

Environmental Educators' Personality Characteristics

A Psychometric Case Study at Environmental Educators' Academy, Skyros Island

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Abstract

Over the last decades, there's been considerable scientific interest in the psychological and personality correlates of pro - environmental behavior. Environmentalism has begun to be examined from the perspective of its association with personality traits, using the Big Five Personality model (Goldberg, 1993). However, there isn't much research concerning the personality traits of people who actively engage in environmental awareness training programs. This study innovates by attempting a measurement of the personality traits of a sample of environmental educator trainees, using a psychometric tool that can also measure sub factors of the main 5 traits. Testing was conducted during a team-building workshop, as part of the Environmental Education Summer School program, in Skyros- Greece, during the 2016 to 2020 period. Results showed that the Environmental Educator group scored significantly lower than the General Population on Emotional Stability ($t=-4.46$, $p<0.001$) and its subscales Emotional Control ($t=-4.20$, $p<0.001$) and Impulsiveness Control ($t=-3.93$, $p<0.001$), while scoring significantly higher on Openness ($t=4.72$, $p<0.001$) and its subscales Openness to Knowledge ($t=2.68$, $p<0.01$) and Openness to Experiences ($t=5.83$, $p<0.001$). The article highlights the personality traits that seem to describe people with the appropriate sensitivity, concern, and motivation, as well as the activation necessary for disseminating promotive information on environmental issues. The findings may be helpful in the design of environmental education programs, in the recruitment and professional development of environmental educators, and in the building of efficient environmental educator teams.

INTRODUCTION - THEORETICAL FRAMEWORK

Throughout human history, human behaviors have disrupted the natural environment, mainly through our tendency to adapt the environment to our needs, instead of adapting to it like the rest of the animal kingdom (Galvani, 2016). Many of our current practices are not sustainable, although people's understanding of environmental crisis issues has increased with time (Pavalache- Ilia, M. et al, 2018). In order to address the environmental crisis, which we are currently experiencing, the scientific community is trying to identify how personality affects environmental behavior, in order to direct its influence into certain actions that will slow down climate change (Wuertz, 2015). Until now, there is evidence to support that there are specific variables that can be manipulated into making people engage more in environmental behaviors such as beliefs, socio-demographic variables, etc. (Skanavis et al., 2016). However, there isn't much research to be found concerning the personality traits of people who actively engage in environmental awareness training programs. It's this gap in research that the present study proposes to start filling in.

Personality – Behavior and Pro-environmental behavior

During the last century, human behavior concerning various fields has become a crucial objective of study and research. Even more, behavior has been systematically examined in light of its interaction with personality in every manifestation of human action, since personality defines behavior but also conclusions about personality characteristics are derived from the observation of behavioral patterns.

Personality refers to individual differences in characteristic patterns of thinking, feeling and behaving. The study of personality focuses on two broad areas: One is understanding personality characteristics, such as sociability or irritability, individually. The other is understanding how a person's various characteristics come together as a whole to define their behavior (<https://www.apa.org/topics/personality> (accessed 2022 -03 -20)). These behavioral differences among individuals are consistent over time or contexts, for example, in the tendency to approach novel objects or predators, explore new environments, or interact with conspecifics (Gosling 2001, as cited in Herborn K. et al, 2014)

As the environmental issue has become an urgent topic, it has attracted scholars' attention across different fields, with environmental behavior emerging as one of the most investigated factors (Tamar et al., 2020). Environmental psychology studies focus on the complex interaction between human behaviors and the environment. The focus eventually shifted from describing environmental behavior to the determinants of pro-environmental behavior (Kothe et al., 2019; Paswan et al., 2017). This endeavor is considered crucial as it promotes positive environmental behaviors and, at the same time, reduces negative environmental behaviors (Kollmuss and Agyeman, 2002). Pro-Environmental behavior (PEB), also known as green-, sustainable-, or environmentally-friendly (eco-friendly) behavior, is defined as a set of behaviors in which individuals take protective actions toward the environment (Krajhanzl, 2010). Now, more than ever, the need to investigate the reasons that lead a person to any kind of environmental behaviors is crucial (Markowitz et al, 2012) due to the

increasingly obvious consequences of the ecological crisis that the planet is experiencing, as well as the role that the human factor has played in it.

For many decades now, scholars have made serious efforts to explore the determinants of pro-environmental behavior as well as the links between them all. Many psychological factors, including personality, attitudes, values, and norms (Kaiser, Wölfing, & Fuhrer, 1999; Stern, 2000), predict individual environmental behaviors. As personality is considered such a core part of what motivates our values, beliefs, and attitudes, it seems reasonable to expect that basic differences in personality may influence our pro-environmental behavior and our engagement in environmental issues (Taciano et al., 2012)

Also Kothe et al. (2019), in their review, suggest that knowledge, attitudes, intention, and values should be examined as some of the potential predictors of pro-environmental behavior, placing additional emphasis on the investigation of the role of each one (Tamar et al., 2020). As cited in Tamar et al. (2020), although the factor of **knowledge** has been found to be a predictor of pro-environmental behavior (Ajzen et al., 2011; Carmi et al., 2015; Zsoka et al., 2013), recent findings confirm that knowledge has weak or no effects on environmental behavior (Gkargkavouzi et al., 2019; Braun and Dierkes, 2017) while findings of Casalo et al. (2019) and Wang et al. (2020) suggest that it has strong effects. Earlier findings, according to Courtenay-Hall and Rogers (2002), support the position that environmental knowledge and environmental behaviors are separated by a gap in people's mind and knowledge, although necessary, is not sufficient in predicting environmental behaviors (Kollmuss and Agyeman, 2002). Moreover, knowledge is only one side of the coin, the flipside being the effect of value orientation on pro-environmental behavior (Bouman et al., 2018; de Groot and Steg, 2007, 2010). It is believed that **values** affect a wide range of environmental beliefs and behavior and are relatively stable over time. Environmental psychology scholars have found many ways in which values influence pro-environmental behavior. Specifically, values predicted willingness to reduce personal car use (Nordlund and Garvill, 2003) and accept climate change policy (Nilsson et al., 2004). Intention to exhibit pro-environmental behavior depends on prosocial and pro self values (Garling et al., 2003). Recent studies suggest that certain types of values (e.g. social-altruistic and egoistic) have a positive impact on environmental behavior, such as controlling human consumptions (Helm et al., 2019), encouraging social environmentalism, conservation and environmental citizenship (van Riper et al., 2019) and promoting green lifestyle (Sony and Ferguson, 2017). **Attitude** also seems to immediately influence pro-environmental behavior, as previously found by Meinhold and Malkus (2005), Jakucionyte-Skodien et al. (2020) and Paswan et al. (2017). However, earlier research such as LaPiere's (1934) found that attitudes were irrelevant to behavior (Aggarwal et al., 2018)

Personality traits seem to be essential elements of people's intrinsic motivation and intention to act and behave pro-environmentally and have been investigated as important predictors of pro-environmental behavior (Poškus, 2018), as cited in Wuertz (2015). Unfortunately, although many steps have been taken to alleviate environmental problems, human behavior is not changing fast enough (Gifford, 2011). People understand that there is a problem with global warming and maintaining a sustainable environment, but "...have done little to change their environmentally-damaging behavior" (Gifford, 2011). As she suggests, the implications

for positive social change include a better understanding by psychologists as to which of the Big 5 personality traits are more likely to contribute to participation in preserving the environment. Researchers in the fields of environmental psychology and sociology have tried to define the concept of the “pro-environmental” individual. This person is described as one who expresses an environmentally friendly course of action in various fields, such as energy use, transportation and waste reduction (Markowitz et al, 2012).

Personality traits- the Big 5 model

Personality traits can describe one behavior or behavioral regularities, but they can also describe causes for a person’s behavior (Kressel and Uleman, 2010). A trait is a stable and salient personality characteristic based on which a person will display certain behaviors in a given situation (Anusic et al., 2009). Costa and McCrae (1990) defined traits as “dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings, and actions” (p. 23). According to Eysenck and Eysenck (1985), people exhibit high variety regarding their stable and immutable psychological characteristics. These discrepancies among individuals have been conceptualized and explored in a plethora of approaches, from theories exploring temperament and motivation, to the more widely-known taxonomies of human personality (Elliot & Thrash, 2002; Gray, 1981). One of the most well-established and most widely used theoretical models of describing personality and individual personality trait differences is the Big Five model (Anusic et al., 2009), on which the present study is based. As cited in Pavalache-Ilia, M. et al (2018), according to -DeYoung (2015), the Big Five theory traits causally influence life outcomes and characteristic adaptations. They describe the function of the underlying psychological processes which generate emotional, cognitive, motivational and behavioral states associated with these traits.

The 5-factor model of personality includes the traits of Extraversion, Openness to experience, Conscientiousness, Agreeableness, and Neuroticism. **Extraversion** assesses the tendency of someone to be optimistic, to feel confident when leading or addressing groups of people, to enjoy social gatherings and interactions, and to experience positive feelings of enthusiasm and energy. **Neuroticism** is described by the tendency towards vulnerability, sentimentality, fearfulness and low stress tolerance. It includes traits such as anxiety, depression, insecurity and, possibly, anger. This personality dimension tends to reflect investment in close relationships as well as more fear of or sensitivity to the possible rejection from others (Hirsh, 2010). Neuroticism’s positive pole is Emotional Stability and this is how it will be used and mentioned in the present study. High levels of **Openness to experience** are related to curiosity and preference for novelty (Ashton and Lee, 2009). High **Conscientiousness** describes one’s tendency to be organized, to work in a disciplined way towards one’s goals, to strive for perfection and accuracy. Finally, **Agreeableness** refers to the tendency to be cooperative, patient and lenient vs. a tendency to be ill-tempered, irritable and resentful. (Pavalache- Ilia, M. et al., 2018).

Over the years, more and more research is focused on finding out how personality traits, more specifically, the “Big Five Personality Traits”, relate to pro-environmental values and environmental attitudes (Hirsh, 2010; Nisbet, Zelenski, and Murphy, 2009; Hirsh & Dolderman, 2007).

The Big 5 connection to environmental aspects in previous research

Openness

Environmental values seem to be directly related to openness, as research has shown that openness is an important predictor of the above. (Hirsh & Dolderman, 2007). People who perceive man as part of the whole and in full connection and interdependence with the natural environment but are also able to recognize the beauty of the natural environment that surrounds them, show high levels of openness. The above is a result of the high cognitive ability of these individuals combined with the flexibility they show in their way of thinking (DeYoung, Peterson, & Higgins, 2005).

Brick and Lewis (2016) suggest that in order to fully comprehend the long-term environmental impacts of climate change, one needs to show high levels of openness. More recent research results continue to find correlations that present Openness as the most directly related factor to environmentalism in general but also to environmental intentions, goals or self-reported behaviour (Wuertz, 2015; Brick and Lewis, 2016). More specifically, the results of Wuertz's (2015) research on the correlation between Big Five and environmental attitudes and behaviours, supported the above theory, showing that Openness is an important predictor of environmental behaviours and positively correlated with ecological thinking (Wuertz, 2015). Similar results presented by Terrier et al. (2016), show evidence that eco-helping correlates with openness to experience.

Openness to experience has also been found to be a factor influencing the probability of going forward with high-cost Energy Efficiency investments and engaging in PEB, according to the study by Busic Sontic et al (2018).

In their study, seeking to further explore pro-environmental behaviour in the context of climate change, Rothermich et al (2021) conclude that Openness, out of the Big Five personality traits, had the strongest link with favourable climate change attitudes. These results confirm the aforementioned research.

Conscientiousness

Research results, in the last few decades, vary as regards to the correlation of conscientiousness with environmental behaviour and environmental concern.

More specifically, according to Jagers and Matti (2010), individuals who have high scores on conscientiousness are more likely to engage in pro-environmental action. The reason for this is that these individuals have the tendency to show self-discipline, act dutifully, and aim for achievement, so their behaviour toward the environment is considered a civil duty (Jagers and Matti, 2010).

Subsequent research agreed that there is a correlation between high conscientiousness and environmental concern (Hirsh, 2010), as well as with pro-environmental behaviours (Markowitz et al., 2012).

Milfont and Sibley, in their 2012 research, found only a small association between Conscientiousness and environmental behaviour, while, in 2016, Brick and Lewis, found none.

Later, in 2016, Farizo et al., presented the results of their research in which they argued that there is a relation between conscientiousness and environmental behaviour and concern, and that individuals with high conscientiousness are more likely to follow the guidelines for a more environmentally friendly way of life. This correlation was confirmed again later by 48.

Busic-Sontic et al. (2017), whose research found that pro-environmental behaviour is influenced by Conscientiousness.

Finally, a different study of Terrier et al (2016) indicates a positive relation between eco-initiatives and conscientiousness.

Extraversion

According to Fuller and Marler (2009), extraversion is a part of the proactive personality, and it can therefore be considered to be a predictor of environmental behaviour. This theory is based on the fact that individuals with such characteristics show a strong interest for and engagement with their environment, so they have fostered high environmental awareness and pro-environmental behaviours (Fuller and Marler, 2009).

There were, however, no significant correlations found in the literature concerning Extraversion and environmentalism, until 2013, (Hilbig et al. 2013).

In 2016, Terrier et al., showed that extraversion predicts eco-civic engagement. More specific, the research concludes that extroverted people who prefer to spend their time among others and to participate in group activities, choose environmental programs and activities linked to eco-civic engagement (Terrier et al., 2016).

Moreover, research has shown that extraversion has been found to also be a factor influencing the probability of going forward with high-cost Energy Efficiency investments and engaging in PEB (Busic-Sontic et al., 2017).

Agreeableness

Another important factor in predicting pro-environmental values is Agreeableness (Hirsh & Dolderman, 2007) and Wuertz (2015). It has been found that Agreeableness is not linked in a positive manner with Consumerism, while it has a positive connection with Environmentalism, as it is considered to be associated with people who have higher compassion for others (Ashton et al, 1998). Thus, pro-environmental thinking is proved to have strong bonds with Agreeableness (Schultz, 2000) and could also be linked with the degree of willingness to invest in expensive Energy Efficiency plans (Busic-Sontic et al, 2017).

On the other hand, people who are self-centred have been thought to care less for the wellbeing of others, while scoring low on Agreeableness (DeYoung, Peterson, & Higgins, 2005).

Finally, while there are researchers who support the idea that the higher this trait is, the more people are prone to pro environmental behaviour (Milfont and Sibley 2012), there are also those who have found no links between the two (Hilbig et al. 2013). Brick and Lewis (2016) - using HEXACO - did not associate Agreeableness to environmental sensitivity and, similarly, Terrier et al (2016) suggest that people who have a sense of community and are collaborative might care less for environmental problems but that does not exclude them from being interested in peoples' way of thinking in other areas. A very interesting finding is that, according to Passafaro et al. (2015), individuals with high levels of agreeableness tend to prefer more sustainable tourism activities and it's more likely for them to state that others should take into consideration the impacts of their tourism choices regarding the environment.

Neuroticism

Finally, in terms of Neuroticism, Gifford and Nilsson (2014) suggest that people who have higher emotional instability have an inclination for caring about a variety of social concerns, which engulfs environmental problems as well, and Basic-Sontic et al (2017) suggest that Green Decision making has links to pro environmental thinking and investing in energy efficiency plans.

▪ Environmental Educators' Personality Traits

Discussions about personality traits related to environmentally friendly and pro-environmental behaviors are becoming more common (Brick & Lewis, 2016; Markowitz et al., 2012; Arbutnot, 1977), but little is known about the personality traits of people who choose to disseminate environmental awareness (Andic & Vorkapic, 2020).

Despite the fact that in recent years the field of environmental education has received a great deal of attention from the academic community (Scott, 2020), little attention has been paid to measuring the personality traits of the educators involved.

According to research conducted by Andic & Vorkapic (2020) on future early childhood educators, examining the connection between personality traits and pro-environmental attitudes, there is “a significant correlation of openness to new experience with growth, natural balance and rejection of exceptionalism, and a significant correlation of neuroticism and eco-crisis opportunities”.

CASE STUDY

The Environmental Educators' Summer Academy

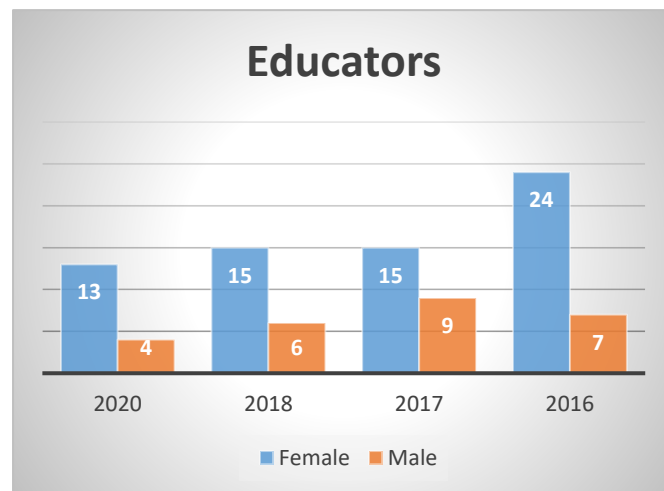
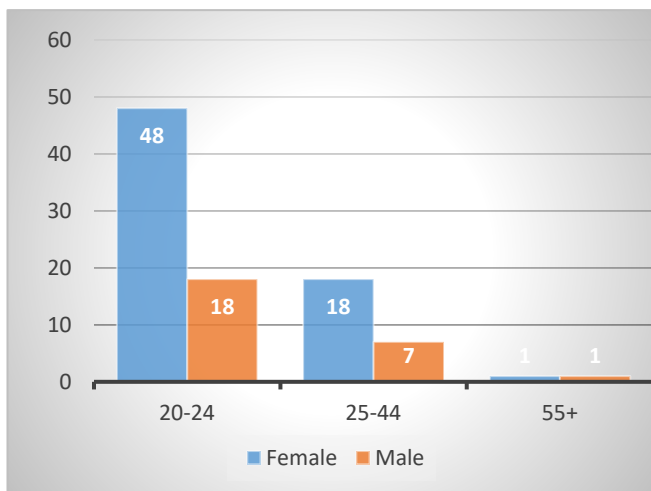
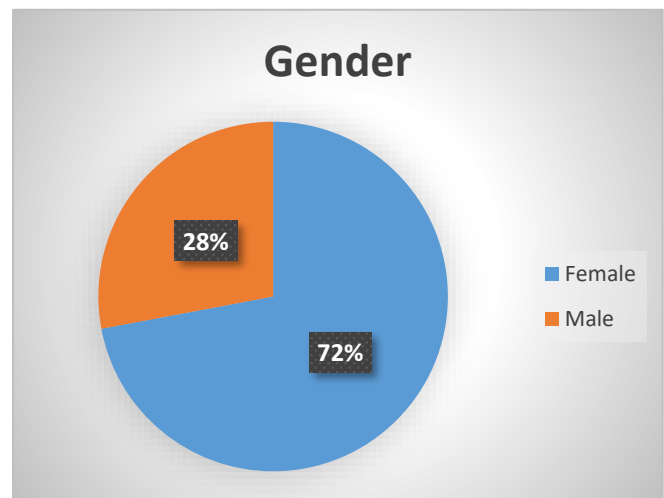
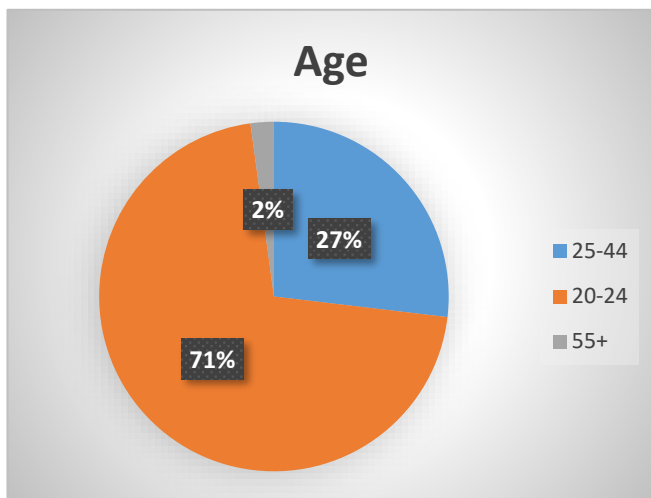
In 2015, two Greek public sector bodies (the multi-awarded ‘‘Skyros Project’’ and the Skyros Port Authority) partnered, for the first time, to create a synergy that focused, in every possible way, on the natural environment and its promotion, as long as it also assisted in the promotion and development of academic knowledge in this field (Skanavis et al, 2019). In 2016, this synergy created the Summer Academy of Environmental Educators, which practiced one of the most modern educational techniques, which is now generally referred to as “train the trainer” (Skanavis et al, 2018). The Summer Academy was set up to offer environmental science students and graduates, as well as environmentally conscious people, the chance to explore first-hand the philosophy behind environmental education and its implementation in practice (Kounani, 2018). The goal was to educate educators in the field of environmental studies in providing formal education (schools), non-formal education (museums, cruise ships, gardens, centers of environmental education) and informal education (means of mass communication) (Manolas, 2017). Based on previous research, the present study attempts to measure the personality traits of people who actively express their willingness to become environmental educators, by participating in the Summer Academy of Environmental educators on the island of Skyros, thereby manifesting their sensitivity and concern on environmental issues. The objective is to test previous findings by comparing a specific group

of environmentally motivated people (trainee educators) to people at large (general population).

Data were collected during the 4 Summer Academy of Environmental educators training courses, beginning in July 2016 and ending in 2020.

Subjects

The questionnaire was administered to 93 students of the Environmental Educators Academy, in Skyros. Most subjects were women (25% men, 72% women), between the ages of 20 – 55+ (71% were between 20-24 years old, 27% between 25-44 years old, while only 2% were above 55 years old).



Means of Sampling

As mentioned before, the psychometric evaluation was conducted using the PEQ[®].

The PEQ[®] questionnaire is based on the five factor model, the most contemporary scientific system of personality classification and description. The five factors trait theory is utilized as a frame of shared reference for the description of personality, through which possible individual differences can be interpreted and categorized.

The PEQ[®] main factors and their respective sub factors are the following:

- 1. Extraversion**
 - Vitality
 - Dominance
- 2. Agreeableness**
 - Cooperativeness
 - Friendliness (Congeniality)
- 3. Conscientiousness**
 - Fussiness
 - Perseverance
- 4. Emotional stability**
 - Emotional Control
 - Impulsiveness Control
- 5. Openness**
 - Openness to knowledge
 - Openness to experience

To assess the subject's attitude towards testing, the questionnaire contains a separate Lie Scale which provides information about the subject's response style and his / her tendency to present a distorted profile. The Lie scale is also subdivided into two secondary scales.

- moral lie
- egotistic lie

The PEQ[®] questionnaire is a self-report psychometric instrument. Individuals are asked to indicate the degree to which questionnaire statements are true or false on a Likert scale (1 = Absolutely false for me, 2 = Quite false for me, 3 = neither true nor false, 4 = Quite true for me, 5 = Absolutely true for me). Automated results are produced via special software. The raw scores are converted to STEN scores. Results include: Individual interpretive report and STEN score graphs.

Procedure

Students participated in a teambuilding workshop as part of their training program. The aim of the workshop was to demonstrate the benefits of teamwork, the influence of personality characteristics on teamwork, the difference between individual work and teamwork, and the extent to which teamwork effectiveness increases in direct proportion to the individuals' unique characteristics contribution.

Phase 1: A computerized version of the test was administered to the subjects on a voluntary basis and the trainer kept the data for processing. Individual test results were not made available to the subjects during this phase.

Phase 2: The trainer made a power-point presentation on team and teamwork (definition, team dynamics, and benefits of teamwork).

Phase 3: The participants were asked to solve a logical reasoning exercise while under the influence of an interfering stimulus, individually at first and then in teams. During this phase they had the chance to find out that their effectiveness increased by about 20-25 % when working in teams.

Phase 4: Subjects received their personal PEQ[®] profiles and report. They had the opportunity to read their personality traits analysis, receive personal feedback from the trainer and discuss their results with their working team members. Now, they were finally able to realize the small group roles they had unknowingly taken on because of their individual personality characteristics, and the resulting individual behavior.

The original responses, the raw scores, and the final results of the personality test were collected and stored in a data base for further processing and statistical analysis.

RESULTS

Table 1. Descriptive Statistics for Skyros Summer School participants' scores in the big five factors and their sub factors compared to the general population's scores (from the standardization sample).

	SKYROS ENVIR. SCHOOL						GENERAL POPULATION								
	N	Min	MEAN	Max	SD	V=S ²	MIN.POSS.	MAX.POSS.	N	Min	MEAN	MEAN%	Max	SD	V=S ²
EXTRAVERSION	93	51	83,62	114	12,65	160,06	24	120	838	38	82,39	68,66	114	9,64	92,93
AGREEABLENESS	93	72	96,90	118	9,60	92,22	24	120	838	32	95,89	79,91	120	9,31	86,59
CONSCIENTIOUSNESS	93	63	89,99	119	11,38	129,47	24	120	838	58	89,48	74,56	116	9,99	99,87
EMOTIONAL STABILITY	93	37	69,84	101	14,32	205,20	24	120	838	30	76,56	63,80	116	13,74	188,90
OPENNESS	93	58	94,33	116	9,87	97,36	24	120	838	52	88,66	73,88	119	11,12	123,63
LIE SCALE	93	22	38,20	57	7,23	52,27	24	120	838	14	42,61	35,51	69	7,37	54,26
Vitality	93	26	45,35	60	7,04	49,62	12	60	838	16	44,44	74,06	59	5,61	31,46
Dominance	93	25	38,27	58	7,01	49,18	12	60	838	20	37,96	63,26	59	5,54	30,68
Cooperativeness	93	32	49,60	59	5,11	26,07	12	60	838	20	48,78	81,29	60	5,10	26,03
Friendliness (Congeniality)	93	29	47,30	59	5,75	33,06	12	60	838	12	47,11	78,52	60	5,15	26,47
Fussiness	93	28	44,38	60	6,99	48,82	12	60	838	25	44,21	73,68	60	6,00	35,98
Perseverance	93	30	45,61	59	6,66	44,35	12	60	838	16	45,27	75,45	60	5,69	32,36
Emotional Control	93	15	33,43	51	8,33	69,40	12	60	838	12	36,97	61,62	60	7,65	58,56
Impulsiveness Control	93	18	36,41	53	7,68	58,92	12	60	838	17	39,59	65,98	60	7,38	54,51
Openness to Knowledge	93	23	46,92	59	6,72	45,16	12	60	838	24	44,86	74,77	60	7,08	50,15
Openness to Experiences	93	32	47,41	58	5,68	32,29	12	60	838	24	43,79	72,99	59	5,68	32,21
Faking Ability	93	9	19,98	31	4,92	24,24	12	60	838	7	22,10	36,83	34	3,98	15,83
Faking Morality	93	9	18,23	27	3,79	14,35	12	60	838	7	20,51	34,18	35	4,48	20,11

As presented in Table 1, the highest raw score appears on the factor of Agreeableness (M=96.90, SD= 9.60) for the experimental group, which differs from that of the general population (M=95.89, SD= 9.31).

Openness follows showing a raw score difference of about 6 whole units between the experimental group (M=94.33, SD=9.87) and the general population (M=88.66, SD=11.12).

Emotional Stability is clearly lower for the experimental group (M=69.84, SD=14.32) when compared with the mean raw score of people in the general population (M=76.56, SD=13.74).

Worthwhile mentioning findings also appear in the Subfactor scores. Specifically, trainee environmental educators seem to have lower emotional and impulsiveness control (M=33.43, SD=69.40 and M=36.41, SD= 58.92 respectively) in comparison to the general population (M=36.97, SD=7.65 and M=39.59, SD=7.38 respectively).

Contrary to the above, environmental educators seem to be significantly more open to knowledge (M= 46.92, SD=6.72) and more open to experiences (M=47.41, SD=5.68) than the general population (M=44.86, SD=7.08 and M=43.79, SD= 5.68 respectively).

Also, according to the t-tests, the Environmental Educator group scored significantly lower than the General Population on Emotional Stability ($t=-4.46$, $p<0.001$) and its subscales Emotional Control ($t=-4.20$, $p<0.001$) and Impulsiveness Control ($t=-3.93$, $p<0.001$), while scoring significantly higher on Openness ($t=4.72$, $p<0.001$) and its subscales Openness to Knowledge ($t=2.68$, $p<0.01$) and Openness to Experiences ($t=5.83$, $p<0.001$).

There was no significant difference found between the experimental group (Skyros) and the General Population (G.P.) on the factor of Conscientiousness ($M=89.99$, $SD=11.38$ for Skyros vs $M=89.48$, $SD=9.99$ for G.P.), Extraversion ($M=83.62$, $SD=12.65$ for Skyros vs $M=82.39$, $SD=9.64$ for G.P.), and Agreeableness ($M=96.90$, $SD=9.60$ for Skyros vs $M=95.89$, $SD=9.31$ for G.P.), even though the latter appears above as the highest scored factor.

Fig 1: Mean scores in the Big Five Factors for the two groups

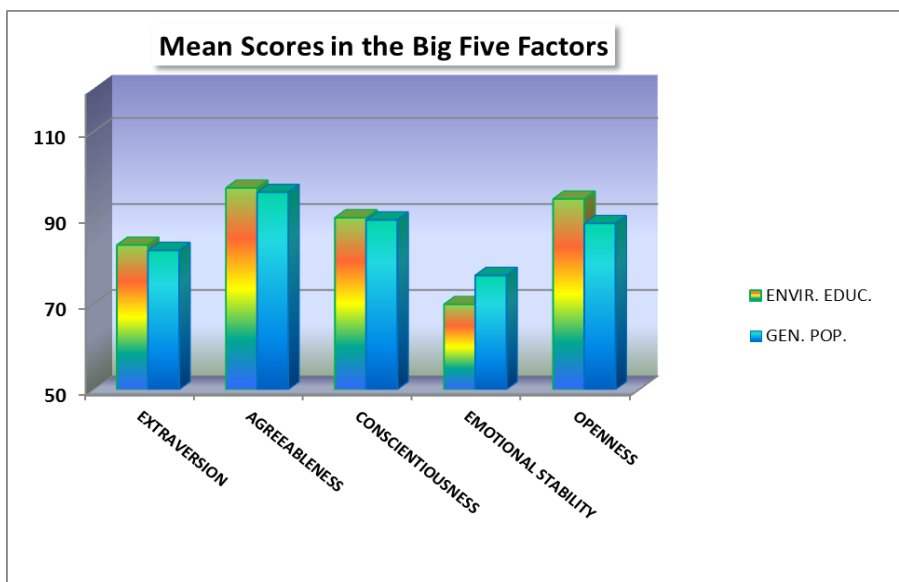
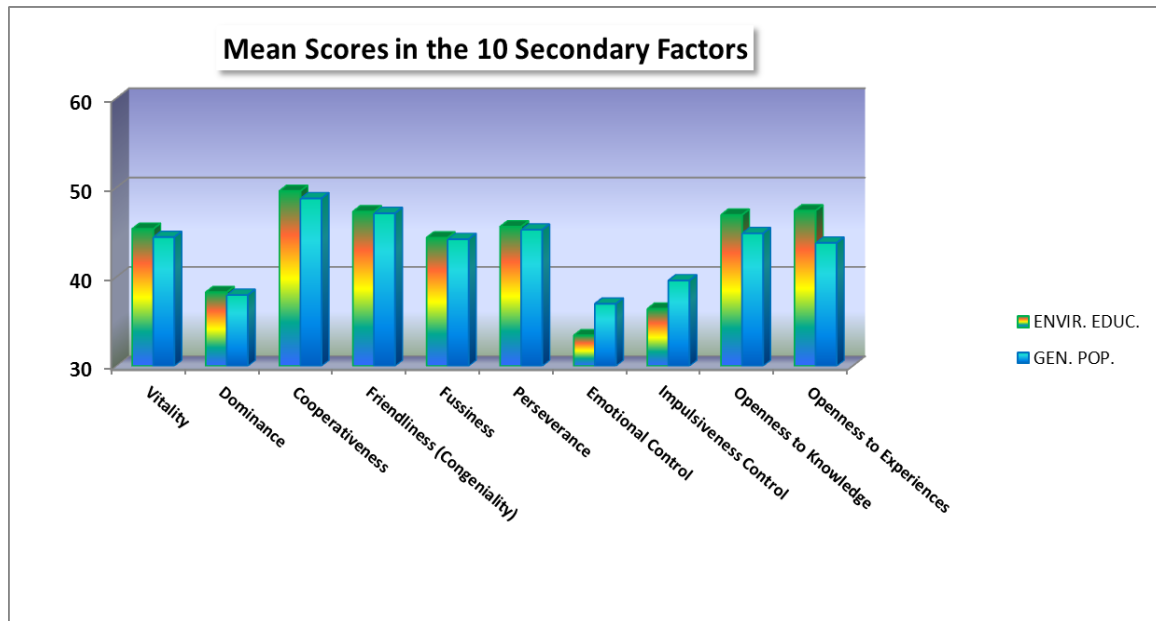


Fig.2: Mean Scores in the 10 Secondary Factors for the two groups.



DISCUSSION

As shown in the results, the experimental group exhibits the highest score on **Agreeableness**. This characteristic has already been found to be associated with pro-environmental motives (Schultz, 2000). Agreeable persons are altruistic, cooperative, trusting, honest, benevolent and, according to Ashton et al (1998), the trait is linked to higher levels of empathy. These persons show great concern for others and for the common good, elements very important for environmental issues promotion. Also, since these people are most of the time very well-liked and in leading positions, they have a higher-than-average ability to inspire other people towards behavioral change. Our findings, however, don't show a statistically significant difference with the General Population trend, so this can only be interpreted as initial evidence for further research using a larger experimental group.

Digging further into our findings, we see that the experimental group subjects exhibited lower **Emotional Stability** than the General Population, scoring lower on both emotional control and impulsiveness control. As mentioned in our theoretical framework, low emotional stability, which also appears in our study, can be explained by the tendency of people exhibiting it to be worried about many aspects of life, including environmental issues (Gifford and Nilsson 2014). However, another explanation/hypothesis lies with the young age of the trainee group (the majority is below the age of 26). The Big 5 Traits model clearly talks about stable and permanent personality characteristics which, however, are consolidated over the 30th year of age. People in our subjects' age range are motivated by what appeals to them, however personality stability has not yet fully set in. In addition, emotional stability, viewed in light of stress tolerance and composure, needs a certain degree of life experience in order for it to be fully established.

Finally, and as far as **Openness** is concerned, it is, at first glance, an expected finding since interest in environmental issues has only relatively recently arisen, thus making individuals who are systematically informed the "a priori" example of aware and sensitive citizens. On the other hand, the fact that environmental educators seem to be significantly described as personalities more open to knowledge and new experiences is very encouraging. As Poškus (2018) underlines, the trait of openness plays a very important role in adopting pro-environmental behavior. Sustainable lifestyles are unusual and novel (even though they are increasingly becoming the norm), thus individuals higher in openness tend to adopt them more readily. Individuals, and also societies, who are high in openness tend to look for new experiences and activities, are more likely to approach situations in a novel manner, and seek out new ways of accomplishing various tasks. It is hoped that a lot of these people have the ambition to transfer this awareness to others. After all, environmental education needs people who seek novel experiences, are adaptive and innovative, focus their attention on current problems, are able to introduce the need for change to other people, feel the need to acquire more knowledge on environmental issues, and are able to devise alternate and imaginative methods of educating others.

Our findings are for the most part consistent with previous research. Openness and Agreeableness were scored higher in our sample when compared with the general population and emotional stability was scored lower (which is high Neuroticism) than the general population. The differences in Openness and emotional stability were statistically significant in the direction hypothesized, while no statistically significant difference was observed for Agreeableness regardless of the high scores attained.

LIMITATIONS & FURTHER SUGGESTIONS

Despite the interesting and mostly consistent with previous research results, the present study is limited in the sense that it focuses on the Personality Traits of the sample, without statistically examining any correlations or predictive relationships between the traits and environmental attitudes or behaviors in the way other studies have. It rather replicates previous research, but with a difference. It concerns itself more with factually examining the way the particular Personality Traits show up in the Greek population and comparing them to a specific sample of people who actively exhibit their environmental concern and sensitivity, rather than simply expressing it through their responses to a set of self-reporting questionnaires.

The small sample (>100) may, at first glance, be considered a serious limitation and it did make it hard for us to obtain statistically significant results, but, on the other hand, it made the significance of the results obtained even more important and pronounced.

It is proposed that the research be continued throughout the annual Summer Academy of Environmental Educators in Skyros, in the years to come. It could also be enriched with samples from other similar educational organizations in order to come up with more significant results about personality characteristics, and provide us with an opportunity to examine their relationship with environmentalism dimensions.

Conclusion

It is commonly accepted that there is the need of more research on environmentally-sustainable behavior and how these behaviors relate to the big five personality traits (Griskevicius, Van Den Bergh, & Tybur, 2010 cited in Wuertz, 2015).

An understanding of personality traits, that correlate with pro environmental behavior, can offer psychologists an insight on how to design messages and behavioral models to address people, motivate them and facilitate their better decision making to preserve the environment. Environmental policies design can also take advantage of such findings since, even though these policies provide the general frame and instructions, pro-environmental action is ultimately driven by behavior.

Similarly, the knowledge on the environmental educators' personality traits would lead to accurate selection criteria, as well as valuable information on the design of training and promotional programs. The examination of the sub factors is also necessary as it gives a detailed depiction of personality structures and behaviors. Hopefully, the results of the present study can contribute and be made good use of in the ways suggested above.

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