

Comparison of the New Ecological Paradigm (NEP) Scale's Level of Participants and Non Participant of Outdoor Sports with Respect to Some Demographic Variables: Turkey Case

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ABSTRACT

The aim of this study is to compare New Ecological Paradigm (NEP) level of participants (OSP) and non participants of outdoor sport (NPOS) with respect to some demographic variable as gender, age and education level in Turkey. The sampling group of this study consists of OSP (n=1181, age=35.85 ± 10.61) and NPOS (n=538, age=31.78 ± 11.47), totally (n=1719, age=34.57 ± 11.04) participants. Sampling has been applied and an electronic questionnaire form sent to all members of mountaineering and cycling clubs bound to Turkish Mountaineering Federation and Turkish Cycling Federation. All the received survey answers (1181) have been assessed and NPOS (538) selected randomly. An electronic questionnaire form used in order to gather data. The survey has been restricted by OSP as mountaineers/rock climbers, cyclists and trekkers and NPOS. The survey included Revised New Ecological Paradigm (RNEP) scales questions and demographic characteristics of participants. RNEP scale which was developed by Dunlap et al. (2000) used in this study. Turkish validity and reliability analysis of original form of NEP was made by Furman (1998) and revised form of NEP's Turkish validity, and reliability analysis was made by Erdogan (2009). As a result of this study, there are statistically meaningful differences between OPS and NPOS with respect to age, gender and education level in favor of OSP.

Keywords: *Outdoor Sports; New Ecological Paradigm; NEP scale*

INTRODUCTION

When environmental problems started in the 1970s, the major problems were about environmental pollution (air, land, visual, light, noise and water pollution), loss of aesthetic values, and resource (especially energy). After these dates, many people and nation focused on the condition for environmental quality or environmental concern. The problem ozone depletion, deforestation, loss of biodiversity, and climate change become wider geographical areas, and the causes of this environmental problem are still complex and synergistic than expected and the solutions were complicated and problematic (Dunlap et al., 2000; Stern et al. 1992).

Values can be conceptualized as important life goals or standards that determine a person's

principles through the life (Rokeach, 1973). Human values have big impact on beliefs and it determines the behavior of a person about good and bad ways, and good or bad goals to follow in his/her life (Rokeach, 1979; Schwartz, 1996). In relation to environment and environmental problems, values sometimes may play an important role on for solving and/or for widening the conflict between individual and collective interests (Axelrod, 1994; Karp, 1996; Keles, 2011).

The relations between values and attitudes which are interested about environmental issues and environmentally related behavior are very complex. The cognitive hierarchy model tries to explain this complexity when values and attitudes are related to actual behavior. According to this model "influence should theoretically flow from abstract values to midrange attitudes to specific behaviors. This sequence can be called environmental value (EV) → environmental attitude (EA) → environmental behavior (EB) hierarchy" (Homer and Kahle, 1988).

EV, EA and EB are the usually learned and/or sometimes analogized results of environmental value system of a person. There are some factors that affect environmental value systems, and make major differences between persons. These are gender, age, ethnicity, income, sensitivity, personality, education systems, education level, school type, personal and/or government political affiliations, neighborhoods, parents' educational backgrounds, family incomes, occupation, leisure time activities, personal and/or regional experiences, development level of country, parents and their life paradigms, relation between nature, living area, friends value systems, religion and piety (Rokeach, 1973; Rokeach, 1979; Dunlap et al. 1983; Mohai and Bryant, 1998; Kim, 1999; Dunlap et al. 2000; Zinn and Graefe, 2007; Taskin, 2009).

Last decades; people want to go to environment for many reasons like hiking, trekking, mountaineering, climbing, fishing, picnicking, camping, motorsport, ATV, orienteering and so on, and the effect of being in environment has permanent and/or temporary affect on wildlife much more then before. On the other hand, the increasing demand of outdoor activities has had a serious permanent and/or temporary negative effect on the environment (Cole, 2004).

Outdoor sports and activities are needed organized or wild areas. Outdoor sports and activities can be grouped in two parts as nature based and nature related sports. While mountaineering is a nature based, hiking is nature related outdoor sports. The participants of outdoor sports see and feel nature directly and understand the meaning and the necessity of protecting and conservation of nature and the environment, even if outdoor sports are nature based or nature related.

It is a big reality that outdoor sports including every kind of outdoor activities have a big economic value and economic and social benefits of it is increasing rapidly. It can be said that nature is the raw material of outdoor sports and activities, and it is really important sustainability of environment and the natural resources. In the future, it is going to continue to be a big economic value, may be more than now.

The Relation between Environmental Attitudes and Outdoor Sports

It is expected that there is a relation between EA and outdoor sports participation. This situation explains by the Cognitive Hierarchy Model. Choice of and participation in the outdoor sports and activities should be influenced by a person's environmental values or attitudes (Bjerke et al., 2006). The people like to be in the nature can be sensitive to the environment and environmental problems than the people do not participate in outdoor activities. Dunlap and Heffernan (1975) examined that participation in outdoor activities influences environmental concern.

Some researcher's results did show that environmental concern was higher among participating in appreciative activities (hiking, camping, visit parks and scenic areas) than among subjects performing consumptive activities (hunting and fishing). Bjerke et al. (2006) found negative association between environmental concern and practicing hunting. In addition these results; Geisler et al. (1977) had a result which has positive relation between activity type and environmental concern. The associations were greatly attenuated by controlling for socioeconomic variables (age, education, place of residence). Theodori et al. (1998) reported that there is a positive correlation between environmental behavior and participation in outdoor sports and activities.

These studies show that there is a strong relation and correlation between environmental attitudes and outdoor sports and activities. Participating in outdoor activities increases EV, EA, and EB.

The New Ecological Paradigm Scale

The NEP is defined by Dunlap and Van Liere (1978) and has been used in many countries over twenty years. The scale was in five theoretical dimensions and consists of 12 items to identify ecological beliefs, values, attitude of a persons. The revised NEP scale developed by Dunlap et al. (2000) was in five factors (fragility of nature's balance, possibility of eco-crisis, anti anthropocentrism, anti exemptionalism, limit to growth) which has 15 items which explain same ecological paradigm.

There are many researches which used NEP. Cordell et al. (2004) analyzed data from the US National Survey on Recreation and the Environment (NSRE). Bjerke et al. (2006) studied NEP in outdoor recreation interests and environmental attitudes, Brymer and Gray (2010) studied NEP in intimate "relationship" with nature through extreme sports participations, Cole (2004) studied NEP in environmental impacts of outdoor recreation in wild lands, and Wolf-Watz et al. (2011) studied NEP in the relation of environmentalism and tourism preferences, and Brymer et. al. (2010) studied environmental profile of outdoor leadership, Dyck et al. (2003) studied specialization among mountaineers and its relationship to environmental attitudes, Kaltenborn et al. (2009) studied NEP in Amenity development in the Norwegian mountains Effects of second home owner environmental attitudes on preferences for alternative development options. And some Turkish researcher used NEP. Isildar (2008) studied evaluation of the effects of environmental education on environmental of approaches and behaviors of vocational school students; Gunden and Miran (2008) studied environmental attitudes of farmers; Taskin (2009) studied the environmental attitudes of Turkish senior high school students.

The aim of this study is to compare NEP level of OSP and NPOS with respect to some demographic variable as gender, age and education level in Turkey.

METHOD

The scope of this study is restricted by OSP as mountaineering/rock climbing, cycling, trekking and NPOS. To determine the ecological perception, the RNEP was used. This study is descriptive and definitive research.

The sampling group of this study consists of OSP ($n=1181$, $\bar{x}_{age}=35.85$ $SD=10.61$) and NPOS ($n=538$, $\bar{x}_{age}=31.78$ $SD=11.47$) total ($n=1719$, $\bar{x}_{age}=34.57$ $SD=11.04$) participants. Sampling has been applied and an electronic questionnaire form sent to all members of mountaineering and cycling clubs bound to Turkish Mountaineering Federation and Turkish Cycling Federation. All the received survey answers (1181) have been assessed and the NPOS (538) selected randomly.

An electronic questionnaire form which included RNEP scales questions, besides demographic

characteristics of participants was developed in order to gather data suitable for the study. The survey has been restricted by OSP as mountaineers/rock climbers, cyclists and trekkers and the non participants of these outdoor sports.

RNEP scale used in this study has five sub dimensions which was developed by Dunlap et al. (2000). The original NEP scale has been developed from Dunlap and Van Liere (1978) which consists of 12 items. But later RNEP scale which has 15 items has been developed by Dunlap et al. (2000) scale in five factors; fragility of nature's balance, possibility of eco-crisis, anti anthropocentrism, anti exemptionalism, limit to growth. The likert scales to each item were totally disagree = 1, partly disagree = 2, neither agree nor disagree = 3, partly agree = 4 and totally agree = 5.

Turkish validity and reliability analysis of original form of NEP was made by Furman (1998) and RNEP's Turkish validity and reliability analysis was made by Erdogan (2009). In this study, RNEP scale is used.

Some Turkish researchers used original RNEP scale with 15 sub dimensions (Isildar, 2008; Gunden and Miran, 2008; Taskin, 2009; Erdogan, 2009; Sam et al., 2009). Erdogan (2009) studied RNEP scale with five factors; fragility of nature's balance, possibility of eco-crisis, anti anthropocentrism, anti exemptionalism, limit to growth, but grouped all these five factors in four factors named; N1=Human Hegemony, N2=Ecological Crises, N3=Capability of Nature and N4=Hegemony of Nature. Also Gunden and Miran (2008), Alniacik and Koc (2009) studied RNEP scale in four factors; ecologic hazard, technological superiority, power of nature and human's hegemony, which are different than Erdogans'. Taskin (2009) studied this RNEP scale in three factors; steady-state economy, human exemptionalism paradigm, limits of growth and balance of nature. Isildar (2008) and Sam et al. (2010) studied RNEP scale in two factors; environment centered, human centered.

All the findings above given indicate that the RNEP scale can not be readily accepted as a unidimensional measure of ecological worldview and in Turkey as well (Alniacik and Koc, 2009). It has more than one dimension and each dimension (even each item in some cases) should be evaluated separately.

Alniacik and Koc found the Cronbach Alpha as 0.68, Demirel et al. found the Cronbach Alpha as 0.72, Taskin found the Cronbach Alpha as 0.46, Sam et al. found the Cronbach Alpha as 0.53, Furman found the Cronbach Alpha is 0,60, Gunden and Miran found the Cronbach Alpha as 0.62, Erdogan found the Cronbach Alpha as 0.62. In this study, the internal coefficient of consistence for RNEP scale as Cronbach Alpha = 0.66, each factor's Cronbach Alpha are N1 = 0.71, N2 = 0.61, N3 = 0.53, N4 = 0.41 and they are in the limits of reliability.

In the process of assessing data, the descriptive statistic means such as frequency (f), percentage (%), average (M) and standard deviation (SD), and to examine the difference groups Mann-Whitney U test, to examine the correlation between demographic variables and RNEP sub dimensions Pearson Correlation test have been used. Results have been assessed according to significant level 0.01 and 0.05.

RESULTS

In Table-1 the findings about OSP and NPOS have been given according to some demographic variables. As it is seen in the table; there are no important demographic differences between OSP and NPOS. The vast majority of participants of present study are male, single, well educated, below 34 years old. Average age of NPOS is lower than OSP.

Table 1: Demographic Findings of Participants

Demographic Findings of Participants		OSP		NPOS		Total	
		n	%	n	%	n	%
Gender	Male	937	79,3	284	52,8	1221	71,0
	Female	244	20,7	254	47,2	498	29,0
Age	24 and <	174	14,7	190	35,3	364	21,2
	25 - 34	415	35,1	166	30,9	581	33,8
	35 - 44	304	25,7	74	13,8	378	22,0
	45 - 54	217	18,4	76	14,1	293	17,0
	55 and >	71	6,0	32	5,9	103	6,0
	\bar{X}_{age}	35.85 ± 10.61		31.78 ± 11.47		34.57 ± 11.04	
Education Level	Primary School	25	2,1	12	2,2	37	2,2
	High School	255	21,6	72	13,4	327	19,0
	University	748	63,3	420	78,1	1168	67,9
	Master or doctorate	153	13,0	34	6,3	187	10,9
Total		1181	100,0	538	100,0	1719	100,0

In Table-2, statistical comparisons of OSP and NPOS have been given according to RNEP items and sub dimensions. As it is seen in the table; both OSP and NPOS, RNEP means are over than medium value. There is statistically meaningful difference between OSP and NPOS in all sub dimensions as named Human Hegemony, Ecological Crises, Capability of Nature and Hegemony of Nature of RNEP ($p < 0.05$). The RNEP items as 1st, 9th, 11th, 12th and 15th which have statistically meaningful difference in favor of OSP and 5th, 6th and 14th which have statistically meaningful difference in favor of NPOS ($p < 0.05$).

Table 2: Statistical Comparison of OSP and NPOS With Respect to RNEP Items and Sub Dimensions

RNEP Items and Sub Dimensions	OSP		NPOS		Total Participants		
	M	SD	M	SD	M	SD	Z
We are approaching the limit of the number of people the earth can support.	3,68	1,02	3,36	1,12	3,58	1,06	-5,757*
Humans have the right to modify the natural environment to suit their needs.	2,42	1,22	2,52	1,21	2,45	1,22	-1,618
When humans interfere with nature it often produces disastrous consequences.	3,89	1,04	3,89	1,14	3,89	1,07	-0,710
Human ingenuity will insure that we do not make the earth unlivable.	3,12	1,06	3,09	1,09	3,11	1,07	-0,921
Humans are severely abusing the environment.	4,19	0,97	4,20	1,08	4,19	1,00	-2,160*
The earth has plenty of natural resources if we just learn how to develop them.	3,99	0,89	4,13	1,01	4,03	0,93	-4,412*

Plants and animals have as much right as humans to exist.	4,5 1	0,6 0	4,3 4	1,1 1	4,4 6	0,8 0	- 1,440
The balance of nature is strong enough to cope with the impacts of modern industries.	2,6 9	1,2 6	2,7 2	1,1 6	2,7 0	1,2 3	- 0,616
Despite our special abilities humans are still subject to the laws of nature.	4,0 3	0,9 0	3,7 0	1,1 5	3,9 3	1,0 0	- 5,342*
The so-called "ecological crisis" facing humankind has been greatly exaggerated.	2,1 5	1,1 0	2,2 2	1,0 8	2,1 7	1,0 9	- 1,591
The earth is like a spaceship with very limited room and resources.	3,5 4	1,0 4	3,3 1	1,1 7	3,4 7	1,0 9	- 3,629*
Humans were meant to rule over the rest of nature	2,3 2	1,1 7	2,5 2	1,2 3	2,3 8	1,1 9	- 3,002*
The balance of nature is very delicate and easily upset.	3,6 8	1,0 5	3,6 4	1,1 6	3,6 7	1,0 9	- 0,152
Humans will eventually learn enough about how nature works to be able to control it.	3,2 7	1,0 7	3,4 4	1,0 3	3,3 2	1,0 6	- 2,582*
If things continue on their present course. We will soon experience a major ecological catastrophe.	4,2 5	0,8 8	4,2 4	1,0 9	4,2 5	0,9 5	- 2,469*
(HH) Human Hegemony	2,6 6	0,7 3	2,7 5	0,6 1	2,6 9	0,7 0	- 3,359*
(EC) Ecological Crises	3,7 9	0,6 8	3,6 4	0,7 1	3,7 4	0,6 9	- 3,495*
(CN) Capability of Nature	4,0 4	0,7 0	3,9 3	0,8 0	4,0 5	0,7 3	- 1,670
(HN) Hegemony of Nature	4,2 5	0,6 0	4,2 4	0,8 7	4,2 5	0,7 0	- 2,610*
n	1181		538		1719		

Z= Mann-Whitney U Test, * p < 0.05

In Table-3, statistical comparisons of OSP and NPOS with respect to some demographic variables have been given according to RNEP sub dimensions. As it is seen in the table; in HH, EC and CN sub dimension; there is a statistically meaningful difference between male OSP and male NPOS ($p < 0.05$), the results are in favor of male OSP.

There is a statistically meaningful difference between female OSP and female NPOS ($p < 0.05$) in HH and HN sub dimension. The results are in favor of female OSP in HH, are in favor of female NPOS.

There is a statistically meaningful difference between 34 years old and below OSP and NPOS ($p < 0.05$) in HH, EC and CN sub dimensions, the results are in favor of OSP. There is a statistically meaningful difference between 45 years old and upper OSP and NPOS ($p < 0.05$) in EC, CN and HN sub dimensions, the results are in favor of NPOS. In HH and HN sub dimensions; there is negative linear relation, but in CN sub dimension, there is positive linear relation between age and CN sub dimension.

There is a statistically meaningful difference between well educated whose education are high school or over OSP and NPOS ($p < 0.05$) in HH, EC and CN sub dimensions, the results are in favor of OSP. In EC and CN sub dimensions; there is negative linear relation, but in HH sub dimension; there is positive linear relation between education level and HH sub dimensions.

Table 3: Statistical Comparison of OSP and NPOS With Respect to Some Demographic Variables According to RNEP Sub Dimensions

Statistical Comparison of OSP and NPOS With Respect to Demographic Variables			Human Hegemony	Ecological Crises	Capability of Nature	Hegemony of Nature	
n							
Gender	Male		93	2.66 ±	3.78 ±	4.04 ±	
		M+	7	0.74	0.69	0.73	4.25 ± 0.60
		M -	28	2.72 ±	3.59 ±	3.89 ±	4.10 ± 0.97
		Z	4	0.59	0.76	0.85	-0,298
	Female		93	2.66 ±	3.80 ±	4.03 ±	
		M+	24	0.73	0.60	0.56	4.24 ± 0.58
		M -	4	2.78 ±	3.69 ±	3.98 ±	4.38 ± 0.72
		Z	25	0.63	0.64	0.74	-3,622 *
	Male/Female		93	-2,156 *	-3,353 *	-2,069 *	
		M+	7	-0.355	-0.311	-1.152	-0.216
		M -	28	-1.105	-1.347	-0.901	-3.234 *
		Z	4				
Age	24 and <		17	2.97 ±	3.80 ±	4.04 ±	
		M+	4	0.84	0.69	0.75	4.34 ± 0.67
		M -	19	2.83 ±	3.45 ±	3.78 ±	4.13 ± 0.98
		Z	0	0.61	0.76	0.88	-1,403
	25 - 34		41	-1,475	-4,351 *	-2,992 *	
		M+	5	2.64 ±	3.90 ±	4.07 ±	
		M -	16	0.72	0.67	0.77	4.36 ± 0.57
		Z	6	2.74 ±	3.76 ±	3.96 ±	4.28 ± 0.81
	35 - 44		41	-2,167 *	-2,521 *	-1,449	
		M+	30	2.54 ±	3.71 ±	4.03 ±	
		M -	4	0.74	0.71	0.67	4.18 ± 0.60
		Z	74	2.54 ±	3.65 ±	3.90 ±	4.19 ± 0.83
45 - 54		30	0.55	0.72	0.81	-1,186	
	M+	21	-0,457	-0,243	-0,296		
	M -	7	2.64 ±	3.72 ±	4.02 ±		
	Z	76	0.60	0.64	0.58	4.12 ± 0.56	
55 and >		21	2.75 ±	3.88 ±	4.18 ±	4.43 ± 0.70	
	M+	7	0.63	0.56	0.65	-4,603 *	
	M -	71	-1,444	-1,978 *	-2,573 *		
	Z	32	2.78 ±	3.51 ±	4.11 ±	-2,140 *	
		71	2.58 ±	3.68 ±	3.94 ±	4.08 ± 0.52	
		32	0.71	0.56	0.55	4.27 ± 0.88	
		32	2.78 ±	3.51 ±	4.11 ±	-2,140 *	

				0.56	0.88	0.53	
				-1,301	-0,309	-2,211 *	
Pearson Correlation between age and sub dimensions NEP	M+			-0.117 **	-0.089 **	-0.032	-0.166 *
	M -			-0.068	0.127 **	0.153 **	0.084 **
	Total			-0,110**	0,003	0,047 *	-0,057 *
Education Level	Primary School	M+	25	3.14 ± 0.79	3.73 ± 0.54	3.84 ± 0.70	4.04 ± 0.63
		M -	12	2.86 ± 0.44	3.63 ± 0.48	3.97 ± 0.48	4.17 ± 0.62
		Z		-0,914	-0,493	-1,435	-1,094
	High School	M+	25	2.68 ± 0.81	3.77 ± 0.70	3.99 ± 0.83	4.31 ± 0.59
		M -	5	2.89 ± 0.58	3.39 ± 0.79	3.67 ± 0.97	4.15 ± 1.09
		Z	72	-2,744 *	-3,439 *	-2,412 *	-0,748
	University	M+	74	2.67 ± 0.72	3.79 ± 0.67	4.06 ± 0.66	4.27 ± 0.57
		M -	8	2.73 ± 0.61	3.67 ± 0.71	3.97 ± 0.79	4.25 ± 0.85
		Z	42	-1,779 *	-2,373 *	-0,950	-2,217
	Master or doctorate	M+	15	2.48 ± 0.63	3.79 ± 0.67	4.07 ± 0.64	4.10 ± 0.69
		M -	3	2.66 ± 0.67	3.76 ± 0.54	4.02 ± 0.54	4.21 ± 0.64
		Z	34	-1,960 *	-0,429	-0,216	-0,525
Pearson Correlation between education and sub dimensions NEP	M+			-0.101 **	0.015	0.050	-0.059 *
	M -			-0.094 *	0.113 **	0.093 *	0.027
	Total			-0,099**	0.041	0,061*	-0,028

Z= Mann-Whitney U Test, * p<0.05, ** p<0.01

M+= Mean of Outdoor Sport Participants, M- = Mean of non Participants of Outdoor Sport

DISCUSSION

A person uses nature as a resource and goes to nature for many different reasons. According to a study conducted in Illinois University, the factors which motivate people to be a participant in outdoor sports are nature love, getting away from routine and family, escaping from responsibility, the need for physical activity, creativity, relaxation, realization of self, improvement and learning new skills, building relationships, making friends and observing them, meeting a famous person (if a known rock climber or somebody else is participating in the event, it draws people who want to meet him\her), spending time with family, the desire to be recognized, helping other people, social responsibility, motivating and inviting factors (e.q. a nice waterfall draws people there), gaining social statue, realization of self, the desire for success, rivalry (within and out), spending time and relaxation, intellectual aesthetics (Ibrahim and Cordes, 2002; Ardahan and Lapa Yerlisu, 2010). Individual's desire to look for him/herself finding and improving him/her in the nature that is as old as human history means "becoming mature person". Because of the reasons why people go nature which are given above, it is anticipated higher level of EA for all OSP, but in all RNEP dimensions level of EA is lower then expected. Of course in all RNEP dimensions level of OSP, EA is higher than level of NPOS. This can be the result of being familiar with nature, to experience the dimensions and results of the environmental crisis. OSP believe that there is an EC, if things go well CN will recover these setbacks and HN is supported, but HH are not supported by OSP.

Some researchers found relation between gender and NEP statistically meaningful. They stated that females have higher EA, EV and EB than males (Lou and Deng, 2008). In current study, there are statistically meaningful differences in HH in favor of OSP male and female, EC and CN in favor of OSP male and HN, CN in favor of OSP female. There is no statistically meaningful differences in all sub dimension of OSP ($p>0.05$), but there is statistically meaningful differences in just HH sub dimension of NOSP ($p<0.05$). The results of the current study are overlaps by these findings.

Some researchers found positive relation between age and EA (Tarant and Cordel, 2002; Zinn and Graefe, 2007; Lou and Deng, 2008). In the young aged participants, the EA is higher. This results overlap with current study. This means that in HH, EC and CN results are favor of young aged OSP, but in EC, CN and HN results are favor of medium aged NPOS. This may be affect of education and changing value of environment. Relation between education and NEP of current study support these results, too.

Some researchers found relation between education level and NEP statistically meaningful. They state that higher education level provides higher EA (Taskin, 2009). In current study, it was found that there is a negative correlation between education level and HH and a positive correlation between education level and CN. While there are a negative correlation between education level and HH and HN of OSP, there are negative correlation in HH and positive correlation between education level and EC and CN of NPOS. But in current study, the high school graduated people's NEP scores are in favor of OSP in HH, EC and CN, the university graduated people's NEP scores are in favor of OSP also in HH and EC, the master and doctorate graduated people's NEP scores are in favor of OSP also in HH. This can be a result of efficiencies of education system of Turkey about meaning and importance of ecology. When education level increases, NEP scores of OSP and NPOS increases too, but increase level is higher in OSP.

As a result of this study, there are statistically meaningful differences between OPS and NPOS with respect to age, gender and education level in favor of OSP. This means that being OSP have positive affect on EA, EV and EB. AV, EA and EB are the usually learned and/or sometimes analogized results of environmental value system of a person. There are big affect of education systems, media, social relation and etc. on AV, EA and EB and also NEP scores. From primary school to university education, the meaning of AV, EA and EB must be added to curriculum both theory and practice. At the same time, in all kind of media, these subjects must be discussed more.

From this perspective for developing higher EA, EV and EB of persons and society, the second and third age groups, females and males must be supported and motivated to join outdoor activities by their employers. Outdoor activities should be organized by private or public sector, nonprofit organizations like outdoor sports clubs or other associations. Municipalities, universities, educational institutions, youth centers, nonprofit organizations, private and public sector must take responsibility and leadership in organizing and delivering outdoor activities. Some activities must be organized for different part of society; especially disadvantaged groups like elderly, disabled persons and their family, persons who have chronic illness, homeless, the young individuals in dormitories. Activities must be done free of charge or with low cost to increase the number of OSP.

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