



GLOBAL JOURNAL OF ADVANCED RESEARCH
(Scholarly Peer Review Publishing System)

ENVIRONMENTAL CONCERN AND PRO-ENVIRONMENT BEHAVIOR IN A PAKISTANI SAMPLE WITHIN AN INDIVIDUAL RELIGIOSITY FRAMEWORK

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ABSTRACT:

This study examines the influence of environmental concerns on potential consumers' pro-environmental behavior in a sample of Muslim students in Pakistan. To this end, subjected to empirical verification with the use of a survey, a theoretical model has been proposed. A total of 280 questionnaires were distributed among university students, and convenience sampling method was used for data collection. Particularly, the findings confirm the influence of environmental concerns on consumers' pro-environmental behavior. The environmental concerns in turn, are also seen to affect consumers' pro-environmental behavior via moderating role of religiosity of a person. Even though, the present findings provide a better understanding of the process and significant antecedents of pro-environmental behavior, this also highlights one area for more thorough investigation. That is, the significant role of religiosity to accelerate consumers' pro-environmental behavioral process. Religiosity represents the moderating variable and was measured using five dimensions: ideological, ritualistic, intellectual, consequential and experimental. As the findings suggest that a person having some concern for the environment would have a stronger preference to participate in pro-environmental activities, if he/she is made more aware of his/her religious teachings about environmental protection. Moreover, this is a relatively new issue in Muslims societies, and it can improve their environment friendly behaviors. Besides, this paper also has some important implications for researchers, marketers/ managers, NGOs as well as government.

Key words: Pro-Environmental Behavior; Environmental Concerns; Religiosity; IIUI; Pakistan

1. INTRODUCTION:

Poverty alleviation and environmental degradation are critical global issues. All over the world, the situation of environmental degradation is escalating and is a warning to the whole humanity. The pressure on the environment has likewise increased enormously, specifically when the scale of human societies has steadily increased and technology has developed ever faster [1]. We have one earth and all of us depend on one biosphere for sustaining our lives. However, each society, each country, struggles for its survival and prosperity without considering its impact on others. Several consume far too little earth's resources and live with the prospect of hunger, disease, squalor, and early death. Others consume at a rate that would leave little for the future generations [2,3]. Now, we are living in 21st century and surely we call it the century of the environment. Today, there is a growing awareness that global peace is threatened not only by the regional conflicts, continued injustices among peoples and nations and arms race, but also by the plundering of natural



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resources and by a lack of due respect for nature. Therefore, to ensure the continuation of humanity on this planet, the people must rise and work together. Indeed, it is an issue that requires quick implementation of helpful effort for solution, especially because of its possible effects on humanity in addition to present global ecosystem [4].

Pakistan, a country of approximately 188 million people [5] making it the world's sixth-most-populous country [6]. It is located in South Asia and the total land area is 796,096 Sq. km, with education rate 43.92%. Almost 95-98 % people believe in Islam [7,8]. However, we do not see any serious efforts from consumers, businesses, NGO's, government, and most importantly religious scholars in highlighting the issue of environmental degradation. Conversely, wherever we see, we witness environmental problems. Rapidly increasing industrial pollution, contaminated water supplies by industrial and agricultural run-offs, deteriorating air quality, and water supplies contamination because of unrestricted industrial with vehicular emissions are big problems [9]. While it is logical to suppose that our beliefs about life's origins and purposes affect our dispositions towards the earth.

More specifically, religion is the primary source to influence on the worldviews, values, attitudes, behavior and decisions of an individual, group, and a society for better or worse. Fam et al., [10] argued that religion is an element of culture that permeates all characteristic of a society. Therefore, religious obligations play a significant role in people's lives through seminal their knowledge, beliefs and attitudes. Different religious groups for instance Christians, Buddhists, Muslims, and others with different religious orientations have different beliefs. We cannot put these beliefs aside when society related issues are explored. The wealth of relevant literature suggests that the religion of Islam particularly presented the idea of maintaining the balance of nature as well as established that it is the responsibility of Muslims to treat nature with respect because it is God's creation.

In addition, in our eagerness to develop and progress, we have lost sight of the limited and subtle environment of earth planet. In this regard, teaching of Islam offers an opportunity to define human responsibility and to understand the natural order [11]. Therefore, when we go through the preaching of Islam, we find out that besides all of other aspects of human life, the chapter of nature or environmental protection is much visible. According to Deuraseh et al. [12], Islam can play a significant role in conservation of the quality of precious environment, as according to Islam, Allah (S.W.T) has absolute sovereignty over man's life and death; however man has no dominion over his own life or non-human life. Thus, man, especially the believers of Islam cannot make a claim as the owner over the elements of environment. Therefore, Islam has the capability of helping to solve the greatest problems of the environment [13], as well can play an important role to make its followers think and reconsider the future of the human community [14].

In most developed countries, researchers made a considerable research on consumers' attitudes and behaviors regarding the environment. However, such research is lacking in many developing countries, although these countries have their share of environmental degradation [15]. In fact, in both the developed and the developing countries, the issues of environmental concerns are among the most topical issues in academic, business and political debates. Particularly, at present one of the main concerns of ecologists and scholars is the destruction of natural environment and its ecological impact on nature [16]. Therefore, the focus in this research is on human's behavior because steps forward in the direction of solving environmental harms is likely to depend on environment friendly behaviors more than on environmental consciousness [17].

Secondly, an important research question is whether an environmental ethics based on religion are present, and whether in Pakistan, a country populated mainly by Muslims; this could be used to advance pro-environmental behaviors. In this regard, Foltz et al. [18] argued that without a grasp of the religious life that filter through the human societies which inhabit the natural environment, no understanding of the environment is adequate. Thirdly, the detrimental effects of environmental degradation are felt most severely by the world's poor, a disproportionate number of whom are Muslims [19,20]. Regrettably, Muslim governments and scholars have been slow to respond to environmental issues and they have



made relatively unimportant contribution to the subject of environment. Therefore, we generally propose in this study that religiosity of a person does influence consumer's decisions and choices, but it acts indirectly through moderating constructs which are closely linked to the ecological behavior being performed by a person. Understanding this moderation can help public policy makers and marketers to determine how to develop marketing communications about ecological products/ services and sustainable livings in Muslims societies.

2. LITERATURE REVIEW:

2.1. Pro-Environmental Behavior:

Pro-environmental behavior has received much recent attention in the academic and policy literatures [21,22]. According to Barr & Gilg, [23] and Hobson, [24] pro-environmental behavior has a minimal impact on the environment for example, recycling, reusing, switching off lights and using sustainable modes of travel and consumption. For many decades, social scientists have explored the factors that motivate an individual to engage in pro-environmental behavior. Because, gaining a thorough understanding of why people commence pro-environmental behavior is important for researchers and policy makers, searching solutions to environmental problems that call for behavioral change. For example, economists, tend to examine the influence of external conditions, for instance socio-economic characteristics, income and price, upon behavior. On the other hand, psychologists, focus on relating internal, or psychological, variables to behavior [25]. In this article researchers took the pro-environmental behavior as a dependent variable.

2.2. Environmental Concern and Consumers' Pro-Environmental Behavior:

Dunlap and Jones [26] defined environmental concern as the degree to which people are aware of environmental problems and assist struggles to solve them and or signify the readiness to contribute personally to their solution. Several authors explored the relationship between environmental concern and behavior in a variety of contexts. Many studies have mentioned that a positive relationship exists between environmental concern and consumers' environment friendly behavior [27-29].

Sia Su [30] reported that Filipino college students consider it more important to protect the environment than economic development of their country. Moreover, they think it is possible to have a friendly environment with strong economy. But it is essential for Filipino public to show their concern about the real and significant environmental issues facing the country. Laskova [31] concluded that people with high environmental concerns shows more positive attitude towards environment, than people who think themselves powerless to help the environment are less likely to participate in pro-environmental activities. While, in one of the research study, Mostafa [32] highlighted the importance of environmental concern along with other variables for the prediction of consumer green pro-environmental behavior. He further added that on the basis of environmental concerns one can differentiate between environmentalist and non- environmentalist consumers.

Mostly Western consumers and many others from the developing countries belong to middle classes, who have expressed their concern about environmental issues. Furthermore, to reduce personal impact on the environment, many of these consumers have done personal efforts. Though, now consumers think that national and international government actions are required because of the wide scope of these issues [33]. Because, now people are more aware and concern about environmental problems, and there is a growing consciousness about effective policies, strategies and actions to confront this issue [34]. However, these increased environmental concerns are not always reflected in people behavior [35]; though, these people with a strong belief about the positive outcome of their pro-environmental behavior, engage in such behaviors to support movement of environmental concerns [36]. Thus, we propose that:

H1: Environmental Concerns are positively correlated with consumers' Pro-Environmental Behavior.



2.3 The Moderating effect of Religiosity:

For the previous few years a global environmental discourse has been underway, one that connects environmental themes with Islamic ethics. But the important question is to what extent can Islam provide us guidance on ecological conservations? To discuss and answer this important question is the purpose of this study. In this chapter we presented many references from the Koran, Hadits of Holy Prophet Hazrat Muhammad (PBUH) and also from the works of few authors who did work on this issue to confirm the part of Islamic belief, ethics and principles in this regard. Izzi Dien [37] reported that in order to promote environmental conservation, personal ethics are far more effective than to focus on pro-environmental behavior. He further added that majority of the Muslims are unaware of the relationship between religion and environmental protection; although in a more general way they are conscious of it.

Similarly, Rice [38] found that religiosity of a person increase the likelihood that one will display pro-environmental behaviors. The Munich-based foundation, Stiftung Interkultur made a survey which confirmed that any Muslim who takes religion seriously, shows more positive behavior toward the environment, and religion also prompts him to take actions in their everyday lives for example protecting green areas, convincing people to be more economical with water and food and to think about their consumption [39].

To further cement the vitality of religious information as a moderating variable, the researcher presented many references from Koran and the Hadiths of the Holy Prophet (PBHH). Kula [13] reported that it is very clear in the Koran that God created everything for humans and all of God's creation is holy which therefore deserves respect from humankind. Moreover, environment is not an ordinary thing to be carelessly exploited and there is nothing like this in the Koran. In contrast, cruelty and recklessness are punishable in this as well as in the next world. Similarly the Holy Prophet (PBUH) said: *"He who does not show mercy to others, will not be treated mercifully"* [40]. The Prophet (PBUH) further said: *"If you show mercy to those who are on the earth, He Who is above the heaven i.e. Allah will show mercy to you"* [41].

So, Islam has preached the equal responsibility of human beings to all living creatures, without making any differentiation. These above two Hadiths of the Prophet (PBUH) guide us that we should be merciful not only to humans but also to other living creatures. The resources of earth like land, air, water, forests, and minerals are at hand of mankind, but these are Allah (SWA) gifts with certain ethical restraints imposed on them. No doubt, we are free to use them to meet our needs, but only in a way that does not disturb environmental equilibrium [42]. Like *"O children of Adam!eat and drink: but waste not by excess for Allah loves not the wasters"* [43].

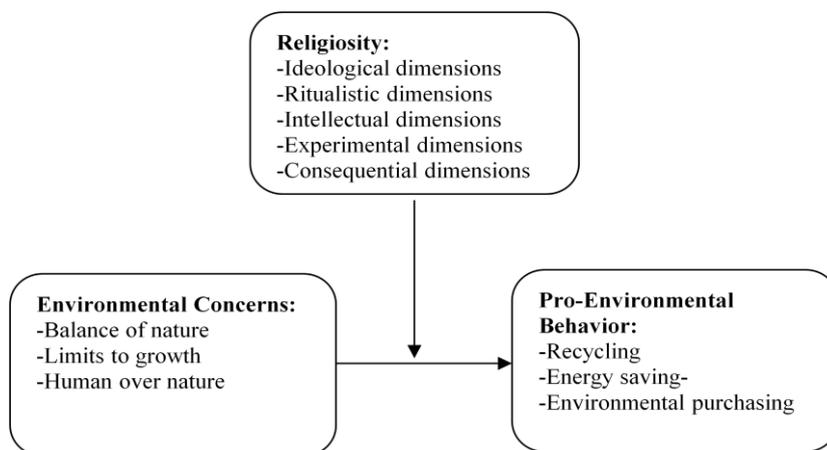
In this age of globalization, environmental problems or ecological crisis are the most important challenge to mankind. In the context of ecological balance, the Holy Prophet Hazrat Mohammad (PBUH) said that *"Anyone who plants a tree under which people seek shade or shelter from the sun will have his reward with Allah"* [44]. Likewise, once He said that any Muslim who plants or cultivates vegetation and eats from it, or another person, animal or bird, eats from it will receive a reward for it from Allah. Thus, without any strong and legitimate reasons, it is encroaching on the bounties of Allah, and on the beauty of the environment which Allah has created [16].

Throughout the course of His life, the Holy Prophet Muhammad (PBUH) was concerned about the environment and its protection, and His concerns reflect in many of the Hadiths that encourage the greening and afforesting of the environment [45]. *"If any of you have a date sapling on the doomsday he should plant it -if possible."* [46]. *"If a Muslim plants a tree or grow grains and a bird, a person or an animal eats from it will be counted as -a charity for him."* [47]. *"Whoever plants a tree is rewarded by Allah as much as the produce grown in that tree."* [48]. These three Hadiths are enough to make His believers understand the importance of protection and planting trees. So that people should take into full consideration the confines of natural world sustaining power and whenever they perform their own progress, they have a right standard of success. If something goes contradict to the balance of nature, still if it is an utmost important and in great interest, people must hold back themselves from doing it[49]. Thus, we propose that:



H2: The Religiosity moderates the influence of consumer Environmental Concerns towards the Environment on Consumer Pro-Environmental Behavior.

2.4. Research Model:



3. METHODOLOGY:

3.1. Sample and data collection

In order to investigate the relationship between environmental concerns and pro-environmental behavior with moderating effect of religiosity, a structured questionnaire using convenience sampling method was circulated among students in the International Islamic University Islamabad (IIUI) in Pakistan. The main reason behind the selection of IIUI was to get a sample composed of Muslim students from different countries. The IIUI student body comprises Muslim students from the Islamic world as well as from the non-Islamic world, which allows for a better understanding of the effects of religiosity in the relationship between environmental concerns and pro-environmental behavior in the wider Muslim community.

Prior to the collection of the data, the respondents were briefed of the purpose and importance of this study, and the variables along with their items, which were in the questionnaires, so that they could better understand the constructs. A total of two hundred and eighty questionnaires were distributed among the male and female respondents of IIUI. Three respondents did not complete their question papers. Therefore, researchers drop these three uncompleted question papers. Two hundred and seventy seven were those respondents who completely filled their question papers. The questionnaire comprised of 46 items. It has two parts. First part contained demographic information and the second part contained the variables and their items. The demographic profile included three items: gender, education level and age. Table- I reveal the demographic profile of the respondents.



Table- I: Respondents' Demographic Profile		
	Frequency	%
Gender		
Male	131	53.5
Female	114	46.5
Age		
Between 20 to 25	168	68.6
Above 25	77	31.4
Student's type		
Part time	156	63.7
Full time	89	36.3
Academic program		
Intermediate	18	7.3
Bachelors	48	19.6
Master	167	68.2
Others	12	4.9

3.2. Measures of constructs:

To measure consumers' environmental concerns, twelve items were adopted from the study of Dunlap et al., [50]. To measure the intensity of responses, a five- points Likert scale was used ranging from *Strongly Disagree* to *Strongly Agree*. The mean and S.D of the scale was found (mean= 4.10, S.D= .374). Similarly, in order to measure the religiosity of a respondent, consisting of twenty two items were adopted from the study of Shabbir [51]. The mean and S.D of the scale was found (mean= 4.49, S.D= .3717). Again five- points Likert scale was used. To measure the consumers' pro-environmental behavior, thirteen items were adopted from the study of Casey & Scott [52]. The mean and S.D of the scale was found (mean= 4.47, S.D= .1945). A four- points Likert scale ranging from *Never* to *Always* was used to measure the intensity of responses.

3.3. Analysis and results:

A total of 277 questionnaires were selected to investigate the relationship between environmental concern and pro-environmental behavior, and to investigate the moderating effect of religiosity between environmental concern and pro-environmental behavior. Prior to further data collection, research team conducted a pilot study to test the suitability of the instrument. A total of 25 questionnaires out of 277 were circulated among university students, collected, and analyzed. The results of the pilot study show an overall Cronbach's alpha of 0.756 for the variable of pro-environmental behavior. While Cronbach's alpha was 0.859 and 0.576 for the variable of religiosity and environmental concern respectively, which were satisfactory. Table- II shows the Cronbach's alphas, Mean and S.D. for each variable, which are acceptable for research.

Table- II: Mean, Std. Dev and Cronbach Alphas			
Construct	Items	Cronbach Alphas	Mean (S.D.)
Pro-Environmental Behavior	12	0.756	4.47 (.1945)
Religiosity	22	0.859	4.49 (.3717)
Environmental Concern	13	0.576	4.10 (.374)



3.4. Test of hypotheses:

Based upon the literature review and hypotheses, researchers used correlation analysis followed by regression analysis for the analysis of data. The Correlation Matrix for IIUI students has been shown in tables- III.

Environmental Concern	Pearson Correlation	0.259**
	Sig. (2-tailed)	0.000
	N	277
Note: **. Correlation is significant at the 0.01 level (2-tailed).		

On the basis of correlation analysis, the hypothesized relationship H1 was confirmed for Pakistani people. The correlation analysis establishes significant positive relationships as predicted in the literature review. The results reveal that environmental concerns positively and significantly influenced the pro-environmental behavior (0.259**, $p < 0.01$, H1 is supported).

	Beta	t-value	Sig.
Environmental Concerns	.259	4.448	.000
n = 377; R Square = .067; Adjusted R Square = .064; F = 19.780; Significance F=0.00			

Results of regression analysis in Table- IV show that the overall full model, with one independent and one dependent variable was significant with an overall F value of 19.780 ($p < 0.01$). Furthermore, Table- IV results also indicated that environmental concern of a respondent had the significant impact on his pro-environmental behavior as indicated by the standardized beta values (Beta=25.9). According to the results of regression analysis, hypothesis one was accepted.

3.5. Descriptive analysis:

Dependent Variable	Demograph	Program	Mean(S.D.)	F	Sig
Pro-Environmental Behaviour	Education level	Bachelor	4.47(.1955)	10.78	.00
		Master	4.53(.1717)		
		Others	4.38(.1968)		

Respondents’ educational level have significant impact on consumers pro-environmental behavior ($F = 10.78$, $p < 0.05$). The difference in consumers’ pro-environmental behavior is between those in the Bachelor degree and those in Master degree. The results (Table# V) indicate that the consumers pro-environmental behavior is getting higher with education level, that is, respondents in Master degree have more favorable attitude towards pro-environmental behavior (mean= 4.53) as compared to those respondents with lower level of education (mean= 4.47). As a result, it is suggested that the highly educated respondents understand the issues of environment and, therefore, are more concerned about the quality of environment and more motivated to participate in environment responsible behavior.



Gender of respondent	N	Mean(S.D.)	Age of the respondent	N	Mean(S.D.)
Male	241	4.43(.2018)	Between 20 to 24	179	4.47(.1897)
Female	36	4.57(.1323)	Between 25 to 30	98	4.58(.1532)

The results (Table- VI) suggest that there is a significant difference between males and females in overall pro-environmental behavior. This result implies that females (mean= 4.57) are generally more inclined to perform pro-environmental behaviors than males (mean= 4.43). Davidson and Freudenburg, [53] also mentioned that in general females have been found to exhibit both higher concern and participate more frequently in various types of pro-environmental behaviors e.g., recycling, energy conservation or political action. The results (Table- VI) also indicate that the age of the respondent groups influences their attitude towards environment. The respondents belong to different age groups. , The respondents with age group “between 25 to 30” have more favorable attitude to exhibit and participate in various types of pro-environmental behaviors (mean= 4.58) as compared to those respondents with age group “between 20 to 24” (mean= 4.47).

3.6. Moderating effect of Religiosity.

To test the moderating effect of respondents’ religiosity between environmental concern and pro-environmental behavior, a three-step hierarchical regression analysis suggested by Sharma et al. [54] and Ali et al. [55] was conducted. In the first step independent variable was entered, secondly moderator variable was entered, and finally the interaction between the independent and the moderator was entered. The results in Table- VII indicates that 6.7% variance in pro-environmental behaviour is explained by the environmental concerns ($p < .05$). Similarly at step 2, 8.5% variance was explained by the religiosity ($p < .05$). The additional 10.9% variance in dependent variable (pro-environmental behaviour) was explained by the interaction term ($p < .05$) which proves the moderating role of religiosity.

Model	Beta	T	Sig	Adjusted R-square	Change R-square
Step#1 Environmental Concerns	.259	4.448	.000	.064	.067
Step#2 Religiosity	.150	2.311	.022	.078	.085
Step#3 Environmental Concerns* Religiosity	4.224	2.705	.007	.099	.109

(Note: Dependant Variable: Pro-Environmental Behavior)

The F change and adjusted R-square are significant from step- 1 to step- 2 and from step- 2 to step- 3 with the introduction of the interaction terms indicating the moderating effect of religiosity. Thus, we now conclusively state that the higher the level of religious knowledge on environmental protection, the stronger the relationship between a respondent concern on environment and his pro-environmental behavior.

4. DISCUSSIONS & MANAGERIAL IMPLICATIONS:

The first objective of the research was to investigate the relationship of environmental concerns with pro-environmental behavior among Muslim respondents in Pakistan. As the hypothesized relationship H1 was significantly and positively correlated. This shows that people, who were concerned about environmental problems, expressed the higher intensity of pro-environmental behavior [31]. The second goal of this study was to empirically test the moderating effect of religiosity between the relationship of environmental concern and pro-environmental behavior. The results of this research study have revealed full support for a moderating role of religiosity. The study have suggested that a person having some concern for the environment would have a stronger preference to participate in pro-environmental activities,



if he is made more aware of his religious teachings about environment. The research team wants to point out that these findings are particularly important because no other study, to our knowledge, has examined whether and how religiosity impacts the relationship between environmental concern and pro-environmental behavior.

This research study has some important implications for researchers, marketers, managers, NGOs as well as government. Marketers and managers of the companies, private and public sector organizations and NGOs may highlight the significance of Islamic perspective on environmental protection, and exploit the teachings of Islam in their businesses advertising, newsletters in order to sensitize the people regarding the loads of the looming threats to environments in Pakistan. Besides, businesses may offer environment friendly products not only in Pakistan but in the entire Muslim world. Since the results of this study showed that religion effects the adaptation of pro-environmental behavior. So, if the organizations offer the environment friendly products and back it with the advertisement of Islamic perspective, then obviously people will buy these products more often than the traditional products.

Secondly, no doubt the syllabus of our schools, colleges and even universities include chapters on environmental protection, but unfortunately we do not see any positive change in our society. On the other hand, we find environmental problems in different shapes. The researchers have a point of view that if we want to improve people behaviors regarding environment then we must link the chapter of natural environment protection with religious teachings. In this regard, the role of the government and NGOs is very important.

Furthermore, almost two million Muslims students in Pakistan are getting religious education in religious seminaries [56]. Though many of these religious seminaries have attempted to provide formal education along with the religious education to their students, but the chapter of environmental protection, including importance of environmental protection in Islamic religion, sayings of the Holy Prophet (PBUH) on environmental protection, ways to protect the real natural environment is still lacking. Therefore if government makes it obligatory to include religious chapter of environmental protection in the syllabus of schools as well as religious seminaries, obviously this will lead people to demonstrate more environment friendly behavior.

5. LIMITATIONS AND FUTURE RESEARCH

As such, all of the research findings are from self-reported data, pro-environmental behavioral intentions as well as actual pro-environmental behavioral intentions likely differ. Therefore, future researchers may find it very beneficial to monitor and compare the stated vs actual pro-environmental behavioral usage to get the most accurate indication of behaviors. The sampling frame for this study was limited to two seventy seven students from only one university. The results might not be generalizable to all segments of society, therefore must be used with caution. It is recommended that future research studies may utilize broader geographical and demographic profile with big sample size to analyze respondents. Another important limitation is regarding the use of student samples, as researchers conducted this study in Pakistan using university students as subjects. Though students are often being used as a substitute to what the actual customers think, but the generalization of the results is another gray area of the current research. By considering this very limitation, future research may think for comparative study among the respondents of different Islamic countries to assess more significantly Muslims consumers' pro-environmental behaviors.

REFERENCES:

- [1] Khwaja. Z. R. (2008), "Consumer Voice", *Consumer Rights Council, SINDH.06*, from www.crc.org.pk.
- [2] UN Documents, (January, 2005), "UN Decade of Education for Sustainable Development", *United Nations Educational, Scientific & Cultural Organization*. <http://habitat.igc.org/open-gates/k-001303.htm>.



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(Scholarly Peer Review Publishing System)

- [3] UN Documents, (June, 1987), "Report of the World Commission on Environment and Development: Our Common Future", From: A/42/427. *Our Common Future: Report of the World Commission on Environment and Development*. <http://habitat.igc.org/open-gates/wced-ocf.htm>.
- [4] Global Environment Centre Foundation, (2000), "Annual report", <http://www.unep.or.jp/gec.gov.uk/sustainable/government/what/priority/behaviourChangeResearchAndGuidance.htm>.
- [5] PMIC. (2014). Prime Minister's Inspection Commission. <http://www.census.gov.pk/index.php>
- [6] Wikipedia. (2014). Economy of Pakistan. http://en.wikipedia.org/wiki/Economy_of_Pakistan
- [7] Population Census Organization, (2010), "Statistics Division: Ministry of Economic Affairs and Statistics, Government of Pakistan", <http://www.statpak.gov.pk/depts/pc/>.
- [8] Wikipedia. (2014). Religion in Pakistan. http://en.wikipedia.org/wiki/Religion_in_Pakistan
- [9] Asif, A. (2005), "Contaminated water, polluted air threaten life, as leaders reach consensus solutions: The State of the Environment in Pakistan", *lead update*, www.lead.org.pk.
- [10] Fam, K. S., Waller, D. S., and Erdogan, B. Z. (2002), "The influence of religion on attitudes towards the advertising of controversial products", *European Journal of Marketing*, Vol. 38 No. 5, pp. 537-55.
- [11] Khalid, F. (1996), "Guardians of the Natural Order", <http://www.unep.org/ourplanet/imgversn/82/khalid.html>.
- [12] Deuraseh, N. (2009), "Maintaining a Healthy Environment: An Islamic Ethical Approach", *European Journal of Social Sciences*, Vol. 8 No. 4, pp. 524-531.
- [13] Kula, E. (2001), "Islam and environmental conservation", *Environmental Conservation*, Vol. 28 No.1, pp. 1-9.
- [14] The Islam. (n.d.) The Islamic foundation for ecology & environmental sciences. <http://www.ifees.org.uk/>.
- [15] Litvin, D. (1998), "Development and the environment: Dirt poor", *The economist*, 346 (8060): S3-S5.
- [16] Kirman, M. A., (2008), "Religious and secularist Views of the nature and the environment", *The Journal of International Social Research*, Vol. 1 No. 3, pp. 267-277.
- [17] Pickett, G. M., N. Kangun and S. J. Grove. 1993, "Is There a General Conserving Consumer? A Public Policy Concern", *Journal of Public Policy and Marketing*, Vol 12 No 2, pp. 234-243.
- [18] Foltz, R. C. 2003, "Introduction", in R. C. Foltz, F. M. Denny and A. Baharuddin (eds), *Islam and Ecology* (Harvard University Press, Cambridge, MA).
- [19] Akhtar, M. R. (1996), "Towards an Islamic approach for environmental balance", *Islamic Economic Studies*, Vol. 3, No. 2, pp. 57-76.
- [20] Foltz, R. C. (September 30, 2005), "Environmentalism in the Muslim World", Nova Science Publishers, Inc. https://www.novapublishers.com/catalog/product_info.php?products_id=2234.
- [21] Jackson, T. (2005), "Motivating sustainable consumption: a review of evidence on consumer behavior and behavioural change. A report to the Sustainable Development Research Network", Retrieved 28 August 2009 from <http://www.sd-research.org.uk/post.php?p=126>.
- [22] Uzzell, D., Muckle, R., Jackson, T., Ogden, J., Barnett, J., Gatersleben, B., Hegarty, P., and Papatathanasopoulou, E. (2006), "Choice matters: alternative approaches to encourage sustainable consumption and production", *Report to DEFRA*. Retrieved 28 August 2009 from <http://www.defra>.
- [23] Barr, S., and Gilg, A. (2005), "Conceptualising and analyzing household attitudes and actions to a growing environmental problem: development and application of a framework to guide local waste policy", *Applied Geography*, Vol. 25, pp. 226-47.
- [24] Hobson, K. (2006), "Environmental psychology and the geographies of ethical and sustainable consumption: aligning, triangulating, challenging?", *Area*, Vol. 38, pp. 292-300. <http://www.islamweb.net/kidsen/kids%20corner%201,2/subjects/Rahma.html>.
- [25] Clark, C. F., Kotchen, M. J., and Moore, M. R. (2003), "Internal and external influences on pro-environmental behavior: Participation in a green electricity program", *Journal of Environmental Psychology*, Vol. 23, pp. 237-246.
- [26] Dunlap, R., and R. Jones. (2002), "Environmental concern: Conceptual and measurement issues", In Handbook of environmental sociology, ed. R. Dunlap and W. Michelson. *London: Greenwood*.



GLOBAL JOURNAL OF ADVANCED RESEARCH
(Scholarly Peer Review Publishing System)

- [27] Hines, J. M., H. R. Hungerford., and A. N. Tomera. (1987), "Analysis and synthesis of research on responsible environmental behavior: A meta-analysis", *Journal of Environmental Education*, Vol. 18, pp. 1-9.
- [28] Ellen, P. S., J. L. Wiener., and C. Cobb-Walgren. (1991), "The role of perceived consumer effectiveness in motivating environmentally conscious behaviors", *Journal of Public Policy & Marketing*, Vol. 10, pp. 102-17.
- [29] Laroche, M., J. Bergeron., and G. Barbaro-Forleo. (2001), "Targeting consumers who are willing to pay more for environmentally friendly products", *Journal of Consumer Marketing*, Vol. 18 No. 6, pp. 503-20.
- [30] Sia Su, G. L. (2008), "Environmental worldview and concern of college students in the Philippines", *International Journal of Sustainability in Higher Education*, Vol. 9 No. 1, pp. 39-47.
- [31] Laskova, A. (2007), "Perceived Consumer Effectiveness and Environmental Concerns", Proceedings of the 13th Asia Pacific Management Conference, Melbourne, Australia, 206-209.
- [32] Mostafa, M. M. (2009), "Shades of green: A psychographic segmentation of the green consumer in Kuwait using self-organizing maps", *Expert Systems with Applications*, Vol. 36, pp. 11030-11038.
- [33] Johri, L. M., and Sahasakmontri, K. (1998), "Green marketing of cosmetics and toiletries in Thailand", *Journal of Consumer Marketing*, Vol. 15 No. 3, pp. 265-81.
- [34] Abdul-Wahab, S. A., Abdurraheem, M. Y., and Hutchinson, M. (2003), "The need for inclusion of environmental education in undergraduate engineering curricula", *International Journal of Sustainability in Higher Education*, Vol. 4 No. 2, pp. 126-137.
- [35] Yam-Tang, E. P. Y., and Chan, R. Y. K. (1998), "Purchasing behaviours and perceptions of environmentally harmful products", *Marketing Intelligence & Planning*, Vol. 16 No. 6, pp. 356-362.
- [36] Kim, Y., and Choi, S. M. (2005), "Antecedents of Green Purchase Behavior: An Examination of Collectivism, Environmental Concern, and PCE", *Advances in Consumer Research*, Vol. 32.
- [37] Izzi Dien, M. (2000), "The Environmental Dimensions of Islam", (*The Lutterworth Press, Cambridge*).
- [38] Rice, G. (2006), "Pro-environmental Behavior in Egypt: Is there a Role for Islamic Environmental Ethics?", *Journal of Business Ethics*, Vol. 65, pp. 373-390.
- [39] Nasr, S. H. (2009), "Islam, Environment and Sustainability, The Environmental Crisis is also a Spiritual Crisis". http://www.qantara.de/webcom/show_article.php?wc_c=478&wc_id=899.
- [40] Bukhara, "Edeb" B. 18; Muslim, "Fedail" H.No: 65. <http://www.islamweb.net/kidsen/kids%20corner%201,2/subjects/Rahma.html>.
- [41] Tirmizi, "Birr": B.16.
- [42] Islamic Relief Environment Policy. (2009), "Published by Islamic Relief Worldwide", 19 Rea Street South, Birmingham -B5 6LB United Kingdom. www.islamic-relief.com.
- [43] Al-Araf/ The Heights 7(31). <http://www.najaf.org/english/book/25/7.htm>.
- [44] Musnad, V: 415. <http://www.captiveminds.org/env/islamecology>.
- [45] Islam Vision. (2010), "Prophet Mohammed: A Pioneer of the Environment", <http://www.islamvision.org/prophet-muhammad1.html>.
- [46] Bukhara, Edebu'l-mufred, (thk., Halid Abdurrahman), p. 138, Daru'l-Ma'rife, Beirut, 1966). <http://binapesi.wordpress.com/2007/08/01/h2o-dont-leave-us-alone/>.
- [47] Bukhara, "al-Khars ve'l-Muzara", Muslim, "Musakaat", H. No: 12. <http://binapesi.wordpress.com/2007/08/01/h2o-dont-leave-us-alone/>.
- [48] Hanbal, A.B. Musnad, V, 415. <http://mtakbar.wordpress.com/2009/05/28/>.
- [49] Palmer, M. (2006), "Religion and the environment in China", <http://www.chinadialogue.net/article/show/single/en/485-Religion-and-the-environment-in-China>.
- [50] Dunlap, R., Van Liere, K., Mertig, A., and Jones, R. (2000), "Measuring endorsement of the new ecological paradigm: A revised NEP scale", *Journal of Social Issues*, Vol. 56, pp. 425-444.
- [51] Shabbir, M. S. (2007), "Factors affecting decision styles: an empirical study of Pakistani managers", PhD thesis submitted in University of Malaya.



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- [52] Casey, P. J., and Scott. K. (2006), "Environmental concern and behaviour in an Australian sample within an ecocentric – anthropocentric framework", *Australian Journal of Psychology*, Vol. 58 No. 2, pp. 57 – 67.
- [53] Davidson, D. J., and Freudenburg, W. R. (1996), "Gender and environmental risk concerns: a Review and analysis of available research", *Environ Behav*, Vol. 28 No. 3, pp. 302–39.
- [54] Sharma, S., Durand, R. M., and Gur-Arie, O. (1981), "Identification and Analysis of Moderator Variables", *Journal of Marketing Research*, 18(3), 291-300.
- [55] Ali, A., Khan, A. A., Ahmed, I, & Shahzad, W. (2011). Determinants of Pakistani Consumers' Green Purchase Behavior: Some Insights from a Developing Country. *International Journal of Business and Social Science*, 2(3): 217-226.
- [56] Christopher Candland. (2005) "Pakistan's Recent Experience in Reforming Islamic Education" in *Education Reform in Pakistan: Building for the Future*, (Robert M. Hathaway, ed.), *Washington, D.C*: pp. 151-153.