

# Environmentally Friendly Behavior in Greek Leisure Centers and Different Participants' Characteristics

Evangelia Kontogianni (Corresponding author)

Department of Physical Education and Sport Science,  
University of Thessaly, Karies, Trikala, 42100, Greece  
Tel.: 30-69-4657-9119 E-mail: [ekontogi@phyed.duth.gr](mailto:ekontogi@phyed.duth.gr)

Charilaos Kouthouris

Department of Physical Education and Sport Science  
University of Thessaly, Karies, Trikala, 42100, Greece  
Tel.: 30-24-3104-7004 E-mail: [kouthouris@pe.uth.gr](mailto:kouthouris@pe.uth.gr)

Aglaia Zafeiroudi

Department of Physical Education and Sport Science  
University of Thessaly, Karies, Trikala, 42100, Greece  
Tel.: 30-24-3104-7004 E-mail: [aglaiazaf@hotmail.com](mailto:aglaiazaf@hotmail.com)

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## Abstract

The aim of the present study was to investigate the environmentally friendly behaviour of people that participate in leisure and recreational activities. In particular to investigate changes in environmental friendly attitudes due to i) different demographic characteristics and ii) different preferences for participation at leisure or recreational activities. Even, to test the predictive ability of the particular environmental variables towards participants' 'word of mouth communication' (WOM) for eco-friendly leisure centers. Three hundred and seventy seven individuals (scuba divers N=81, swimming pool users N=124 and beach swimmers N=172) completed the following scales: a) 'eco-friendly policy', b) 'disposition to eco-friendly behavior', c) 'centers compliance to eco-friendly services', and 'WOM for

eco-friendly leisure centers'. The reliability of the scales were tested successfully (Cronbach's  $\alpha = .78 < .89$ ). Generally the results of the study supported that female, older in age and higher educated participants reported higher scores in all variables. Moreover statistical significant differences were revealed on 'eco-friendly policy' scale ( $p < .001$ ), as scuba-diver and beach swimmer subgroups succeeded significantly higher scores than the swimming pool users. Relevant results appeared for the 'centers compliance to eco-friendly services' variable ( $p < .01$ ), as scuba-diver subgroup scored significantly higher than the other subgroups. Finally all the three environmentally friendly scales (policy  $\beta = .20$ , compliance  $\beta = .26$  and disposition  $\beta = .41$ ) predicted statistically significant the 'WOM for eco-friendly leisure centers' ( $p < .001$ ). The managerial and marketing implications of these results are extensively discussed.

**Keywords:** Eco-Friendly Behavior, Policy, Compliance, Disposition, WOM, Recreation Services.

## 1. Introduction

Environmental issues have very quickly become a major global phenomenon in the last decade due to the individuals' increasing concern for the environment and the ecological pressures from non-governmental organizations (Jain & Kaur, 2004).

Consumption has become synonymous with environmental degradation and a number of present environmental problems can be linked to consumer lifestyles (Ozkan, 2009). People realizing the negative impact of their consumer behaviour in the environment, change their daily habits and behavior (Samarasinghe, 2012), seek more environmentally friendly products and services and are willing to pay more for that kind of products and services (Sarigöllü, 2009; Getzner & Grabner-Krauter, 2004).

Recreation participation has increased over the past decades (Thapa, 2010). The environmental footprint of particular recreational and leisure activities is increasingly observed (Trendafilova & Waller, 2011). Over the same timeframe, the field of recreation ecology has developed, largely in response to land managers' needs to maintain natural resource conditions in the face of rising demand for recreation opportunities (Monz, Cole, Leung, & Marion, 2009). Much of the recreation ecology research has focused on studying the effect that recreation has on the environment (Trendafilova & Waller, 2011).

Given the increase in recreation participation, it is important to assess recreationists' environmental attitudes and behaviours to promote environmental stewardship, and to develop effective strategies in natural resource management and public policy (Thapa, 2010).

Recent research has focused on the relationship of recreation participation and environmentally friendly behaviour. Peterson, Hull, Mertig and Liu (2008) identified that recreation participation had a greater impact on environmental concern compared to previous studies. Overall, findings were mixed with respect to the positive association between recreation participation and environmentally friendly behaviour (Jackson, 1986; Payne, 2002).

## 2. Theoretical Background

The literature review will originally expand on concepts dealt with the central principles in the methodology of the present study. Those concepts are the main notions for linking recreation and leisure market with the protection of the environment. In addition, research results will be quoted referring to the linkage between leisure and recreational activities and ecological concepts.

### 2.1 *Eco-Friendly Policy*

Environmentally friendly policies are concerned with the environmental protection processes and further ensure that there is a logical determination of the costs of environmental degradation due to industrial activities (Asuquo, 2012).

Asuquo (2012) suggested that firms should formulate and implement environmentally friendly policies to enhance their competitiveness which would subsequently lead to high corporate performance.

Panagiotidou, Kouthouris and Kontogianni (2013) investigated the beliefs of university students regarding implementation of environmentally friendly policy in Greece. Participants were 300 university students (34.3% male and 65.7% female). The results regarding the beliefs about implementation of environmentally friendly policy indicated a serious mood of the students towards the selection of sports centers which offer environmentally friendly services.

Nevertheless, there is currently a considerable gap in research focusing on recreational and leisure activities participants' beliefs about implementation of environmentally friendly policies.

### *2.2 Compliance of Leisure and Recreational Centers to Eco-Friendly Services*

The notion of 'environmental compliance' is directly related to the previous concept of 'eco-friendly policy'. They both constitute successive links in the chain of environmental behavior.

The importance of environmentally friendly design and construction of leisure and recreational activities and facilities has evolved over the past few decades (Gibson, Lloyd, Bain, & Hottell, 2008). Especially the design, build and operation of leisure and recreational facilities e.g. swimming pools and ski slopes have critically evaluated. Due to the effect of leisure and recreational activities on the environment (e.g. consumption of large amounts of water and energy resources), leisure and recreational facilities have to comply with strict regulatory and environmental principles (Gibson et al., 2008).

Environmentally friendly initiatives must now be under development in order to help leisure centers to be in compliance with the environmental laws. Many recreation managers in charge of environmental operations are working to comply with standards and guidelines (e.g., governmental standards) while integrating environmental issues into daily practice (e.g., recycling) (Rigby & Tager, 2008). Organizations comply with general aspects of environmental management referring to water resources (e.g., water quality management, wastewater management), energy conservation and use, waste management, air quality, environmental education, etc. (Sachs, 2002).

Environmental compliance may be defined as the state of being in accordance with a set of guidelines, specifications or legislative mandates designed to protect or manage targeted environmental resources or amenities (Heyes, 2000). Achieving compliance and identifying situations where actions or activities fail to agree with established standards remains a vital aspect of environmental protection. Therefore developing an effective environmental compliance program is an essential ingredient to any successful public or private sector entity whose activities impinge on the environment (Bregman & Edell, 2002).

While environmental responsibility has dramatically grown in the leisure and recreation industry in the last few years (Salome, van Bottenburg, & van den Heuvel, 2013), there still is relatively little academic research into the environmental responsibility of this industry.

### *2.3 Disposition to Eco-Friendly Behavior*

Kollmuss and Agyeman (2002) reported that old habits are a very powerful barrier for the adoption of environmentally friendly behavior. They also mentioned the difficulty for an individual who has tried to change a habit, even if the new habit has advantages over the old one. Pelletier, Dion, Tuson, and Green-Demers (1999) argued that people fail to adopt environmentally friendly behaviors because they believe neither can change their habits nor can they incorporate environmentally friendly behaviors in their daily life. Changing behavior often requires removal of old habits and creation of new ones instead (Dahlstrand & Biel, 1997).

Limayem, Hirt, and Cheung (2007) defined habits as the extent to which people tend to perform the behaviours automatically. Thøgersen and Møller (2008) argued that habits are conceptually related to environmentally friendly consumer behaviours.

In a previous research conducted in USA, findings showed that 82% of Americans did recycling, 83% has changed its purchasing habits in order to protect the environment, and 67% was willing to pay more 5-10% for eco-friendly products (Coddington, 1990).

Few studies have been conducted regarding disposition to eco-friendly behavior in the context of recreational activities. In Greece Chortiations, Kouthouris, Kontogianni, and Zafeiroudi (2013) investigated possible differences in disposition to eco-friendly behavior among participants and non-participants in recreational sport activities. The sample consisted of 300 Greek university students, of whom 73 (24.3%) were male and 227 (75.7%) female. The results indicated that students who participated in recreational sport activities reported higher scores in disposition to eco-friendly behavior than non-participants. In conclusion, students who participated in recreational sport activities expressed a higher intention to change individual behavior to protect the environment in relation to non-participants in recreational sport activities.

More over studies have showed that individuals are also willing to pay more when they adopt an eco-friendly behavior. Recreational scuba divers in Barbados are willing to pay more for marine biodiversity and reduce the negative impacts of this activity on the environment (Schuhmann, Casey, Horrocks, & Oxenford, 2013).

### *2.4 “Word of Mouth for Eco-Friendly Leisure Centers”*

The word of mouth (WOM) is “the informal transmission of ideas, comments, opinions, and information between two people, neither one of whom is a marketer”. Two subjects are involved in WOM one who “gains information about behaviors and choices”: the receiver, and the second who “increases his/her confidence in the personal product or behavioral choice by persuading others to do the same” (Blackwell Miniard, & Engel, 2006, p. 533).

WOM gives reliable and trustworthy information about products sometimes more than the formal communication. “The more positive information consumers get about a product from peers, the more likely they will adopt the product”. Furthermore WOM permits to reduce the uncertainty about the choice of a product and also to reassure that the consumer he/she makes a good choice. It is an efficient marketing, for instance, “80% of all buying decisions are influenced by someone’s direct recommendations” (Solomon, Bamossy, Askegaard, & Hogg, 2010, p. 402). This shows the vital role of the word of mouth in promoting particular products to the consumers.

Studies in the services marketing literature have consistently supported the value of WOM as one of the most effective communication strategies for service organizations (Alexandris, Dimitriadis, & Kasiara, 2001; Zeithmal & Bitner, 2003). This is due to the high-perceived risk that customers face, because of the intangibility of the core product, and the difficulties in standardizing quality. Perceived risk is defined as the uncertainty that consumers face before they buy a product or use a service (Murray, 1991). Customers rely more on personal sources of information, such as friends’ opinions, than on impersonal and more formal ones such as advertisements.

Paladino and Baggiere (2008) encourage marketers to develop WOM communication for ‘green’ electricity purchase, as it was supported that the social influence of friends significantly affected consumers’ green electricity purchase. In another study, it was supported that WOM communication was the main factor which affected customers’ quest and selection of green restaurants (Dewald, Bruin, & Jang, 2013).

Averdung and Wagenfuehrer (2011) investigated the influence of WOM communication on the consumers’ willingness to pay more for environmentally friendly products and services. The results indicated that WOM communication significantly affected the consumers’ willingness to pay more for that kind of products and services. In a relative research with a sample consisting of female consumers of eco-friendly food products, results indicated that positive WOM recommendations were especially significant for the trust in eco-friendly products (Banyte, Brazioniene, & Gadeikiene, 2010).

Chen (2013) stated that consumers attach great importance to WOM communication in order to buy "green" products. Considering the above statement, organizations should pay more attention to the ‘green WOM’ and its effects on the green purchasing behavior of green and non-green consumers. Growing in importance of ‘green WOM’, Yuhong and Shaoping (2010) suggested that organizations should launch a special green channel to spread WOM.

### *2.5 Demographic Characteristics and Environmentally Friendly Behavior*

Previous research has examined the effect of demographic characteristics on the environmentally friendly behaviour which indicated mixed results (Rouphael & Inglis, 2001; Uyerra & Cote, 2007). However, there is limited research regarding environmentally friendly behaviour and demographics in the context of leisure and recreation.

Rouphael and Inglis (2001) who recorded underwater behavior of 214 divers in a Marine Park in Australia argued that women involved in recreational diving behave more

environmentally friendly than men. In a similar study which was conducted in a National Marine Park of a Caribbean island contrary results were obtained. The sample of the study consisted of 28 divers (19 males, 9 females). Male and female divers appeared to display distinctly different underwater behaviors. Female divers inflicted more negative impacts on the marine environment than male divers (Uyarra & Cote, 2007).

Musa, Seng, Thirumoorthi and Abessi (2011) in their study in recreational diving argued that young people (19-29 years old) do not indicate environmentally friendly behaviour regarding marine environment in contrast with older people, while D' Souza, Taghian, and Khosla (2007) argued that young people are more sensitive to environmental issues. Kontogianni, Zafeiroudi, Pantidis, and Kouthouris (2012) investigated differences between ski centers' users due to different age level regarding attitudes to general participation in environmental actions. The sample consisted of 135 ski resorts' users aged from 19 to 54 years old. Results indicated no statistically significant differences regarding attitudes to participate in environmental actions due to different age level. Xiao and Dunlap (2007) argued that individuals with higher educational level were more concerned with environmental issues. Similar findings were obtained by Ozkan (2009) in a study in Turkey who reported that individuals with higher educational level indicated an environmentally friendly behaviour. Opposite findings were reported by those who argued that there was no statistical difference between individuals with different educational level regarding their intention to buy environmentally friendly products (Samarasinghe, 2012).

In a more recent study conducted in Greece Kontogianni and Kouthouris (in press) aimed to investigate environmentally friendly behavior at a Greek ski resort. Specifically the study aimed to investigate demographic differences (gender, age, educational level) in terms of: a) 'attitudes towards environmental issues', b) 'verbal commitment to environmental actions', c) 'preferences for environmentally friendly services', d) 'willingness to pay more for environmentally friendly services', among users of a ski resort. Two hundred and fifty five individuals (recreational skiers 64.6%, snowboarders 17.9%, resort' visitors 17.5%) took part in the study. Regarding demographic characteristics statistical significant differences were found only between males and females on the 'attitudes towards environmental issues' scale, with female users scoring higher than male users.

Studies concerning differences in environmentally friendly behaviour due to different demographics have not always produced similar findings (Uyarra & Cote, 2007), therefore more research is required.

### *2.6 Leisure/Recreational Activities and Environmentally Friendly Behaviour*

Previous research has investigated the relationship between recreation and environmentally friendly behaviour (Thapa & Graefe, 2003). Peterson et al. (2008) supported that recreation participation has a greater impact on environmental concern. Theodori, Luloff, and Willits (1998) reported that there is a positive correlation between environmental behavior and participation in recreational activities.

Regarding the relationship between recreation activity and environmental concern Dunlap and Heffernan (1975) reported that a) recreation and environmental concern are positive and b) the relationship is stronger for appreciative (hiking, camping, photography) than consumptive (bunting, fishing, snowmobiling) recreational activities.

Nord, Luloff and Bridger (1998) investigated the relationship between forest recreation and environmental concern and pro-environmental behaviour. The sample consisted of 1201 individuals aged from 18 years old and older. Frequency of visits to forest areas and forest recreation activities were moderately associated with proenvironmental behaviour, in spite of its weak association with generalized environmental concern.

The aim of Ardahan (2012) study was to compare New Ecological Paradigm level (persons' ecological believes, values, attitude) of participants (mountaineers/rock climbers, cyclists and trekkers) and non participants in recreational activities in Turkey. The sample consisted of 1181 participants (mean age=35.85) and 538 non participants in recreational activities (mean age=31.78). Results indicated statistically meaningful difference between participants and non participants ( $p < 0.05$ ).

In Greece Zafeiroudi and Hatzigeorgiadis (2012) investigated the relationship between responsible environmental behaviour and physical exercise participation in sport centers (e.g., parks). The survey involved 203 people from Greece (56% men and 44% women) aged 18 to 69 years. Findings indicated that participants who were exercised in sport centers 'quite often' showed higher scores in 'group environmental action' ( $p < .01$ ) than those who reported that they never exercise.

Chortiatinos and colleagues (2013) investigated the relationship between responsible environmental behaviour and participation in recreational sport activities. 300 university students, of whom 73 (24.3%) were men and 227 (75.7%) women took part in the study. Results indicated that students who participated in sport and recreational activities were more informed on issues related to environmental protection and had a higher intention to change individual behavior to protect the environment in relation to non-participants.

Though the association between participation in recreation activity and environmentalism is complex, there is a need for additional research to better understand the relationship (Schuett & Ostergren, 2003; Teisl & O'Brien, 2003).

### *2.7 Leisure and Recreational Activities in Greece*

In Greece peoples' interest for recreation has increased in recent decades. A significant number of commercial companies related to recreation have been established, offering a number of various forms of activities and related educational and recreational programs. Consequently, there has been a significant increase in participation of Greeks in recreational and leisure activities, as individuals, groups or families, and the popularity of the respective choice of activities in various destinations has increased (Kouthouris, 2009).

### **3. Objectives of the Study**

The aim of the present study was to investigate environmentally friendly behaviour of Greek participants in leisure and recreational centers.



In particular i) to investigate demographic differences in a) ‘eco-friendly policy’, b) ‘centers compliance to eco-friendly services’, c) ‘disposition to eco-friendly behavior’, ii) to find possible differences due to participation in different leisure and recreational activities, and iii) to examine if ‘WOM for eco-friendly leisure centers’ can be predicted by the above variables.

#### 4. Method

##### 4.1 Participants and Procedures

Three hundred and seventy seven (N=377) individuals who participated in recreational scuba diving (N=81), users of a major swimming pool (N=124) and swimmers in the sea (N=172) in Midland Greece took part in this study. Data was collected in a diving center, a major swimming pool and a public beach swimming area respectively, by a team of two researchers familiar with recreational and leisure activities. Four hundred questionnaires were distributed and three hundred and seventy seven were returned, achieving a response rate of 94.25%. In terms of demographic characteristics of the sample, 52.3% were male and 47.7% were female. In terms of the age, the younger and the older respondents were 18 and 62 years old, respectively. The majority of respondents (37.9%) was between 29 and 38 years old and was educated at university level (58.1%). The demographic characteristics of the sample are presented in Table 1.

Table 1. Demographic Data of the Sample

Sample	Gender	Age Subgroups	Educational Level
Scuba divers: 81 (21.5%)	Males: 197 (52.3%)	1 <sup>st</sup> group (18-28): 113 (30%)	Primary education: 14 (3.7%)
Pool users: 124 (32.9%)	Females: 180 (47.7%)	2 <sup>nd</sup> group (29-38): 143 (37.9%)	Secondary education: 118 (31.3%)
Sea visitors: 172 (45.6%)		3 <sup>rd</sup> group (39<): 121 (32.1%)	University graduates: 219 (58.1%) Students: 26 (6.9%)

##### 4.2 Research Instruments

4.2.1 ‘Eco-Friendly Policy’: ‘Eco-friendly policy’ scale was created and successfully tested for its psychometrics by Kouthouris and Kontogianni (2013). This scale evaluates the citizen’s beliefs about an active participation in events and activities for the establishment of eco-friendly policies and respectively eco-friendly practices in Greece. The scale consists of six (6) items: What is your opinion regarding eco-friendly policy in your country, what do you think of the following: a) “It is important to promote eco-friendly policy”, b) “I insist that more activities must be done on environmental protection”, c) “It is important to raise citizens' environmental concern”, d) “Activities for environmental protection mean waste of time”, e) “I believe that environmental protection is insignificant”, g) “Under the current economic crisis, I believe that environmental protection is not necessary”. Answers were given to a 7-point Likert scale (from 1=very strongly disagree to 7=very strongly agree). The internal consistency of the scale was tested high (Cronbach's  $\alpha = .83$ ).

4.2.2 'Compliance of Leisure/Recreational Centers to Eco-Friendly Services': 'Compliance of leisure/recreational centers to eco-friendly services' scale was created and successfully tested for its psychometrics by Kouthouris and Kontogianni (2013). This scale evaluates the citizen's perceptions about eco-friendly services, delivering by recreational centers. The scale consists of ten (10) items: How interested are you in leisure/recreational centers to comply with: a) "the implementation of laws relative to the environment protection", b) "efforts to find new alternative energy sources (wind, solar, etc.)", c) "proper management of garbage or waste (collection, recycling and disposal)", d) "avoiding pollution of the aquifer (by mechanical or chemical waste)", e) "finding ways to restrict wastage of electricity and natural resources such as water", f) "keeping the traditional architecture of the area", g) "By implementing sustainable management of the center", h) "efforts to educate staff on eco-friendly practices", i) "informing customers about the seriousness of using eco-friendly policy", j) "the introduction of new more eco-friendly methods of exercise". Answers were given to a 5-point Likert scale (from 1=not at all to 5=very much). The internal consistency of the scale was high (Cronbach's  $\alpha = .95$ ).

4.2.3 'Disposition to Eco-Friendly Behavior': 'Disposition to eco-friendly behavior' scale was created and successfully tested for its psychometrics by Kouthouris and Kontogianni (2013). This scale is created to record intentions towards the restriction on personal anti-environmental friendly habits. The scale consists of six (6) items: I am willing to... a) "confine my comfort", b) "change personal everyday habits", c) "work harder in some cases", d) "pay extra money", e) "contribute voluntarily in some cases", f) "get into difficulties". Responses were given to a 7point Likert scale (from 1=very strongly disagree to 7=very strongly agree). The internal consistency of the scale was high (Cronbach's  $\alpha = .88$ ).

4.2.4 'WOM for Eco-Friendly Leisure Centers': 'WOM for eco-friendly leisure centers' scale was created by Kouthouris and Kontogianni (2013). This scale evaluates individuals' WOM to visit leisure centers with eco-friendly services. The scale consists of three (3) items: a) "I will tell positive things to other people about leisure centers that provide eco-friendly services", b) "I will recommend leisure centers that provide eco-friendly services to other people", c) "I will encourage my family and my friends to visit eco-friendly leisure centers". Answers were given to a 7-point Likert scale (from 1=very strongly disagree to 7=very strongly agree). The internal consistency of the scale was high (Cronbach's  $\alpha = .93$ ).

4.2.5 Demographic Information. In the last part of the instrument, respondents were asked to provide demographic information on gender, age, and educational level.

## **5. Results**

### *5.1 Descriptive Statistics of the Study's Variables*

In terms of descriptive statistics of the study's variables, participants as a total reported high score at 'eco-friendly policy' variable ( $M=6.13$ ,  $SD=.99$ ) and relative high scores at 'centers compliance to eco-friendly services' variable ( $M=4.22$ ,  $SD=.80$ ) and 'disposition to eco-friendly behavior' variable ( $M=4.12$ ,  $SD=1.12$ ) (Table 2).

Table 2. Descriptive Statistics and Reliability Scores of Study's Variables

	N-items	MIN	MAX	M	SD	Cronbach's $\alpha$
Eco-Friendly Policy	6	2	7	6.13	0.99	.83
Eco-Friendly Compliance	10	1	5	4.22	0.80	.95
Eco-Friendly Disposition	6	1	7	4.92	1.12	.88

## 5.2 Demographic Differences and the Environmentally Friendly Scales

### 5.2.1 Gender and study's variables

An independent sample  $t$  test was conducted aiming to test for differences in the study's variables between male and female participants. Statistically significant differences were found in 'eco-friendly policy'  $t_{(375)} = -3.605, p < .001$  and 'centers compliance to eco-friendly services'  $t_{(375)} = -2.432, p < .05$ , between the two groups. Female participants scored significantly higher than male participants in both the above variables. No statistically significant differences were found in terms of 'disposition to eco-friendly behavior'  $t_{(375)} = -1.428, p > .05$  between the two groups (Table 3).

Table 3. Results of t-Tests for Study's Variables by Gender

	Eco-Friendly Policy	Eco-Friendly Compliance	Eco-Friendly Disposition
	M ( $\pm$ .SD)	M ( $\pm$ .SD)	M ( $\pm$ .SD)
Male	5.95 ( $\pm$ 1.04)*	4.12 ( $\pm$ .88) **	4.84 ( $\pm$ 1.20)
Female	6.32 ( $\pm$ .90)*	4.532 ( $\pm$ .70) **	5.01 ( $\pm$ 1.03)
t	-3.605	-2.432	-1.428
p	p<.001	p<.05	n.s

Note. \*p < .001, \*\*p < .05

### 5.2.2 Age Groups and Study's Variables

An analysis of variance was conducted aiming to test for differences in the study's variables between the three age subgroups (18-28, 29-38 and >39 years old). The analysis revealed significant effects for 'eco-friendly policy' ( $F_{(2,374)} = 12.84, p < .001$ ), 'centers compliance to eco-friendly services' ( $F_{(2,374)} = 15.22, p < .001$ ), and 'disposition to eco-friendly behavior' ( $F_{(2,374)} = 5.05, p < .01$ ). Post-hoc tests (Sheffe's) revealed that the 2<sup>nd</sup> (29-38 years old) and 3<sup>rd</sup> age subgroups (>39 years old) scored significantly higher than the 1st age subgroup (18-28 years old) in all the above variables. The ANOVA's scores are presented in Table 4.

Table 4. Analysis of Variance for Study's Variables by Age Subgroups

Age Subgroups	Eco-Friendly Policy	Eco-Friendly Compliance	Eco-Friendly Disposition
	M (±.SD)	M (±.SD)	M (±.SD)
1 <sup>st</sup> group (18-28)	5.74 (±1.17)	3.9 (±.89)	4.7 (±1.16)
2 <sup>nd</sup> group (29-38)	6.3 (±.83)	4.34 (±.70)	5.0 (±1.12)
3 <sup>rd</sup> group (39<)	6.29 (±.89)	4.4 (±.74)	5.1 (±1.06)
F	12.84	15.22	5.05
p	p<.001	p<.001	p<.01
	1-2,3**	1-2,3**	1-2,3**

Note. \*\*p < .05

### 5.2.3 Educational Level and Study's Variables

An analysis of variance was conducted to test for differences in the study's variables between the four educational level subgroups (primary education, secondary education, university students, university graduates). The analysis revealed significant effects for 'eco-friendly policy' ( $F_{(3,373)} = 17.95, p < .001$ ), 'centers compliance to eco-friendly services' ( $F_{(3,373)} = 9.46, p < .001$ ), and 'disposition to eco-friendly behavior' ( $F_{(3,373)} = 7.15, p < .001$ ). Post-hoc tests (Sheffe's) revealed that the 3<sup>rd</sup> educational level subgroup (university graduates) scored significantly higher than the other educational level subgroups in 'eco-friendly policy'. In addition, the 3<sup>rd</sup> educational level subgroup (university graduates) scored significantly higher than the 2<sup>nd</sup> (secondary education) and 3<sup>rd</sup> (university students) in 'centers compliance to eco-friendly services'. More over, the 3<sup>rd</sup> educational level subgroup (university graduates) scored significantly higher than the 1<sup>st</sup> educational level subgroup (primary education) and 3<sup>rd</sup> (university students) in 'disposition to eco-friendly behavior'. The ANOVA's scores are presented in Table 5.

Table 5. ANOVA for Study's Variables by Educational Level Subgroups

Age Subgroups	Eco-Friendly Policy	Eco-Friendly Compliance	Eco-Friendly Disposition
	M ( $\pm$ .SD)	M ( $\pm$ .SD)	M ( $\pm$ .SD)
1 <sup>st</sup> Group (Primary Education)	5.5 ( $\pm$ 1.6)	4.24 ( $\pm$ 1.05)	4.15 ( $\pm$ 1.36)
2 <sup>nd</sup> Group (Secondary Education)	5.9 ( $\pm$ 1.04)	4.0 ( $\pm$ .87)	4.71 ( $\pm$ 1.16)
3 <sup>rd</sup> Group (University Graduates)	6.4 ( $\pm$ .72)	4.4 ( $\pm$ .69)	5.12( $\pm$ 1.02)
4 <sup>th</sup> Group (Students)	5.34 ( $\pm$ 1.42)	3.81 ( $\pm$ .85)	4.56 ( $\pm$ 1.29)
F	17.95	9.46	7.15
p	p<.001	p<.001	p<.001
	3-1,2,4**	3-2,4**	3-1,4**

Note. \*\*p < .05

### 5.3 Differences due to Participation in Different Leisure and Recreational Activities

An analysis of variance was conducted aiming to test for differences in the study's variables between the three subgroups (scuba-divers, swimming pool users, and sea swimmers). The analysis revealed significant effects for the 'eco-friendly policy' ( $F_{(2,374)} = 7.16, p < .01$ ) and 'centers compliance to eco-friendly services' ( $F_{(2,374)} = 4.94, p < .01$ ). Post-hoc tests (Sheffe's) revealed that the scuba-divers and sea swimmers subgroups scored significantly higher than the swimming pool users' subgroup in the 'eco-friendly policy' variable. No statistical significant differences were found between the scuba-divers and sea swimmers subgroups in the above variable. Additionally, scuba-divers subgroup scored significantly higher than the swimming pool users' subgroup in the 'centers compliance to eco-friendly services' variable. No statistical significant differences were found between the sea swimmers subgroup and the scuba-divers and swimming pool users' subgroups in the above variable. No significant effects were found for the 'disposition to eco-friendly behavior' ( $F_{(2,374)} = 2.2, p > .05$ ). The ANOVA's are presented in Table 6.

Table 6. ANOVA for Study's Variables by Different Leisure and Recreation Activities Subgroups

Activities Subgroups	Eco-Friendly Policy	Eco-Friendly Compliance	Eco-Friendly Disposition
	M (±.SD)	M (±.SD)	M (±.SD)
1 <sup>st</sup> Group Divers	6.37 (±.88)	4.45 (±.72)	5.15 (±1.16)
2 <sup>nd</sup> Group Pool users	5.87 (±1.16)	4.10 (±.81)	4.87 (±1.14)
3 <sup>rd</sup> Group Sea swimmers	6.19 (±.87)	4.19 (±.81)	4.84 (±1.09)
F	7.155	4.938	2.193
p	p<.01	p<.01	<i>n.s</i>
	1 <sup>st</sup> -2 <sup>nd</sup> ** , 2 <sup>nd</sup> ,-3 <sup>rd</sup> **	1 <sup>st</sup> -2 <sup>nd</sup> **	

Note. \*\*p < .05

#### 5.4 Predicting WOM for Eco-Friendly Leisure Centers from Study's Variables

A regression analysis was conducted to investigate the degree to which environmentally friendly scales could predict WOM (Table 7). WOM was set as the dependent variable and the study's variables were set as the independent variables. The regression model was significantly ( $F = 129.32$ ,  $p < .001$ ), predicted the 51% of variance. More detailed 'disposition' was the strongest contributor ( $b = .41$ ,  $p < .001$ ), followed by 'compliance' ( $b = .26$ ,  $p < .001$ ) and 'policy' ( $b = .20$ ,  $p < .001$ ).

Table 7. Prediction of WOM from Environmentally Friendly Scales

Study's variables	<u>B</u>	<u>β</u>	<u>t</u>	<u>p</u>
Eco-Friendly Disposition	.38	.41	9.3	.001
Eco-Friendly Compliance	.33	.26	5.4	.001
Eco-Friendly Policy	.21	.20	4.1	.001

$F=129.32$ ,  $p<.001$ , Adjusted  $R^2= .50$

## 6. Discussion

Until nowadays, limited research has been undertaken to understand participants' perception of environmental friendly behavior in leisure and recreational activities. Considering the lack of research, the present study investigated environmentally friendly behavior of Greek participants in leisure and recreational activities, in the context of recreational scuba-diving and activities in pools and sea.

Regarding as a total, participants reported high score in 'eco-friendly policy' variable and relatively high scores at 'centers compliance to eco-friendly services' and 'disposition to eco-friendly behavior' variables. Similar findings were obtained by previous studies

conducted in Greece (Chortiatinos et al., 2013; Panagiotidou et al., 2013). This might be due to the fact that individuals have begun to comprehend the negative implication, which certain leisure and recreational activities have on the natural environment as Tixier (2009) noted. To the best of our knowledge it should be noted that, there is limited existed data concerning the above environmentally friendly scales in the context of leisure and recreational activities.

Considering the second objective of the study, regarding demographic characteristics, statistically significant differences were found at ‘eco-friendly policy’ and ‘centers compliance to eco-friendly services’, with the female scoring significantly higher than male. These results are in line with previous studies which supported that women who were involved in recreational scuba diving behaved more environmentally friendly than men divers (Rouphael & Inglis, 2001). However, no statistically significant differences were found in ‘disposition to eco-friendly behavior’ variable, regarding gender demographic characteristic. It is worthwhile to be mentioned that both female and male participants reported relatively high scores, though.

Findings concerning age subgroups are in line with previous research which supported that older participants tend to show higher levels of environmentally friendly behaviour than younger ones (Musa et al., 2011). Older participants scored significantly higher than younger ones in all study’s variables. A possible explanation for this might be that older individuals are more environmentally aware than younger ones (Tonglet, Phillips, & Bates, 2004).

Additionally, significant differences in all study’s variables were found between individuals with different educational level. Participants with higher educational level scored significantly higher than individuals with lower educational level in all study’s variables. A possible explanation for this might be that people with higher education have consequently increased access to information regarding environmental issues. Similar findings were obtained by Ozkan (2009) in a survey conducted in Turkey.

Present findings are in line with other studies’ findings which indicated significant differences regarding different demographics and environmental variables (Musa et al., 2011; Ozkan, 2009). Considering that we can come to the conclusion that demographic variables are useful variables for identifying an appropriate environmentally friendly consumer’s market segment. Since other studies did not declare for demographic differences facing environmental issues (Uyarra & Cote, 2007), findings regarding demographic characteristics towards environmental scales should be treated with caution.

In terms of differences due to participation in different leisure and recreational activities the results indicated that the scuba-divers and sea swimmers subgroups scored significantly higher than the swimming pool users’ subgroup in the ‘eco-friendly policy’ variable. Additionally, scuba-divers subgroup scored significantly higher than the swimming pool users’ subgroup in the ‘centers compliance to eco-friendly services’ variable. This might be due to the fact that individuals with frequent exposure to the natural environment are more likely to have environmentally friendly attitudes and behavior than those who spend more time in a structured environment as Stewart and Craig (2000) noted.

Regarding the third objective of the present study, the regression model tested successfully the predictive ability of study's variables towards 'WOM for eco-friendly leisure centers'. It should be noted that the  $F$  test was significant ( $p < .001$ ), indicating that the selected variables were significant contributors in predicting 'WOM for eco-friendly leisure centers'. This is an important finding since as Banyte et al. (2010) argued that positive WOM recommendations are especially significant for the trust in eco-friendly products and services.

## **7. Conclusions**

According to study's findings demographic characteristics were proved to be useful variables for the identification of the environmentally friendly consumer. Above findings can shade light in the existing gap regarding the relationship between demographics and environmentally friendly behavior.

The present study identified an important relationship between environmental friendly behaviour and participation in leisure and recreational activities. Participants in those activities indicated high scores in the environmentally friendly scales. Managers and marketers should respond to individuals' concern by adopting environmentally friendly programs in order to protect the environment and improve leisure centers' public image.

Moreover, the environmentally friendly scales predicted statistically significant WOM. Consequently 'WOM' communication can be regarded as an effective tool in the hands of managers and marketers to promote leisure centers' environmentally friendly services.

## **8. Managerial Implications**

1. The present findings supported that demographics can contribute to successful identification of the environmentally friendly consumer. Managers and marketers should use demographics in order to identify possible customers of theirs, plus demographics variables are easier to be found than other variables. An effective segmentation will help managers and marketers to provide better services (i.e. programs) in order to get individuals more involved with environmentally friendly leisure and recreational activities.
2. It was also supported that individuals who are involved in leisure and recreational activities indicated high scores in environmentally friendly scales. Considering that promotion of leisure/recreational facilities and programs could be regarded as an effective component of environmental protection strategy.
3. Managers should invest on spreading WOM as it is considered to be an effective method for providing opportunities for leisure and recreational participation and at the same time preserving the environment in which those activities take place in a sustainable way. Additionally WOM can effectively promote leisure centers' environmentally friendly services.

## **9. Limitations and Future research**

1. Opposite results were obtained regarding the usefulness of demographic variables for identifying an appropriate environmentally friendly consumer's market segment (Jain & Kaur,



2004; Straughan & Roberts, 1999). Considering present demographic results, we can conclude that demographic characteristics are useful variables for the environmentally friendly consumer's identification, though more research is needed in order to validate demographic characteristics' usefulness.

2. Future research should investigate the relationship between participation in leisure/recreational activities and environmentalism since results were proved to be controversial (Payne, 2002; Peterson et al., 2008).

3. The limitations of the study were the selection of some leisure/recreational activities and this study was based on samples of participants in three different leisure and recreational facilities in Greece. While the results are useful in the context of the specific leisure/recreational activities and facilities, they should be further validated with samples of other activities and facilities in order to have confidence in generalizing them.

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