

Effect of Health Consciousness and Material Values on Environmental Belief and Pro-environmental Behaviours

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Abstract. The aim of this paper is to test the relationship between health consciousness, material values and pro-environmental behaviours. The mediating role of environmental belief in these relationships is also investigated. To achieve this cross sectional survey research was conducted in two Indian universities and 332 students doing engineering or management course responded to the survey. The regression analysis results show that health consciousness has positive relationship with pro-environmental behaviours. In case of material values only one sub dimension namely 'centrality of acquisition' has negative relationship with pro-environmental behaviour. Environmental belief did not mediate any relationship. Article discusses the limitations and future scope of research.

Keywords: Health consciousness, Material values, NEP, Pro-environmental behaviour

1. Introduction

Our earth is facing severe environmental problems such as pollution, climate change, loss of biodiversity, depleting natural resources, depleting ozone layers, and acid rains. The origin of these problems can be traced out in human activities. The intensity of these problems and the tentative solutions to these problems is debated among scientific and political community. The belief that technological advancement will solve environmental problems cannot be fully relied on because in the 19th and 20th century with the advancement of industrial revolution era, human beings saw the major degradation of environment. However the role of technology cannot be negated, it is very much important to increase efficiency of resource usage as well as to find environment friendly products. The technology development happens for human and it is used by humans. Moreover in the eco-system human beings, historically, claimed the first right over the resources. Hence the role of human beings in dealing with environmental problems is as important as technology. While discussing the role of psychology to achieve ecological sustainability Oskamp, (2000) identified three major sources of earths environmental problem overpopulation, overconsumption, and under conservation. Each of this is related to an individual.

Another important thing is that the natural environmental problems demands action at various levels; global, national, organizational as well as individual level. Large problems need to be dealt at larger levels. At global level large and long term policies are made, governments provide legal framework, policies, and support system to deal with environmental problems. Business organizations can concentrate at bringing environment friendly products or services, proper and minimum usage of resources, green technology development, while an individual can contribute by adopting environment friendly behaviours.

2. Underlying Concepts

2.1. Pro-environmental behaviour (ProEB)

The focus of the present paper is the individual. Stern 2000 classified individuals' pro-environmental behaviour into four categories; environmental activism, non activist public-sphere behaviours, private sphere behaviours, and behaviours in organizations. In this paper we are looking at private sphere behaviours, these behaviours deal with optimum usage of resources in an individual's life it also covers use, purchase and disposal of personal and household products that have environmental impact. These behaviours have significant impact on the environment at an aggregate level, i.e. when people independently do the same things (Stern, 2000). Government bodies as well as researchers in this area are concerned about changing

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people's behaviour. To change these behaviours, first it is important to understand them as well as their antecedents. Present paper is a research endeavour to understand the pro-environmental behaviour among Indian youth.

2.2. Environmental belief (En Belief)

These are the individual's belief about the relationship between human and the natural environment. An individual's belief about fragility of nature's balance, reality of limits to growth, possibility of an eco-crisis, exemptionalism, antianthropocentrism are captured in a widely used scale of environmental belief known as New Ecological Paradigm (NEP) scale. Individuals with high environmental belief are said to have pro-ecological belief.

2.3. Health Consciousness (HC)

Gould, 1990 viewed health consciousness as inner status of a person about his/her health. Gould conceptualized it as a psychological variable consisting of four dimensions namely health alertness, health self-consciousness, health involvement, and self-monitoring of one's health. It is different than anxiety or fear of sickness, it is a psychological state where an individual is aware of and involved in his/her health condition. Like Gould, present study also considers it as purely psychological state and considers illness preventive or physical fitness behaviours as an outcome of health consciousness rather than one dimension of it.

Gould, 1990 found that health consciousness is positively related to dietary pattern such as vitamin intake, calorie reduction. Health conscious people discuss health related issues seek health related information (Gould, 1990) and are found to take preventive actions such as exercise, consumption of nutritious food (Iversen and Kraft, 2006). Health consciousness is one of the prime motives in the purchase of organic food (Lockie et al., 2004).

Increased level of air, water, and noise pollution, climate change, depleted ozone layers have given rise to many health related problems. The health conscious people due to their information seeking behaviour will be concerned of state of environment and its adverse impact on the individual or society in a large. This may shape their belief about nature and human relationship, and may prompt them to take pro-environmental actions. Also health conscious people who respect themselves might also respect the larger environment's health. However empirical test of this relation, to the best of researcher's knowledge, is yet to be explored. It results in the first set of hypothesis.

Hypothesis 1: Health consciousness will be positively related to pro-environmental behaviours.

Hypothesis 2: Environmental belief will mediate the relationship between health consciousness and pro-environmental behaviours.

2.4. Materialism

In this study materialism is viewed as a form of consumption. Richins and Dawson, 1992 conceptualized materialism as a values-orientation, with three components-acquisition centrality, acquisition as the pursuit of happiness, and possession-defined success.

- Possession defined success (Success) - the use of possessions to judge the success of others and oneself.
- Acquisition centrality (centrality) – Individuals give possessions a central place in their life. High level of consumption functions as a goal and provides aim for life.
- Acquisition as the pursuit of happiness (happiness) – the belief that possessions and their acquisition lead to happiness and life satisfaction.

Like private sphere pro-environmental behaviours consumption pattern of individuals may have effect only in aggregate, i.e. when done by many people.

India is not known for overconsumption patterns; however, recent economic development has not only increased purchasing power of Indians, but also accessibility and availability of goods and services. In this context it will be useful to look into materialistic values and its link with pro-environmental behaviours.

Stern, 2000 emphasized the role of values in forming environmental beliefs, attitude, and behaviours. Schultz and Zelency, 1998 found positive relationship between self-transcendence and pro-environmental behaviours. Kilbourne and Pickett, 2008 found negative relationship between above mentioned three dimensions of material values and environmental beliefs as well as behaviours in North American population. As materialistic people give more emphasis on consumption they may view nature as a commodity to use. They may consider human being at the centre of everything and the whole nature, both living beings and non-living things, is meant for gratifying his/her needs/desires. Thus material values may affect environmental beliefs which in turn will affect the pro-environmental behaviours. This gives the second set of hypothesis.

Hypothesis 3a: Material value 'possession defined success' will negatively affect pro-environmental behaviour.

Hypothesis 3b: Material value, 'acquisition centrality' will negatively affect pro-environmental behaviour

Hypothesis 3c: Material value 'acquisition as the pursuit of happiness' will negatively affect pro-environmental behaviour.

Hypothesis 4: Environmental belief will mediate the relationship between each material values and pro-environmental behaviours.

3. Methodology

3.1. Sample

The data for this survey were collected from MBA (Master of Business Administration) and undergraduate engineering students of two Indian universities located in south India. Both universities have almost 50% students from northern India. Researchers focused on MBA and engineering students because of two main reasons. First, MBA and some of the engineering students will be decision makers in business organizations, their environmental concern, their orientation towards the natural environment are important. Second, engineering students will be involved in day to day production or service activity, product design activity, and their views will also be considered in business decisions. Hence, their own environmental concern, their pro-environmental behaviours is important once they join business organizations in the design of environment friendly product, systems or service delivery and/or, in ensuring optimum use of resources.

Purposive sampling method was used to select the respondents. The first author of this paper went to the classrooms with the permission of the respective instructor. He explained the purpose of this survey to the students and requested them to participate in it. Total 332 respondents responded to this survey, almost all students participated in this survey. The age of the respondents varied from 19 to 25 years, approximately 22% respondents are female. After deleting questionnaires with large missing data (more than 3 items), 316 useful samples were retained for the analysis. For remaining sample missing data, if any, were imputed with mean values for that particular variable.

3.2. Measurement Instrument

The pro-environmental behaviours (ProEB) was measured using a 10 item scale, the items for this scale were selected from two scales Whitmarsh and O'Neil (2010), and Osbaldiston and Sheldon (2003). The criteria used to select the items were its relevance to student population and feasibility at student life. Items like kitchen waste disposal were not selected because most of the respondents (66%) stay in hostel. (reliability coefficient, Cronbach alpha, $\alpha = 0.611$). The environmental belief (En Belief) was measured by a 15 item scale known as New Ecological Paradigm scale, (Dunlap, et.al., 2000), ($\alpha = 0.615$). Health consciousness (HC) was measured by a 9 item scale given by Gould, 1990, ($\alpha = 0.873$). The materialism construct was measured using a scale developed by Richins and Dawson, 1992. It consisted of total 18 items that covers three sub dimensions. Each sub dimension has six items, ($\alpha = 0.753$).

4. Results

Regression analysis was done to test the hypothesis, results are shown in table. Model 1 consists of health consciousness and material values as predictors of pro-environmental behaviours. Hypothesis 1 and 3b are supported in model 1, however data did not support the hypothesis 3a, 3c. Thus, health consciousness is positively and material value ‘acquisition centrality’ is negatively related to pro-environmental behaviours. To check mediation effect first health consciousness and material values were regressed on environmental beliefs; second environmental belief was regressed on pro-environmental behaviours, the results are shown in model 2 and 3 respectively. Both the models were found to be significant. As a third step health consciousness, material values and environmental belief were regressed on pro-environmental behaviours, and results are shown in table as model 4. Observe that none of the independent variable except “possession defined success “ is significant in model 2, however possession defined success does not predict pro-environmental behaviours, as shown in model 1. Hence hypothesis 2 and 4 are not supported i.e. environmental belief did not mediate the relationship of either health consciousness or material values with the pro-environmental behaviours; rather it acts as an independent variable.

Table 1: Regression Results

Variable	Model 1	Model 2	Model 3	Model 4
HC	.210*	0.050		.203*
Success	-.065	-0.164**		-.042
Centrality	-.244*	0.062		-.253*
Happiness	.020	-0.111		.036
En Belief			0.135**	.140*
Adjusted R Square	0.117	0.036	0.024	0.133
F	11.407**	3.905**	8.708**	10.651**
Dependent Variable	ProEB	En Belief	ProEB	ProEB
Values are standardized regression coefficients. (*p<0.05 , **p<0.01)				

5. Discussion

The main contribution of this paper is to empirically test the relationship between health consciousness and pro-environmental behaviours. The relationship emerged in the expected direction. In case of material values only ‘acquisition centrality’ was found to be negatively related. Acquisition as the pursuit of happiness, and possession-defined success did not show any relationship with pro-environmental behaviours. Previous research found all the three dimensions negatively related to pro-environmental behaviours (Kilbourne and Pickett, 2008). In their research they used 8 items to measure pro-environmental behaviours, 50% of which are related to buying behaviours or spending money on environmental activities which has direct economic impact on the individual. In the present research we have not captured green product purchase behaviours or money spent on environmental activities. In the present research we are capturing actions done by individual that may benefit the natural environment by conserving resources, reuse, recycle or optimum use of resources, however none of the activity may have large economical impact on the individual.

Unlike Kilbourne and Pickett, 2008 environmental belief did not mediate the relationship between material values and pro-environmental behaviours. In this research we measured general environmental belief and not specific belief about air, water or noise pollution, or things that affect day to day life of an individual. General environmental belief captures belief about larger phenomena like natural catastrophe, balance of nature. In daily life an individual may not think consciously about these things or his/her life does not get affected regularly by these things. For the same reason environmental belief may not have mediated the relationship between health consciousness and pro-environmental behaviours.

6. Limitation and Scope for Future Work:

The sample used in this study may not be representative of Indian student population. The scope is limited to engineering and MBA students.

Independent variables selected in this study explains 13.3% variation in the pro-environmental behaviours, there are extraneous variables affecting this variation which needs to be unearthed. Moreover this relationship may vary across different pro-environmental behaviours such as waste disposal, resource conservation, purchase behaviour, environmental activism. It needs to be investigated in future research.

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