

Original article

Gender and economic orientation as correlates of attitudes towards environmental abuse: A study of a group of Nigerian undergraduates

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ABSTRACT

Equity is central to concerns over environmental sustainability. Gender and economic power constitute prime bases of inequalities in human society. Moreover, university education has the potential to produce ideal individuals equipped to advance noble causes including environmental sanity. Hence, this study was designed to examine how economic and gender orientation affects attitude towards environmental abuse among a group of Nigerian undergraduates. Structured questionnaire were self-administered to 1120 randomly selected respondents and 1098 were analyzed. Multi-item measures were used to assess variables. One way ANOVA, Brown-Forsythe's test and Spearman's correlation r were used to analyze data. Results show that the mean score for attitudes towards environmental abuse was high (5.38 ± 0.87 , min. = 1.0, max. = 7.0) but, the generic pattern for attitude was fairly environmentally friendly because only 56.7% of respondents scored the mean or above. Age, sex and marital status had no effect on their attitude ($p > 0.05$) but religion and field of study did ($p < 0.05$). Economic and gender orientations were significantly and positively related to attitude towards environmental abuse ($p < 0.05$). Being Muslim and Christian as opposed to being a practitioner of a traditional religion; and undertaking studies within the field of biology and life sciences as well as science and technology, as opposed to social sciences, humanities and arts, predisposes students to healthier attitudes towards environmental abuse. Collectivist economic orientation and egalitarian gender orientation predisposes students to a healthier attitude towards environmental abuse.

KEY WORDS: gender, economic orientation, attitude, environmental abuse, undergraduates

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1. Introduction

The concept of sustainability is a very crucial social concept in the twenty-first century. In the Brundtland Report of the World Commission on Environment and Development, sustainable development was defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 43). Physical or environmental sustainability is central to all the concepts of sustainability, and it is the basis upon which economic and social sustainability rests. The essence of environmental sustainability is in the symbiotic relationship between the welfare of current and future generations, in addition to the anthropogenic nature of environmental issues,

which recognizes the imperativeness to of reconciling environmental exploitation for human needs, and the need to conserve the natural world (CORRAL-VERDUGO ET AL., 2009).

The human dynamics of environmental conservation inevitably form the bedrock of concerns of disciplines like conservation psychology or ecopsychology. Among the interests of conservation psychology are psychological tendencies, including attitudes, motives, beliefs, norms and values that are related to sustainable actions (TAPIA-FONLLEM ET AL., 2013). Attitudes towards environmental abuse are instances of such interests. It is a subject of considerable importance because it expounds environmental friendliness, or otherwise, of an individual's attributes. It therefore bears consequences for environmental sustainability.

Instances of human actions that qualify as environmental abuse, like sustainability-enhancing behaviour, are limitless. Although, environmental sustainability is diametrically opposed to environmental abuse, many times they are two alternative behaviours. However, choosing between alternative actions may not be simple choices; having considerable bearing on legal, political, developmental and ethical frameworks. Environmental abuses are human actions that mete out detriment to the environment, the environment being 'water, air, land and all plants and human beings and/or animals living there in and the inter-relationships which exist among these or any of them' (FEDERAL ENVIRONMENTAL PROTECTION AGENCY ACT, 2004). The industrial revolution marks a significant point in the history of environmental abuse owing to massive energy generation using fossil fuels, deforestation and exhaustive land use. All these have produced greenhouse gas emissions into the atmosphere at a rate faster than the earth's natural capacity to extinguish the detriment they produce (FAO, 2006). Beyond this historical origin however, humans, especially in more developed countries, have tremendously perpetrated abuses against the environment. The numerous international meetings and agreements, over environmental abuse, such as the Kyoto protocol, is a strong indication of the depth of environmental challenges that confront the human race in modern times. Hence, a systematic study of attitude towards environmental abuse is in order. This attitude is an emotional process which symbolizes concern over environmental abuse. As an emotion, it complements cognitive resources to influence an individual's engagement in sustainable behaviours. Indeed, attitude towards environmental abuse is a significant social reality which is basic to sustainability as a phenomenon. According to CORRAL-VERDUGO ET AL. (2009: 35) "the predisposition to strongly oppose others' anti-environmental actions seems to be another important correlate of a pro-sustainability orientation". As individuals uphold healthier attitudes towards environmental abuse, they exhibit pro-sustainability orientation.

The methodical study of attitude towards environmental abuse should necessarily engage with questions of equity. Sustainability is itself fundamentally concerned about equity in resource use over generations (MEINZEN-DICK, KOVARIK & QUISUMBING, 2014). This concern for equity inspired the subjects of gender and economic orientation in the study reported here. Apparently, gender and economic power constitute prime bases of inequities in human society. Besides, economic

demands are major factors propelling environmental abuse (CHUKWU, 2008). The much referenced Brundtland Report (WCED, 1987) appreciates that "physical sustainability cannot be secured unless development policies pay attention to such considerations as changes in access to resources and in the distribution of costs and benefits. Even the narrow notion of physical sustainability implies a concern for social equity between generations, a concern that must logically be extended to *equity within each generation*" (pp. 43, italics ours).

Economic orientation is an indication of the current commitment to equity. This could range between the individualistic and the collectivist. The more collectivist it is, the more altruistic and pro-environmental it would be, because altruism is manifested when one is motivated to focus on others' well-being, others' increased benefits with little or no regard for personal gain (BATSON, 1991; VAN LANGE, 2000). Collectivist economic orientation is linked to the consideration of future consequences which sustainability stands for.

Gender is another crucial factor in sustainability, and of course, attitude towards environmental abuse. As pointed out earlier, sustainability's concern for intra-generational equity is inevitably linked to gender relations, because gender is a central basis of inequity in human societies. For instance, natural disasters increased three fold between 2000 and 2009 from those experienced between 1980 and 1989. This is especially true of the climate related natural disasters which account for up to 80% of this rate (LEANING & GUHA-SAPIR, 2013). Yet, more women die from natural disasters when compared with men (NEUMAYER & PLÜMPER, 2007). BRODY ET AL. (2008) similarly reported that the probability that a woman rather than a man will die during a disaster is 14 times higher. This makes it plausible to impress that gender is a major risk factor for being a victim of environmental abuse and degradation. Still, the vulnerability of women to environmental disasters especially in the global south, is second to virtuousness, a notion arising from women's protective tendency towards the environment in the global north (ARORA-JONSSON, 2011). Although, these traditional ecofeminist perspectives of vulnerability and virtue have been criticized for assuming homogeneity of women and lacking empirical scrutiny, questions of gender inequity can hardly be divorced from sustainability discourses. These discourses have seemingly eschewed the role that gender orientation may play in influencing pro-sustainability orientation and behaviour. For instance, MEINZEN-DICK ET AL. (2014) asserted that "the issue of gender and sustainability has two sides: the differential

contributions of men and women to sustainability and the differential impacts of sustainability (or environmental degradation) on men and women" (pp. 31). Gender orientation can range from traditional to egalitarian, and it is another potent pointer of commitment to equity. Egalitarian gender orientation is potentially and positively consequential for pro-sustainability behaviour.

This article is the report of a study of a group of Nigerian undergraduate's attitudes towards environmental abuse. Influence of economic and gender orientations on their attitudes were examined. As a segment of the population, expectations are high that Nigerian undergraduates are champions of environmentalism, owing to their advantaged educational status when compared to the pool of the general Nigerian population. Besides, focussing on a group of undergraduates will reveal possible strengths or lapses of environmental education in Nigeria. The following research questions were answered:

- 1) To what extent is attitude towards environmental abuse healthy or otherwise?
- 2) What is the effect of economic orientation and gender orientation on respondents' attitudes towards environmental abuse?
- 3) How does age, sex, religion, marital status and field of study influence attitudes towards environmental abuse?

2. Methods

This study is a survey targeting undergraduate students of the University of Ilorin, North-central Nigeria. The University is typically referred to as Unilorin. It is one of the early generation universities established in 1975 by a decree of the then Federal Military Government. The University is located in the city of Ilorin, approximately 500 kilometres away from the nation's capital. Ilorin is a geographical and cultural confluence of northern and southern Nigeria. Information obtained from the academic planning unit of the University indicates that the total number of undergraduate students is 35,359 (academic year 2015/2016). The required sample size is 1,092, using the total population, 95% confidence level with a confidence interval of 2.92. This was increased to 1120, 1112 copies of the questionnaire were retrieved and 1098 were used in data analysis. The population was stratified into three fields of study, using respondents' faculty and respondents were sampled proportionately. The fields of study included biology and life sciences, science and technology as well as social sciences, humanities and arts.

Self-administered questionnaire was used, owing to the high literary competency of the target population, its guarantee of anonymity thereby increasing the chance of getting true information, and its near indispensability in surveys. The questionnaire had an introductory page where the goal of the study was described, anonymity of responses was guaranteed, respondents were informed that they do not have to respond to any question they do not want to, and other related ethical issues. Respondents were required to append their signature, to signify and document their informed consent.

Attitude towards environmental abuse was operationally defined as the unease respondents feel in the face of environmental abuse. It was measured with a 13-item author-devised scale assessing how worried respondents are when 'a tree is cut down', 'factories throw waste into rivers', 'wood is used to cook', etc. Its internal consistency as assessed with Cronbach's alpha is 0.781. There were seven response categories, ranging from 'I'm so worried', to 'I'm not worried at all'. Items were scored 1 to 7, scores were aggregated and divided by 13, or the number of items attempted by respondents.

Economic orientation was defined as the extent to which respondents think that the distribution of wealth should be based on collectivism or individualism. It was assessed with a ten-item economic individualism/collectivism scale (KHOURY, 2006). Examples of items in the scale are 'it is important to share wealth and property for the common good', 'my wealth is my own'. Cronbach alpha was 0.660. There were five response categories, ranging from 'strongly agree' to 'strongly disagree'. Items were scored 1 to 5, scores were aggregated and divided by 10, or the number of items attempted by respondents.

Gender orientation was defined as a respondent's tendency to appreciate equal opportunities for both sexes. It was assessed with a 15-item scale of Sex Role Attitudes (UJI ET AL., 2006). Examples of items in the scale are 'bringing up children is the most important job for women', 'women do not have to work if there is no economic need'. Response categories ranged from 'strongly agree' to 'strongly disagree' and Cronbach alpha was 0.802. Items were scored 1 to 5; scores were aggregated and divided by 15, or the number of items attempted by respondents. All items were scored in a way that a higher score signified a healthier attitude towards environmental abuse, a more collectivist economic orientation and a more egalitarian attitude towards gender. Sex, marital status, religion and fields of study were assessed nominally. Age of

respondents was categorized into three: 15-21, 22-28, and 29-35.

The distribution of the socio-demographic profile of respondents was examined using percentile analysis. One sample Kolmogorov Smirnov test (for normalcy) was used to test the null hypothesis that all interval level data were not normally distributed. Results indicate that all these data were normal ($p < 0.05$). A descriptive analysis of items in the scale of attitude towards environmental abuse was conducted using mean scores. One way ANOVA and independent samples t test were used to assess significant differences in mean scores across sub-groups of age, sex, religion, marital status and field of study, depending on the number of sub-groups. Brown-Forsythe's test was used to affirm/refute differences or otherwise. Eta and η^2 were used as measures of effect size while post hoc test (LSD) was used to identify homogenous sub groups. Pearson's correlation r was used to depict the relationship between pairs of interval level variables. All data analyses were accomplished using IBM's Statistical Package for Social Sciences (version 21.0).

3. Results and discussion

3.1. Profile of respondents

The sex distribution of respondents shows that males (50.2%) are only marginally more than females (47.8%). This indicates a closing of the wide gap in educational achievement between the two sexes in Nigeria. Few respondents did not indicate their gender (2%). The majority (66%) of respondents are aged between 15 and 21, while those aged between 22 and 28 were 21.4%. 1.2% of respondents were aged between 29 and 35. Meanwhile, a noticeable percentage (11.4%) of respondents did not indicate their age. This is an indication that information about age is something that some young people feel uncomfortable to share. The two dominant religions in Nigeria — monotheistic Abrahamic religions — Islam and Christianity, are almost equally reflected in the study population. Muslims were 48.6% while Christians were 49.7%. This is also a flimsy indication that the wide educational gap between adherents of the two religions is diminishing. Meanwhile, ten respondents were practitioners of Traditional religion, an indication of some measure of cultural survival in the study population. Very few respondents indicated that they practice an unconventional religion, atheism or believed in no religion at all. These data attest to the 'universality' of university settings — a locale for

the manifestation of diversity. Expectedly, an overwhelming majority of respondents (96.6%) were single. A noticeable percentage (2.4%) was married; five were divorced while one was widowed. Five respondents did not indicate their marital status. More than half of the respondents (53.6%) belonged to the field of social sciences, humanities and arts. Those in the field of biology and life sciences constituted 25.3% of respondents while those belonging to science and technology were 20.5%. Seven respondents did not indicate their faculty, making it difficult to categorize them. The distribution of the profile of respondents is shown in Table 1.

Table 1. Profile of respondents (N = 1098)

| Socio-demographic variables/sub-groups | | Frequency | Percentage |
|--|------------------------------------|-----------|------------|
| Sex | Male | 551 | 50.2 |
| | Female | 525 | 47.8 |
| | No response | 22 | 2.0 |
| Age* | 15-21 | 725 | 66.0 |
| | 22-28 | 235 | 21.4 |
| | 29-35 | 13 | 1.2 |
| | No response | 125 | 11.4 |
| Religion | Islam | 534 | 48.6 |
| | Christianity | 546 | 49.7 |
| | Traditional | 10 | 0.9 |
| | Others** | 4 | 0.4 |
| | No response | 4 | 0.4 |
| Marital Status | Single | 1061 | 96.6 |
| | Married | 26 | 2.4 |
| | Divorced | 5 | 0.5 |
| | Widowed | 1 | 0.1 |
| | No response | 5 | 0.5 |
| Field of study | Social science, humanities and art | 588 | 53.6 |
| | Biology and life sciences | 278 | 25.3 |
| | Science and technology | 225 | 20.5 |
| | No response | 7 | 0.6 |

*The mean age was 20.27 ± 2.75 , minimum= 15, maximum= 35

**Eckankar, Atheist and None

3.2. Attitude towards environmental abuse among respondents

The mean score for attitude towards environmental abuse was high (5.38 ± 0.87 , min. = 1.0, max. = 7.0). However, 56.7% of respondents arbitrarily possess a healthy attitude towards environmental abuse because they scored the mean

or above. The remaining 43.3% arbitrarily possess unhealthy attitude towards environmental abuse, they scored below the mean. These findings are better than, but similar to, the findings of IBRAHIM & BABAYEMI (2010), who similarly studied environmental attitudes among some Nigerian undergraduates and found that 54.2% of their respondents “possess an unhealthy or risky attitude towards environmentalism” (pp. 50). Similarly, in a survey targeting Nigerian secondary school teachers, MANSARAY ET AL. (1998) found that many respondents held negative environmental attitudes. Yet, scholars have strongly suggested that positive attitudes are prerequisites of pro-environmental behaviour (KAISER ET AL. 1999; FIELDING ET AL. 2008).

The descriptive analysis of items in the scale of attitude towards environmental abuse shows that environmental abuses committed by industrialists (throwing waste into rivers, releasing smoke into the atmosphere) are the greatest cause of worry for respondents. People’s refusal to construct drainage when they build houses was another intense source of worry among respondents. Vehicular emissions and dumping refuse on road sides also

constituted intense reasons to worry among respondents. Concerns over water conservation, harm caused to animals and plants are moderate bases of worry among respondents, ranking 6th and 8th, respectively. Forest-related dynamics constitute the poorest cause of worry among respondents because burning bushes, cutting down trees and using wood to cook are among the least causes of worry for the respondents. Similarly, energy conservation through the use of energy saving bulbs and turning off lights during daylight are also lesser reasons why respondents may be worried. Yet, forests have been excessively exploited in most parts of Nigeria (WHITE & OATES, 1999) and forests and trees are important elements of the ecological and biophysical systems that “maintain a constant climate, provide clean air, recycle nutrients such as nitrogen and phosphorus, and regulate the world’s water cycle, giving humanity freshwater for drinking and sanitation” (WHITMEE ET AL., 2015: 2). Results of the descriptive analysis of items in the scale of attitude towards environmental abuse are presented in Table 2.

Table 2. Descriptive analysis of items in the scale of attitude towards environmental abuse

| S/No | Item | Mean | Rank |
|------|--|-----------|------------------|
| 1 | A tree is cut down | 4.55±1.90 | 11 th |
| 2 | Trash is dumped on public roads | 6.07±1.34 | 5 th |
| 3 | An animal is harmed | 5.44±1.63 | 7 th |
| 4 | Bushes are burnt | 4.81±1.94 | 9 th |
| 5 | Energy saving bulbs are not used | 4.74±1.85 | 10 th |
| 6 | Factories throwing waste into rivers | 6.35±1.25 | 1 st |
| 7 | Streets smelling of smoke from vehicles | 6.26±1.20 | 4 th |
| 8 | Neighbours wasting water | 5.74±1.51 | 6 th |
| 9 | Wood used to cook | 4.45±1.94 | 12 th |
| 10 | Industries releasing smoke into the atmosphere | 6.27±1.26 | 2 nd |
| 11 | People building houses without constructing drainage | 6.27±1.18 | 2 nd |
| 12 | Lights on during daylight | 4.36±1.96 | 13 th |
| 13 | A plant is harmed | 4.88±1.85 | 8 th |

3.3. Effect of age, gender, religion, marital status and field of study on attitudes towards environmental abuse among respondents

The 22-28 age sub-group had the healthiest attitude towards environmental abuse (mean =5.45±0.93). This was followed by the 15-21 sub-group with a mean attitude score of 5.34±0.88, while the 29-35 sub-group scored a mean of 5.01±0.92. One way ANOVA showed that these differences

were insignificant ($p > 0.05$). Levene’s test indicated the validity of this result by indicating sub-group homogeneity of variance ($p > 0.05$) while Brown-Forsythe’s test affirmed the insignificance of these differences ($p > 0.05$). These findings are congruent with those of OGUNBODE (2013) who administered the new ecological paradigm (NEP) scale with a view to examining ecological attitudes among undergraduates in an African context. OGUNBODE (2013) found age to be insignificantly related to

ecological attitudes among samples of Nigerian undergraduates.

Males have slightly healthier attitudes towards environmental abuse (mean = 5.39 ± 0.91) when compared to females (mean = 5.37 ± 0.84). This difference is insignificant whether equal variances were assumed across the two sub-groups or otherwise ($p > 0.05$). Hence, sex had no effect on attitude towards environmental abuse. This is consistent with the findings of OGUNBODE (2013) who reported insignificant differences between males and females with regard to their NEP scores. Similarly, IBRAHIM & BABAYEMI (2010) reported insignificant difference in attitude of Nigerian undergraduates towards environmentalism. These findings lend credence to critics of women's virtuousness, especially in the context of less-developed societies like Nigeria. As noted in the introductory part of this article, virtuousness, a notion arising from women's protective tendency towards the environment in the global north has been heavily criticized. A claim of virtuousness on the part of women is attenuated by this finding.

Muslim's have the healthiest attitude towards environmental abuse (mean = 5.47 ± 0.86), Christian's attitude is lower (mean = 5.31 ± 0.86) while practitioners of a Traditional religion have the worst attitude (mean = 4.59 ± 1.00). One way ANOVA shows that these differences are significant ($p < 0.05$). Levene's test indicates the validity of this result by indicating sub-group homogeneity of variance ($p > 0.05$) and Brown-Forsythe's test affirmed this difference ($p < 0.05$). Hence, religion had main effect on attitude towards environmental abuse. Eta was 0.124 and η^2 was 0.015. Just 1.5% of the variation in attitude towards environmental abuse is accounted for by religion. Post-hoc tests show that all three sub-groups of religion were significantly different from each other ($p < 0.05$). WHITE'S (1967) popular argument which lends credence to the notion that Christian beliefs predispose Christians to holding anti-nature dispositions is somewhat supported by this finding because Muslims were marginally, but significantly better than Christians. However, this finding is contrary to that of IBRAHIM & BABAYEMI (2010), who reported significantly better attitudes towards environmentalism among Christians as opposed to Muslims.

Single individuals have marginally healthier attitudes towards environmental abuse when compared to married and divorced undergraduates but marital status had insignificant effect on attitude towards environmental abuse ($p > 0.05$). This suggests that marriage confers no special

sense of responsibility that may be an asset to environmental sustainability.

Undergraduates in the field of biology and life sciences had the healthiest attitude towards environmental abuse (mean = 5.57 ± 0.84). This was closely followed by those in science and technology (mean = 5.45 ± 0.78) while those in social sciences, humanities and arts scored the least (mean = 5.27 ± 0.89). These differences are significant ($p < 0.05$). However, Levene's test threatens the validity of these differences ($p < 0.05$). Nevertheless, Brown-Forsythe's test affirmed these differences ($p < 0.05$). Therefore, field of study had main effect on attitude towards environmental abuse. Eta and η^2 are 0.151 and 0.023, respectively, indicating 2.3% of the variation in attitude towards environmental abuse is accounted by field of study. The post-hoc test shows that the social sciences, humanities and arts sub-group is significantly different from the biology and life sciences as well as the science and technology sub-groups ($p < 0.05$). This finding is corroborated by that of OGUNBODE (2013). According to the report, students in the faculties of social sciences, law, arts and humanities had significantly poorer ecological attitudes. However, this finding is contrary to that of IBRAHIM & BABAYEMI (2010), where insignificant differences in attitude towards environmentalism across sub-groups of field of study was reported. The current findings suggests the relevance of course of study to attitudes towards environmental abuse. The summary of the analysis of the effects of age, sex, religion, marital status and field of study on attitude towards environmental abuse is presented in Table 3.

3.4. Economic orientation, gender orientation and attitudes towards environmental abuse

The relationship between economic orientation and attitudes towards environmental abuse yielded a Pearson's correlation r of 0.290 ($p = 0.000$). The Pearson's correlation r of gender orientation and attitudes towards environmental abuse is 0.102 ($p = 0.000$). Both orientations are significantly and positively related to attitude towards environmental abuse but the economic orientation is stronger. This supports the idea that economic demands are major factors propelling environmental abuse (CHUKWU, 2008). As these orientations improve, attitudes towards environmental abuse will become healthier or environmentally friendlier. These orientations serve protective roles, and are therefore assets for environmental sustainability.

Table 3. Effect of age, sex, religion, marital status and field of study on attitude towards environmental abuse among respondents

| Socio- demographic variable | Sub-groups | Mean±SD | Levene's test for homogeneity of variances | | ANOVA | | t test | | | Robust test for equity of means (Brown- Forsythe's test) | | Eta | Eta² |
|-----------------------------------|---|-----------|--|------------|----------------|------------|-----------------------------------|-------|------------|---|------------|-------|-------|
| | | | Levene's statistic | p value | F statistic | p value | t statistic | | p value | Statistic | p value | | |
| Age | 15-21 | 5.34±0.88 | .780 | .459 | 1.53 | 0.21 | - | | - | 1.44 | 0.25 | - | - |
| | 22-28 | 5.45±0.93 | | | | | | | | | | | |
| | 29-35 | 5.01±0.92 | | | | | | | | | | | |
| Sex | Males | 5.39±0.91 | 2.120 | .146 | - | - | Equal variances assumed | 0.295 | .768 | - | - | - | - |
| | Females | 5.37±0.84 | | | | | Equal variances not assumed | 0.295 | .768 | | | | |
| Religion* | Islam | 5.47±0.86 | .236 | .790 | 8.513 | .000 | - | | - | 6.92 | .004 | 0.124 | 0.015 |
| | Christianity | 5.31±0.86 | | | | | | | | | | | |
| | Traditional | 4.59±1.05 | | | | | | | | | | | |
| Marital status** | Single | 5.38±0.87 | 0.639 | .528 | 0.078 | 0.925 | - | | - | 0.091 | 0.914 | - | - |
| | Married | 5.32±0.70 | | | | | | | | | | | |
| | Divorced | 5.32±0.89 | | | | | | | | | | | |
| Field of study | Social science, humanities and art | 5.27±0.89 | 3.76 | .023 | 12.70 | .000 | - | | - | 13.68 | .000 | .151 | .023 |
| | Biology and life sciences | 5.57±0.84 | | | | | | | | | | | |
| | Science and technology | 5.45±0.78 | | | | | | | | | | | |

*'Others'— Eckankar, Atheist and None were excluded from this analysis owing to very limited frequency

**The widowed respondent was excluded from this analysis

4. Conclusions

The pattern of attitudes towards environmental abuse is fairly environmentally friendly. Age and sex have no effect on attitudes towards environmental abuse. Similarly, being married or otherwise is an irrelevant factor in attitudes towards environmental abuse. Being Muslim or Christian is significantly associated with having healthier attitudes towards environmental abuse, respectively. However, being a practitioner of a Traditional religion is significantly associated with having an unhealthy attitude towards environmental abuse. Being in the field of biology and life sciences as well as science and technology, as opposed to being in the field of social sciences, humanities and arts, significantly predisposes individuals to have a healthier attitude towards environmental abuse. The more collectivist the economic orientation and the more egalitarian the gender orientation, the more environmentally friendly the attitude towards environmental abuse.

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