

The Relationship between Values, Environmental concern & Behaviour: A Jordanian sample

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Abstract

This study aimed at identifying the system of human values of Petra university students according to Schwartz theory of values; it also aimed at identifying the correlation between environmental concern & behaviour. The study sample consisted of 218 students, using three questionnaires to collect data. The first questionnaire included the 40 paragraphs using Schwarz model; the second questionnaire included 20 paragraphs to measure environmental concern depending on the scale of Thompson and Barton, whereas the third questionnaire included 22 paragraphs to measure the environmental behaviour. Results showed that students own a system of values in four dimensions, but tend more to be towards the traditional values and less towards the human values; students' interests were centred on nature. Findings also showed a positive correlation between general values in two dimensions (conservatism, and self-transcendence), and environmental values whether (eco-centric, or anthropocentric) and a weak correlation between the general values in two dimensions (Openness, Self enhancement) and the environmental values.

Keywords: eco-centric, anthropocentric, environmental concern, values, Environmental behavior

1. Introduction

Since the beginning of the environmental movement, in mid 1970s, researchers have attempted to identify the forces that lead people to express concern for environmental issues. Over the last two decades, a number of studies have suggested that values should be considered a core concept in the study of environmentalism, and tried to link research on environmentalism with social psychological literature on values (Schultz and Zelezny, 1999).

Therefore, we find that recent researches worldwide tried to explore underlying values that provide a basis for environmental concern and pro-environmental behavior instead of exploring general environmental concern. Pro-environmental behavior can include personal buying behavior, travel behavior, recycling and use of resources, and participation in a pro-environmental organization

(Snelgar,2006).Whereas Jordanian studies focused on studying either environmental attitudes or assessing environmental literacy (knowledge, attitudes and concerns) or how environmental values are in curricula contexts , but very few studies tried to explore the values and environmental concern, or dealt with the relationship between values and behavior , as in this study .

Jordan has taken lots of steps in respect to environmental concern over twenty years ago. So that the Ministry of Education developed an environmental educational strategy , developing curricula of science in all levels to provide students with the necessary information on environment , aiming at raising their environmental awareness, and enriching them with environmental values and attitudes , affecting their behavior positively.

Noting that, Jordan is facing a lot of environmental problems, such as scarcity in water resources and increasing demand on energy. Also we can notice that most Jordanian universities introduce courses that may raise the student's awareness towards better environmental practices and behaviors.

Over the years, researchers who studied values have used different theories, but the most notable one is Schwartz's value theory. Schwartz considers values as criteria that people use to select and justify their behavior and judge others. He proposes five main features of values: 1) they are beliefs; 2) they transcend specific actions and situations; 3) they refer to desirable goals; 4) they guide the selections or evaluation of behaviors and events and; 5) they are ordered by relative importance (Schwartz, 2002).

Schwartz identified ten types of value ordered in terms of four values clusters: openness to change (stimulation, self-direction), conservation (conformity, tradition, security), self-enhancement (power, achievement), and self-transcendence (welfare for others, universalism, benevolence) , (Dietz et al, 2005). Schwartz proposed that these ten domains are culturally universal in their content and structure and applicable across cultures (Schultz and Zelezny, 2003).

There is no doubt that the process of socialization determines our values, which contributes to parents, teachers, friends, governments, religious personalities, and the media, all these participate in the proliferation of an individual's value system (Harstell, 2006).

The significance of values for behavior lies in their function that helps to understand the interpersonal world. Values are self-centered and social –centered in the sense that they are at the crossroads between the individual and the society (Grunert & Juhl, 1995).

Stern and Dietz developed value belief norm (VBN) theory of environmental concern (Hansla et al, 2008). The theory is an extension of Schwartz norm-activation theory of altruistic behavior (Kortenkamp & Moore, 2001). Stern and Dietz theory states that environmental concerns are the result of person's general set of values. Specifically they proposed that environmental concern is related to social-altruistic, egoistic, and bio-spherical value and belief about consequences of environmental changes for valued objects (Stern and Dietz, 1994). Egoistic environmental concern is based on beliefs about the effect of environmental destruction that may have on the individual. Social-altruistic environmental values are based on human benefits or human goals, while bio-centric on the inherent value of the natural environment (Schultz and Zelezny, 1999).

Thompson and Barton used different terminology, and said that different values underlie concern for the environment in different individuals: eco-centric and anthropocentric. Eco-centric concern for the environment, or eco-centrism, predisposes individuals to value nature for its own sake, judging that it deserves protection because of its intrinsic value regardless of its usefulness to humans. While anthropocentric concern refers to the idea that humans are the centre of the universe. The individuals believe that the environment should be protected because of its value in enhancing the quality of life for humans. Anthropocentrism also notes that there is a third group of individuals who are apathetic about the environmental issues (Casey and Scott, 2006).

Kempton said that environmental value (concern) may be derived from three sources: religion or spirituality, anthropocentric (human-centered), or bio-centric (living-thing-centered) (Kempton et al, 1995).

In surveying the relevant literature, we have found a study conducted by (Grunert & Juhl, 1995) on the relationship between general values, and buying of organic foods aimed to investigate the replication of the Schwartz's value theory on the universal content and structure of values in Denmark, and the assessment of the Schwartz's value theory in explaining specific aspects of consumer behavior. The result showed that the universal content and structure of value were replicated in Danish sample. Results also showed a correlation between 30 human values with environmental concerns.

In another study conducted by (Casey & Scott, 2006) on environmental concern and behavior of Australian people as related to demographic features, results showed that female gender, better education and being older were associated with higher level of eco-centric concern for the environment and reporting more ecological behaviors. Results also showed a positive correlation between environmental behavior and levels of eco-centric concern, whereas it showed negative correlation between environmental behaviors with levels of anthropocentric concern.

As for the study conducted by (Hansla et al, 2008) in Sweden about the relationship between awareness of consequences, environmental concern and value orientations, results showed that the environmental concerns for self, others, and biosphere were related to their awareness of consequences beliefs for oneself, others and biosphere respectively. Also, each of awareness- of - consequences beliefs corresponded to only one value type (power, benevolence, and universalism respectively).

In Jordan we have found a study conducted by (Dajeh, 2012), aimed to investigate the environmental literacy (knowledge, attitudes and concern) of pro-vocational education teacher in Jordan. The result showed that the teacher possessed an inadequate knowledge of environmental issues, but demonstrated positive environmental attitudes and expressed high levels of concern on environmental issues.

2. Problem and objectives of the study

Since over 40 years, researches have tried to understand the reasons behind people's interest in environmental issues, and a lot of study approaches were there to study the values that are the basis for environmental behavior.

Whereas when reviewing the educational literature in this area of values and behavior on the regional and national level, it was noticed that very minor studies were there in Jordan as such. And thus this research paper aims at studying how values and environmental concern relate to environmental behavior of Jordanian people, particularly Petra University students. And to study the impact of gender, religious commitment, and ideological beliefs on values.

Values are ordered in four value clusters: Openness to change, Conservation, self – enhancement, and self – transcendence, according to Schwartz theory. (Bjerke and Kaltenborn ,1999). The study also tries to point out the general values that are highly related to environmental concern, and behavior. The objectives of this research were to:

- a) Obtain a description of values, in term of four values clusters according to Shwartz. (Openness to change, conservation, self-enhancement, and self- transcendence).
 - b) Obtain a description of environmental concern in terms of eco-centric and anthropocentric concern.
 - c) Study the impact of gender, religious commitment and ideology on values.
 - d) Identify correlation between values, environmental concern , and pro-environmental behavior
- And according to the previous objectives, the study tries to answer the following questions.

3. Questions of the study

This study discusses certain questions that reflect the relationship between general values, environmental concern, and environmental behavior of Jordanian people subject to the questionnaire that is built to answer the following questions:

- 1- What are the main general values of Petra university students?
- 2- Do they differ in terms of gender, ideology, and religious commitment?
- 3- What are the main environmental concerns of Jordanian Petra university students?
- 4- Is there any correlation between general values, environmental concern, and environmental behavior?

4. Study limitations

The study sample is limited to students of a Jordanian private university (Petra university), and certain questionnaires were used to gather data needed for the study. Therefore the results of this study are based on the sample, the tools used, and one should be cautious when applying the results to other Jordanian universities' students, although they may agree with their results in terms of similarity of culture and circumstances.

5. Definitions of the study

- General values: Broad preferences concerning appropriate courses of action or outcomes. As such, values reflect a person's sense of right and wrong or what "ought" to be.
- Environmental values: Values supporting actions of environmental interest –orientation. Such values may be centered towards individual and society (anthropocentric) , or eco-centric (towards nature) . Environmental values are measured using the measurement developed by Thompson & Barton in 1994.
- Eco –centric values : Values showing moral considerations to the environment and its elements independently from human beings , since nature deserves protection for its main values , no matter that its useful for humans or not.
- Anthropocentric values: These are values treating humans as centre of the universe, so that one should protect environment because of its value in maintaining a good quality of life, whether for the individual or the society.
- Environmental behavior: A set of behaviors that can be exercised by the individual in his daily life, in order to protect the environment aiming at rationalizing consumption and optimal use of energy and natural resources. Such environmental behavior was measured through a special tool developed by the two researchers.

5. Methodology

The study uses the descriptive quantitative analytical method, analyzing the Socio-demographic variables (factors), using SPSS program, applying four major parts of questionnaires that were randomly distributed on Petra university students registering for the year 2010-2011 in all faculties, where the total amount of Petra students reached (7000). Community of the study - Sample:

The sample consisted of (218) students of whom (123) were male making (56%), and (95) were female making (44%). So that (300) questionnaires were distributed on students, and (12) questionnaires were excluded for insufficient data , and therefore the remaining total was (218), which makes (87%).

Table 1: Sample characteristics (N=218)

Variable	Number	Percent
Gender		
Male	123	56.4%
Female	95	43.6%
Religious		
Committed	144	66.1%
Non-committed	74	33.9%
Affiliation		
Affiliated	78	35.8%
non- Affiliated	140	64.2%

5.1. Data collection method

The data was gathered in this study in a way that several questionnaires were used as follows: The first part presents general data on Petra university students, the second part deals with measuring the general values of students; the third part discusses the environmental values and concern, while the fourth part discusses the reported pro-environmental behavior.

Part 1: (General values scale –made up of 40 statements) the values are ordered in four value subscales. (openness to change , conservation , self-enhancement , and self- transcendence) as developed by Schwartz , and customized to the Jordanian society .(Schwartz,2002)

The value subscales consisted of (10, 13, 7, 10) items respectively, response to all scales ranging from (1) strongly disagree to (5) strongly agree.

Part 2: (Environmental concern questionnaire) –made up a) 20 statements ranging from (1) strongly disagree to (5) strongly agree. The reliabilities (Cronbach alpha) of the eco-centric, anthropocentric which are reported in Thompson and Barton (1994), were 0.78, 0.67 respectively.

The eco-centric, anthropocentric subscales developed by Thompson and Barton (1994); they were selected, translated and customized to suit the Jordanian society.

Part 3: The (pro-environmental behavior scale was constructed and piloted on a small sample, and after making use of feedback given by the experimental sample – the scale was finally made up of 22 statements) as shown in the appendix below . This part was constructed based on desired environmental behavior , that environmental Jordanian societies agreed on and pronounced in their publications ,this questionnaire was customized to be used in the university , so that the scale was designed to cover many areas , such as recycling , consumer energy saving , and better use of energy and resources. And 4 of these statements were built negatively.

Part 4: The set of socio-demographic questions dealing with the variables (gender, religious commitment, and ideological affiliation).

5.2. Dependent variables: Pro- environmental behavior.

5.3. Independent variables: General values, environmental values.

5.4. Validity of the tool: All questionnaire components dealing with environmental values were translated into Arabic, and some parts were adjusted to suit the Jordanian culture, and that was given to a committee of reviewers in the educational studies field in Jordanian universities, who were asked to review the questionnaire statements.

5.5. Reliability of the tool

Reliability quotients were calculated for all scales used in the study. It is found that the reliability coefficients (Cronbach alpha) for the values subscales (openness, conservation, self-enhancement, self –transcendence) were respectively (0.65, 0.73, 0.57, and 0.72) .The reliability and coefficients for eco-centric, anthropocentric subscales were (0.74 and 0.72) respectively. Reliability coefficients for pro-environmental behavior were (0.67).

6. Results & discussion

In order to answer the first question of this study that is related to determining the main general values of Petra students, 218 questionnaires were analyzed, means and standard deviations of the sample grades were calculated on a

scale of general values in four sub-dimensions: (Openness to change, conservation, self-enhancement, and self-transcendence).

The following table no.2 shows the results shown in descending order according to means of the scale of general values in the four sub-dimensions according to Petra students.

Table 2: Means and standard deviations of the sample scores on a scale of general values in the four sub-dimensions

General Values	M	SD
Conservatism	4.28	0.44
Openness	4.21	0.44
Self- enhancement	4.17	0.48
Self- transcendence	4.07	0.54

Table no.2 shows that the means of the sample scores were between 4.07 and 4.28, and the mean of the sample scores for the conservation dimension was 4.28, which is the highest of all other three dimensions the findings show that those students own a general value system in four dimensions, and show a high degree of agreement for values within the conservatism which includes conformity, tradition and security. Results also reveal low scores on values of self- transcendence which included benevolence and universalism.

This may be attributed to the Jordanian society as a parental traditional society which still derives its values from customs , traditions and religion, so that we find that students in Jordan are still clinging to traditional values that rely on harmony and security, treated as most important values, compared to openness and self-realization as less important.

As for the dimension of human values, the results of this study were contrary to the study carried out by Aqel in 2006, which dealt with behavioral values of Arabian Gulf students, which showed that students' values were human, attributing that to the Islamic religion adhering to the values of altruism, charity and humanitarianism ,in comparison to the same values of Petra university students that were not clear because of the cultural and economic changes in the Arab world, creating a social reality with new standards and values , so that some people began to abandon some of these human values such as altruism and charity as limiting their ambitions, while other people were attached to values of the past with some partial or total rejection of the new values.

To answer the second question of this study, which is concern about studying the impact of the following variables on general values system of Petra students: (Gender, affiliation, religious commitment), means and standard deviations were calculated according to the previous variables. The following table no.3 shows theses results.

Table.3: (Means and standard deviations of the sample grades on general values system according to gender, affiliation, and religious commitment)

	N	Openness		Conservatism		Self- enhancement		Self- transcendence	
		M	Sd.	M	Sd.	M	Sd.	M	Sd.
Gender									
Male	123	4.23	0.43	4.29	0.46	4.21	0.47	4.09	0.60
Female	95	4.18	0.45	4.27	0.41	4.13	0.49	4.06	0.45
Affiliation									
Affiliated	78	4.22	0.39	4.24	0.47	4.21	0.44	4.09	0.55
non- Affiliated	140	4.20	0.46	4.30	0.42	4.16	0.50	4.06	0.54
Religious commitment									
Committed	144	4.17	0.47	4.40	0.37	4.19	0.46	4.15	0.48
non-committed	74	4.29	0.36	4.05	0.47	4.15	0.51	3.92	0.61

Table 3 shows that the means of the study sample grades of those male students were higher than those females on the four dimensions but with little differences. Table 3 also shows that those samples with affiliation were higher in

means in the three dimensions: Openness, self-enhancement, and self-transcendence, if compared to those with no affiliation, but still with little differences.

The results of those students with religious commitment were higher in means in terms of dimensions of conservatism, self-enhancement, and self-transcendence, when compared to those not committed, with large differences in favor of the committed students, whereas the means were higher in terms of the openness dimension in favor of the non-committed students.

And to understand the statistical significance of the results, t-test was performed, results show no statistical significance in terms of the variables (gender and affiliation), whereas there was a statistical significance of the religious variable.

Table: T-test of the sample grades

General Values Lub Scale	religious commitment	No.		l.	T	Sig.
Openness	Committed	144	4.17	0.47	1.87	0.05
	non-committed	74	4.29	0.36	2.03	
Conservatism	Committed	144	4.40	0.37	6.07	0.01
	non-committed	74	4.05	0.47	5.64	
Self enhancement	Committed	144	4.19	0.46	0.52	0.60
	non-committed	74	4.15	0.51	0.51	
Self-transcendence	Committed	144	4.15	0.48	3.11	0.01
	non-committed	74	3.92	0.61	2.88	

Table 4 shows the differences between the means of those religiously committed and non-committed students, in terms of the dimensions (conservatism and self-transcendence) in favor of those committed students. The table also shows the significant differences in terms of the openness dimension in favor of those non-committed students, whereas the results were of no significant differences in terms of the (self-enhancement) dimension.

This finding may be attributed to the Islamic religion that came with a comprehensive system of values of different aspects of social, moral and mental, humanitarian life, which made its exercise as a human duty that will be rewarded and held accountable if left. These values have been derived from the Koran and the (Sunnah) teachings of the prophet, so that Islam promoted values of justice, equality, peace, altruism, conservatism and preservation of the environment, so we find that the more students are committed to Islam, the more they tend to hold on values of humanity. And the students who are more committed to religion tend to hold on to values of conservatism, because the values prevailing in the Arab societies are generally derived from religion, so that committed individuals do not find any contradiction between the values of the Jordanian society and the values of Islam. While we find that students who are not committed are more open.

In order to answer the third question of the study dealing with exploring the students' environmental values, the means and standard deviations were also calculated according to environmental values scale, in terms of both (eco-centric, and anthropocentric), where table no.5 shows the results.

Table 5: Means and standard deviations of the study sample grades on a scale of environmental concern.

Environmental concern	Mean	St.dev
Eco-centric	4.08	0.56
anthropocentric	3.93	0.54

Table no. 5 shows the means of the study sample, so that it was 4.08 for the (eco-centric), whereas 3.92 for those (anthropocentric). Which means that students own a combination of environmental values in two dimensions, whereas their values are more centered towards eco-centrism.

The results of this study are consistent with the results of several previous studies, which concluded that any individual may own environmental concern in the three dimensions with varying degrees. Snelgaer, 2006) et al, 2004, McMillan, (Stern& Dietz, 1994).

Students having high levels of environmental concern in the dimensions eco-centric and anthropocentric can be attributed to the efforts undertaken by educational institutions, both formal and informal in Jordan. At the official level, the Ministry of Education in Jordan teaches students courses in environment starting from the ninth grade, working on raising awareness of their environmental problems, making them able to manage these conservatively, also focusing on the need to use appropriate strategies to equip students with environmental concern or values, attitudes promote their environmental behavior. Most of the Jordanian universities propose optional environment courses, aiming at increasing environmental awareness and developing students' values and attitudes towards the environment. Therefore, universities play an integral role of schools.

It is also clear that university students' high levels of environmental concern can be attributed to the role played by religious institutions that focused on Islamic education promoting environmental concern, which serve as guidelines to positive human behavior towards the environment enabling man to function in succession upon Earth. (Rabee et al, 2010)

And in order to answer the next question (4) of this study dealing with the degree of students practicing in environmental behaviors, therefore mean and standard deviation were calculated for the whole test.

Table no. 6: Mean and standard deviation of the study sample grades on a scale of environmental behavior.

scale	mean	St.dev
Environmental behavior	2.99	0.53

Table (6) shows that the mean of total score for the sample reaches 2.99, where the percentage of the degree of environmental behavior reaches about 60%, and this shows that the expected level of practicing environmental behavior by the sample is in medium in average.

And in order to answer the last question of the study which is concerned with studying the correlation between the general values, the environmental values, and environmental behavior, Pearson coefficient correlations were calculated. The results are shown in table (7).

Table 7: Pearson coefficient correlations between general values, environmental concern and environmental behavior.

scale	Eco-centric		anthropocentric		Environmental behavior	
	r	Sig.	r	Sig.	r	Sig.
Openness	0.14	0.04	0.15	0.03	0.03-	0.62
Conservatism	0.36	0.01	0.45	0.01	0.31	0.01
Self- enhancement	0.10	0.14	0.19	0.01	0.04	0.59
Self- transcendence	0.43	0.01	0.39	0.01	0.40	0.01

The table (7) shows a positive correlation between general values in two dimensions (conservatism, and self-transcendence), and environmental concern whether (eco-centric, or anthropocentric), where the correlation coefficients were high ranging between (0.36- 0.45); and they were also a positive correlation between general values in two dimensions (conservatism, and self-transcendence) and Environmental behavior. All of which are statistically significant.

The table also shows a weak correlation between the general values in two dimensions (Openness, Self enhancement) and the environmental values, where the correlation coefficients ranged between (0.10- 0.19). Whereas the table shows a negative correlation between general values, in terms of (openness) and environmental behavior reaching (-0.03), but which is of no statistically significance.

The results of this study are consistent with the results of several previous studies in this area, especially with regard to the positive correlation between self-transcendence and eco-centric values. (Schultz & Zelezny, 1999).

As for conservative dimension, the study showed a positive relationship between the traditional values and the environmental concern whether (eco-centric, or anthropocentric). This may also be attributed to the Jordanian society culture, which derives from the Islamic religion that cares for the environment preservation.

Although some believe that the environmental concern is a post material attitude that develops among wealthy people once the more basic needs of food and safety have been met, the results of this study refutes the previous argument, where results of this study indicated the presence of a high degree of environmental concerns of the

sample, although Jordan is one of the developing countries, which is currently suffering from difficult economic conditions. But these results can be attributed to the role played by the Arab cultural heritage in identifying environmental concerns, knowing that the cultural heritage is a set of attitudes and values, beliefs and behaviors that prevail in society and is transmitted from one generation to another. The Jordanian society draws its culture from the teachings of the Islamic religion, which stresses the need to respect environment and conservatism, promoting the values of equality, justice and altruism, so that man is considered responsible for reconstruction on earth.

References

- Al-dajeh, H. (2012). Assessing environmental literacy of pre- vocational education teachers in Jordan, *College Student Journal*, 46 (3), p492-507.
- Ata, M.(2006). Behavioral values among students of intermediate and secondary education in the Member States of Education for the Gulf States Bureau, theoretical and field study (2nd ed.),Riyad.(Arabic resource)
- Bjerke, T. & Kaltenborn, P. (1999).The relationship of eco-centric and anthropocentric motives to attitudes toward large carnivores. *Journal of environmental psychology*, 19, 415-421.
- Casey,P.J & Scott ,K. (2006). Environmental concern and behaviour in an Australian sample within an ecocentric – anthropocentric framework. *Australian Journal of Psychology*, 58(2) , pp 57–67.
- Dietz, T., Fitzgerald A., & Shwom, R. (2005). Environmental Values, *Annu. Rev. Environ.Resourc.* Retrieved December 16,2010 from Web site:[http:// www.annualreviews.org](http://www.annualreviews.org).
- Hansla, A., Gamble, A., Juliusson, A.,& Garling, T.(2008). The relationships between awareness of consequences, environmental concern, and value orientations. *Journal of Environmental Psychology*, 28, pp 1-9.
- Harstell, B. (2006). Teaching toward compassion: Environmental values education for secondary students. *The journal of secondary*, XVII(4), 265-271.
- Grunert, S. C., & Juhl, H. J. (1995). Values, environmental attitudes, and buying of organic foods. *Journal of Economic Psychology*, 16, 39-62.
- Kempton,W., Boster, J,S., & Hartley,J. (1995):*Environmental Values in American Culture*. Cambridge,MA:MIT press.
- Kortenkamp, K. V. Moore, C. F. (2001). Egocentrism and Anthropocentrism: Moral Reasoning about Ecological Commons Dilemmas. *Journal of Environmental Psychology*, 21, 261-272.
- McMillan, E. E., Wright, T.,& Beazley ,K. (2004). Impact Of University – Level Environmental Studies Class on Student’s Values. *The Journal of Environmental Education*, 35(3), 19-28.
- Rabee,A.,et al.(2010). Environmental Education, Amman, (Dar) the world of culture for publication and distribution.(Arabic resource)
- Schultz, p. W., & Zelezny, L. (1999). Values as predictors of environmental attitudes: Evidence for consistency across 14 countries. *Journal of environmental psychology*, 19, 255-265.
- Schultz, p. W., & Zelezny, L.(2003) Reframing Environmental Messages to be Congruent with American Values. *Research in Human Ecology Review*,10(2),126-136.
- Schwartz, Sh.(2002). “A proposal for measuring value orientations across nations.” <http://naticent02.uuhost.uk.uu.net/questionnaire/index.htm>.
- Snelgaer, R. S. (2006). Egoistic, altruistic and biospheric environmental concerns: Measurement and structure. *Journal of environmental psychology*, 26, 87-99.
- Stern, P. C., Dietz, T. (1994). The Value Basis of Environmental concern. *Journal of social issues*. 50(3), pp 65-84.

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