly an agricultural country. Green revolution has helped India to be self sufficient in food supply. However, excessive use of pesticides, herbicides, and fertilizers has contributed to a degradation of nature. The underground water supply is contaminated due to the presence of harmful minerals like zinc and magnesium. The consumption of such water can become a significant public health issue.

The Indian people wish to promote sustainable national development. So, the Indian business community should have the objectives to innovate and disseminate the means for creating sustainable livelihoods on a large scale and to mobilize widespread action to eradicate poverty and regenerate the environment. Further, institutional systems should be developed to save the environment from further degradation. The need to preserve and clean the environment must be an integral part of the formal education process. Environmental education must be promoted through existing educational/ scientific/research institutions. In addition to formal education, encouragement should be given to non-governmental organizations, mass media, and other concerned organizations for promoting environmental awareness among the people at all levels. Training must be given to school teachers in environmental education, so that they are able to mobilize peoples' awareness for the preservation and conservation of the environment.

LIMITATIONS OF THE STUDY

As this research study is confined to selected respondents from the Northern Indian region, the findings of this research cannot be generalized. However, this study can be regarded as a starting point for further research in this important area.

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