

# Role of Worry and Attitude in Determining Pro Environment Behaviour in Young Indians

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**Abstract:-** The relation between ever increasing population and consumption habits with accelerated deterioration of environment is well established. Lifestyle and consumption patterns impact environment in a direct and indirect way by putting demands on production process. With climate change becoming critical in recent years, studying environment attitudes and behaviours has become important. Addressing environmental crisis at local or global level also call for studying fundamental attitudes and emotions that shape pro-environment behaviour. The goal of this paper is to study the (1) impact of environmental concern and worry on pro-environment behaviour and to (2) evaluate differences on the basis of education and gender. Based on the sample of 190 young individuals, measures of environmental concern, worry and PEB will be used to find the correlation, regression and group differences.

**Keywords:-** Attitude, Worry, Pro-Environment Behaviour, Youth.

## I. INTRODUCTION

A survey of 2019 in US also showed that worry had spiked up among young adults due to climate change (Parker, Morin, & Horowitz, 2019). Emotional responses to environmental crisis have also become equally important to measure as they impact our mental and physical well-being. "Climate anxiety" has come to be used commonly with worrying (Pihkala, 2020). Stern (1992) suggests that best interventions related to environment conservation can be established by increasing environment concern and knowledge. Dwyer et al. (1993) also argues that goals to change behaviour permanently through interventions often has low success rate. Studying whether attitudes or emotions impact PEB can help strategize policies based on antecedents of PEB rather than mitigating the crisis. The goal of this paper is to study the (1) impact of environmental concern and worry on pro-environment behaviour and to (2) evaluate differences on the basis of education and gender.

## II. REVIEW OF LITERATURE

### ➤ *Environmental Attitudes (EA)*

A general attitude towards environmental issues is called as environmental concern. It includes one's attitude towards one's and others actions with respect to environment consequences (Ajzen, 1980). Value priorities play an important role for these evaluations. It may thus be

said that EA involves specific attitudes related to specific intentions as well as general values. Environmental attitude, concern and awareness of consequences are often used interchangeably (Stern et al., 1993). Environmental concern has been studied through specific values like biospheric, egocentric and altruistic as well as through general worldviews and values (Schultz, 2001; Dunlap & Van Liere, 1978). EC has popularly been referred to as new way of thinking called as New Ecological Paradigm NEP (Dunlap & Van Liere, 1978). According to Theory of Planned Behaviour, distinction between attitude, intention and behaviour can be explained (Ajzen, 1991). Person's attitude towards a behaviour is determined by accessible beliefs regarding that behaviour and its consequences while intentions are person's willingness to perform a behaviour. Therefore, environment attitude is also commonly associated with awareness of consequences. It is also argued that even when people have different attitudes for specific environment issues, they all reflect one single major attitude called as environmental concern (Dunlap & Van Liere, 1978). Attitudes and behaviour have been explained widely to have causal relationship through Theory of Reasoned Action by many researchers. After TRA, environmental attitudes or concern are best studied in light of pro-environment behaviour though VBN model (Stern, 2000). The model links one's values to New Ecological Paradigm (NEP) which makes the individual aware of environmental consequences of their actions and accept some amount of responsibility denotes by ascription of responsibility. These cognitive links activate moral obligation towards environment conservation called as pro-environment behaviour. Environmental attitude measured by NEP has been found to be correlated to conservation and recycling behaviours (Kaiser et al.2005; Stern, 1999). Hines et al. (1987) concluded that attitude is one of the many factors influencing environment responsible behaviour. Stern and Oskamp (1987) argue that this relationship between attitude and environmentally responsible behaviour depends on difficulty level of the behaviour.

### ➤ *Worry*

Knowledge, perceptions and affect towards climate change are found to be crucial determinants of pro-environmental behaviour regarding climate change (Whitmarsh, 2005). Worry has been found to be very common emotion related to environmental crisis. Worrying is a cognitive process that leads to fearful thoughts that are affect-laden. It can be better understood as cognitive process in state of uncertainty aimed at problem solving and self-

regulation. The affective dimension is associated to anxiety. These thoughts are accompanied by feeling of despair, grief and anger (Pihkala, 2020; Verplanken et al., 2020). A distinction has been made between constructive and unconstructive worry (McNeill & Dunlop, 2016; Watkins, 2008). While constructive worry involves problem solving and is action-oriented, unconstructive worry is related to generalised anxiety and interrupts daily functioning of mind (Behar et al. 2003). Constructive worry is protective and unconstructive worry manifests distress and anxiety-related pathologies (Davey et al., 1992; Watkins, 2008). It has been called as constructive emotional state that helps initiate pro environmental behaviours (Clayton & Karazsia, 2020). Sometimes, worrying can be unconstructive mainly when it is accompanied with anxiety (Pihkala, 2020). Pihkala (2020) also argue that worrying is a practical emotion involving re appraisal of thoughts that ultimately aid in problem solving. An interesting finding related to emotions and action is role of locus of control. Since strong feelings sometimes are succeeded by helplessness, locus of control will determine if emotions like worry will lead to action. Worry related to climate change is found to be closely associated to different types private-sphere (conservation) and public-sphere (policy support and activism) PEBs (Verplanken & Roy, 2013; Kleres & Wettergren, 2017; Smith & Leiserowitz, 2013). In a study based on India by Thaker et al. (2020) worry was found to have weak link to risk perceptions, unlike western countries. Verplanken et al. (2020) also found that habitual worry was significant predictor of pro-environment behaviour.

#### ➤ *Pro-Environment Behaviour*

According to UN pro-environmental behaviour is related to use of services and product in a way that minimises destruction of natural resources caused by toxic materials, carbon emissions and pollutants keeping in mind the needs of future generations (UNEP, 2005). Pro-environmental behaviour (PEB) can be distinguished as either “impact-oriented” or “intent-oriented” behaviour (Stern,2000). The impact-oriented approach views human action with varying levels of negative environmental impact. This approach focuses on identifying target behaviours that directly or indirectly impact the environment and the strategies to reduce their impact. The intent-oriented approach uses the actor’s point of view for defining pro-environmental action. If the intention behind the action is in favour of the environment it is labelled as pro-environment. It stresses an actor’s subjective motivation as the defining characteristic (Stern, 2000). Another distinction has been made between private sphere and public sphere PEBs. Private sphere PEBs have small impacts and can comprise of behaviours like waste disposal, green consumerism or use of eco-friendly transportation whereas public sphere PEBs impact the environment on a larger scale but indirectly. They comprise of behaviours like actively participating in protests or filing petitions (Stern, 2000).

#### ➤ *Demographics*

Research has also shown that women slightly are more concerned than men about environment (Li et al., 2022). They have also been found to hold stronger political

opinions and attitude mainly due to gender differences in socialisation and resulting value systems (Zelezny et al., 2000). Ballew et al. (2018) found that even though men and women held similar views regarding climate change, women’s risk perception was more severe. In other words, they view climate change as more harmful. This was the case even when women had less knowledge of facts on environment damage than men. A lot of research support has also come for correlation between women and different types of PEBs like, showing support for eco- friendly policies, recycling, etc. (Li et al., 2022). A lot of research evidence has been found for a close association between higher educational differences and pro-environment behaviour (De Silva and Pownall, 2014). Many PEBs like recycling, water saving, green food choices, green purchases have been positively correlated to high levels of education.

### III. METHODS

#### ➤ *Hypotheses*

- A positive correlation will exist between attitude, worry and PEB.
- Worry and attitude will be significant predictors of PEB.
- There will be significant gender differences in the sample for worry, attitude and PEB.
- There will be significant educational differences in the sample for worry, attitude and PEB.

#### ➤ *Sample*

A sample of 190 individuals, males and females was purposively selected from two educational levels, namely graduates and undergraduates. Most of the data was collected through online forms and few questionnaires were filled in person. Online data collection made it possible to cover a large area, like people from Chandigarh, Delhi, Jammu and Panjab.

#### ➤ *Measures*

Attitudes are measured through New Ecological Paradigm Scale (NEP) developed by Dunlap and colleagues. It measures framework of thought through 15 items against which subjects have to give agreement or disagreement. It is based on 5-point Likert scale ranging from strongly agree to strongly disagree. The scale has good internal consistency and represents unidimensionality (Khan et al., 2012). Climate change worry scale developed by Stewart (2021) was used to measure worry. It is composed of 10 items based on 5-point Likert Scale ranging from “never =1” to “always =5”. The scale has good test-retest reliability with Cronbach alpha of 0.90 and 0.92. It has also been found to reflect one variable, that is, worry through factor analysis and has good convergent and divergent validity (Stewart, 2021). Pro Environmental Behaviour Scale (PEBS) by Markle (2013) is used to measure pro-environment behaviour based on three dimensions, conservation, food and transportation. Based on 11 items, three dimensions have different point Likert scale. Conservation scale has a Cronbach alpha of 0.74 and is based on on 5-point Likert Scale ranging from “never =1” to “always =5”. Food scale has the Cronbach alpha of 0.65 and each item has three

options with scores as, “yes” = 5, “no” = 1, “I don’t eat meat/poultry” = 5, respectively. Transport scale has the

Cronbach alpha of 0.66 with 3point liker scale, ranging from “frequently =5”, “occasionally= 3” and “never= 1”.

**IV. RESULTS**

**Table 1** Descriptive Statistics and Intercorrelations for Attitude, Worry and PEB

S. No.	Variables	Mean	S.D.	1	2	3
1	Attitude (NEP)	31.29	4.051	-	0.118	0.211**
2	WORRY	20.97	7.791	0.118	-	0.189**
3	PEB	36.70	6.228	0.211**	0.189**	-

**Table 2** Regression Analysis for Attitude, Worry and PEB

Predictor	B	Beta	R2	t	Sig
Attitude (NEP)	0.323	0.211	.045	2.961	0.003**
Worry	0.151	0.189	.036	2.633	0.009**

**Table 3** t- Test Measure for Attitude, Worry and PEB on the Basis of Gender

Variable	MALE		FEMALE		t-test	Sig
	M	SD	M	SD		
Attitude (NEP)	30.51	4.032	31.85	3.988	2.280	0.024**
Worry	20.20	7.75	21.51	7.780	1.168	0.244
PEB	35.58	6.437	37.52	5.969	2.143	0.033**

**Table 4** t- Test Measure for Attitude, Worry and PEB on the Basis of Education Qualification

Measures	GRADUATES		POST GRADUATES		t-test	sig
	M	SD	M	SD		
Attitude (NEP)	31.08	4.236	31.81	3.524	1.127	0.261
Worry	22.17	7.235	17.96	8.380	3.45	0.001**
PEB	36.03	6.39	38.39	5.547	2.37	0.019**

**V. DISCUSSION**

The results of the study showed that worry, attitude and PEB are positively correlated. Worry and attitude measured through NEP turned out to be significant predictors of PEB. As hypothesized a significant positive correlation was found between attitude, worry and pro-environment behaviour as shown in Table 1. Regression analysis showed that NEP and worry are significant predictor of PEB as shown in Table 2. NEP turned out to be a better predictor of PEB than worry. NEP accounted for 4.5% variance and worry 3.6 % variance. ANOVA analysis was found to be significant for regression. These results were consistent with earlier studies. Further, t test results showed significant differences for pro-environment behaviour on the basis on gender;  $t(188) = 2.143, p = 0.033$  as shown in Table 3 and educational qualification;  $t(188) = 2.37, p = 0.019$  as seen in Table 4. Also, attitude differed significantly among males and females,  $t(188) = 2.280, p = 0.024$  as shown in Table 3. Similarly, significant differences were found for worry but on the basis of educational qualification,  $t(188) = 3.452, p = 0.001$  as seen in Table 4.

This is consistent with other researches that have shown role of affect in activating pro-environment action. It is believed that affect is a major driver of pro -environment perceptions and actions (Brosch, 2021). For instance, a study by Young et al. (2009) showed consumer guilt had a significant relationship to green consumer behaviour. Doherty and Clayton (2011) also found concern about global

warming manifests as discrete emotions. According to Behar et al. (2003) worry constitutes of affect-laden thoughts related to future threats. Similarly, Environmental attitude measured by NEP has been found to be correlated to conservation and recycling behaviours (Kaiser et al.2005; Stern, 1999). Hines et al. (1987) draw EA as one of the many factors influencing environment responsible behaviour. Stern and Oskamp (1987) argue that this relationship between EC and environmentally responsible behaviour depends on how easy or difficult the behaviour is. Attitudes and behaviour have been linked together into a causal relationship through Theory of Reasoned Action (TRA) by many theorists. A evidence has been found for TRA for eco-friendly behaviours (Kim and Hunter, 1993). It can be said that knowledge of perceived benefits arising from pro-environment behaviour determines one attitude towards environment. An extension of TRA is the Theory of Planned Behaviour which has also been used widely in social psychology to explain deliberate behaviours. Proposed by Ajzen and Fishbein (1980), the theory states that an individual’s intention to perform a behaviour will depend on subjective norm (belief that others expect him to perform the behaviour) and his attitude (positive or negative) towards that behaviour. This intention is correlated to actual behaviour.

Gender differences were found in the sample for attitude and PEB. Women are said to be composed of nurturant traits and perform better than males as caregivers (Johnson & Gilligan, 1983). Vicente-Molina et al. (2018)

also found significant gender differences among university students with respect to pro- environment action. Many comparative studies have revealed that one factor that differentiates environmentally responsible consumers from others is knowledge of the problem and ways to mitigate it (Stern, 1992). This study also revealed educational differences between graduates and post graduates for worry and PEB. Graduates scored higher on worry than post graduates. It can be understood in light to social ecological perspective as Stewart (2021) found that many young adults experience worry related to environment degradation thinking about its outcome for future generations and their own life. These thoughts are succeeded by feelings like sadness, distress and irritability (Stewart, 2021). Nevertheless, most worrying is thought to be a normal response and a healthy coping mechanism for different types of risks or threats and so is the case for climate crisis as well (Doherty & Clayton, 2011; Pihkala, 2020; Verplanken & Roy, 2013).

## VI. CONCLUSION

They study has implications for general public as well as for youth of society. It shows that attitude towards environment can influence pro-environment behaviour. Measures can be taken to promote positive attitude among people for environment protection. It also shows that worry can be constructive in environment conservation. Some of the limitations of the study are also accounted for. It is suggested that in future similar researches, effect of knowledge on attitude and affect can increase the explanatory power of the relationship as many recent models for attitude measurement, it is assumed that knowledge of a certain fact influences that attitude to it.

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