



Awareness Concerning Volunteerism, Philanthropy, and Environment—A Comparative Study Between Mati and Skyros

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On a global level, there is a tendency to conduct bibliographic studies about the creation of resilient communities in disaster areas. Community resilience has a significant role when residents are called upon to recover from a natural disaster (Molavi, 2018; Moreno, 2018). Based on previous research in the existing literature and after the catastrophe in Mati, and even more specifically in continuation to the research of Vallianou et al.'s, 2020, the present study goes a step further comparing for two populations the dimensions of volunteerism, philanthropy tendencies, and environmental awareness. A quantitative research was conducted through questionnaires via phone interviews and in person, one year after the wildfire, in Mati, Greece. The sample consisted of participants from Mati and Skyros Island. The findings of the study revealed that natural disasters are interconnected to volunteerism, philanthropy, and environmental awareness. In our research residents of Mati seem to score higher in environmental awareness in comparison to Skyros' residents who seem to have a stronger tendency on philanthropy. To conclude, the age groups which seem to be more environmentally aware are the one of 46-55 and the one of 65 and above.

Keywords: motivation, quality of life, social interaction, human factors, environmental awareness

Introduction

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Natural Disaster: Examples of Natural Disasters: From Global to Local

According to Below and Wallemacq (2018), a disaster can be described as “an unforeseen and often sudden event that causes great damage, destruction and human suffering”, which often destroys society’s available resources in order to handle the situation. For instance, in the Asia-Pacific region, in 2015, over 70 million people were affected by disasters, with over 16,000 victims (Ray-Bennett, 2007).

Natural disasters tend to change our lives in an irreparable way (Papaspiliou, Skanavis, & Giannoulis, 2014). Forest fires, as all natural disasters, are capable of solemnly affecting communities’ social structure as well as their environment (Papaspiliou et al., 2014). Forest fires not only have impact on the terrestrial environment and lead to a great damage of biodiversity, but at the same time they cause economic destruction including, loss of property and damage to agriculture (Adab, Kanniah, & Solaimani, 2013; Malik, Rabbani, & Faruq, 2013; Merlo & Rojas Briaes, 2000; Verde & Zezere, 2010; Wenliang, Shixin, Yi, Litao, & Shujie, 2010). Human factors seem to be the main cause of wildfires as they are, unlike other natural disasters, such as earthquakes or windstorms, the easiest to predict and control (Papaspiliou et al., 2014).

In Mediterranean countries (France, Italy, Greece, Spain), tourism seems to be more intense during summer when the temperatures are really high. As a result, tourists tend to move more in coastal areas, a fact that could explain the expansion of a wildfire (Papaspiliou et al., 2014). The year of 2007 was devastating, wildfires resulted in the loss of a great number of houses (2,200) in California and at least 850 buildings in Greece (Bassi & Kettunen, 2008).

As reported by Koutsias et al. (2012), even though the environmental destruction that was caused by the forest fire in Peloponnese, in 2007, was a matter of great importance, the major outrage was the loss of 67 lives. This incident, that affected directly both the environment and human lives, is the most extreme natural disaster which happened recently in Greece (Koutsias et al., 2012).

Consequences of Natural Disasters

Wildfires as all natural disasters have serious consequences in humanity. The consequences of natural disasters are divided into two categories. The first one threatens human life, and the other one endangers the stable structures and the successful functioning of human societies (Papaspiliou et al., 2014). Natural disasters have the potential to cause social change in places of high inequality, which can lead to additional economic and human losses (Yamamura, 2015).

Individuals and communities are differentially exposed, and vulnerability based on various factors such as age, gender, education, wealth, class, race/ethnicity/religion, disability and health status. These factors influence both the impacts and how the actors prepare for, respond to, and recover from hazards and disasters (Muttarak & Lutz, 2014).

Psychological Consequences of Natural Disasters

Similarly, a variety of analyses has shown that natural disasters have a negative impact on people’s psychology too, such as environmental post-Traumatic Stress Disorders (PTSD) (Thordardottir et al., 2015) and also the distress which people that live in disaster zones experience as a consequence of negative environmental changes, such as those captured by the concept of “solastalgia” (i.e., the anguish produced by environmental changes affecting one’s own beloved place, especially the loss of solace once provided by the environment; see Albrecht, 2005; 2010; 2012; Albrecht et al., 2007).

Preparedness, Awareness, and Resilience

That's why people should be prepared to face a natural disaster not only physically but also mentally. Mental (or psychological) preparation for wildfire is both uncertain and individual (Prior & Eriksen, 2013). According to Perry and Lindell (1978), mental preparedness is connected to "disaster subcultures" in communities, which are: (a) organized groups of people who have beforehand or routinely encountered a disaster, and (b) have developed a specific familiarity with the disaster and how they should react before, during, and after the event (Perry & Lindell, 1978).

But have you wondered "how prepared are local communities for a wildfire?" Governments due to the economic crisis gave priority on forest fire management (Salvati et al., 2015), prioritizing fire suppression technical means—less capable of fires prevention and control in less accessible rural areas and in densely populated per urban districts—and reducing human fire-fighting involvement (Xanthopoulos, 2008).

Well-informed communities form an integral part of forest fire prevention and control mechanisms, which is why it is important to be aware of the degree of information absorbed by citizens, and the main sources from which it is drawn (Karanikola, Tampakis, Arabatzis, & Maheridis, 2013).

As a matter of fact, well-informed residents of communities tend to be more resilient. Residents are increasingly and especially identified as key to progress in disaster management, given their commitment to risk information management and adjustment measures. The efficacy of participatory risk management relies on recognizing public perceptions of risks and incorporating them with great practices. Incorporating local information with scientific and specialized skill is essential to disaster risk management for decreasing human and economic losses (Eiser et al., 2012).

Public awareness can help lessen the harmful effects of disasters; a prior study found that "cultural misconceptions and incorrect beliefs and attitudes" could cause inadequate public behavior in disaster preparedness and response (Baytiyeh & Naja, 2014). It is very important for people to be informed about the risk of disasters so they can protect themselves and everyone else.

In addition, resilience is not just the ability to absorb shocks and maintain function, yet it includes a subsequent perspective concerning the capacity for renewal, re-association, and improvement, to be taken into consideration for re-planning a practical future (Lazzeretti & Cooke, 2015).

Natural Disasters: Volunteerism and Philanthropy

Generally, volunteering is defined as a behavior towards benefitting another person, group, or organization and furthermore the regular habitat when the volunteer performs non-compulsory and unpaid exercises (Wilson, 2009; Penner, 2004; Pagès, Fischer, & Van der Wal, 2017; Wanderley et al., 2019, p. 2). According to Musick, Wilson, and Bynum (2000), people who believe it are their personal responsibility to help those in need volunteer more hours than those who do not feel personally responsible. People who volunteer are likely to be above average in both income and education (Edwards & White 1980; Smith, 1994). So far, volunteerism has been defined rather broadly in disaster management studies and definitions typically focus on volunteers and volunteer activities (Whittaker, McLennan, & Handmer, 2015). Understanding the relationship between natural disasters and volunteerism is an important addition to the existing literature on volunteerism and may also inform the design of policies that help affected areas recover from natural disasters (Kalish, 2014).

Actually, volunteer fire departments play a significant role in providing rescue supply in case of a fire, emergencies, large-scale events, or even large-scale disasters (Degel, 2015). A review additionally uncovered five nations with some kind of fire volunteers: Portugal, Greece, Southern France, a couple of locales in Spain

(for example Catalonia, Valencia, Andalusia), and Italy (i.e., Sardinia). This is not surprising given that most articles, when discussing forest fires, refer to these as the five most fire prone countries—i.e., so-called “fire club” (Górriz-Mifsud, Burns, & Marini Govigli, 2019). These countries alone have a total burnt area of about 450,000ha/year, with a yearly expense of 1.5 billion euros in harms (Verkerk, Martinez de Arano, & Palahí, 2018; Górriz-Mifsud et al., 2019).

In the same way, philanthropy is equally important as volunteerism after a natural disaster. Philanthropy, defined briefly as: Private action for the public good (Payton, 1988) covers a behavior more far-reaching than interpersonal relationships. Philanthropy relies on feelings of civic duty, stewardship, and social responsibility for the well-being of society as a whole (Schuyt, Smit, & Bekkers, 2013).

Studies have reported a positive association between the level of social capital within communities and their constituents’ effort to mobilize resources for local Human Service Organizations (HSOs) which cater to social and humanitarian needs in the post-disaster recovery process (Dutta, 2017; Walker & McCarthy, 2010). When natural disasters occur, communities largely depend on philanthropic activities driven by local HSOs to satisfy immediate community needs. One example of resource mobilization is local philanthropy. The term “local philanthropy”—an institutionalized form of philanthropic collective action (Hwang & Young, 2019)—refers to community’s capacity for mobilizing resources (e.g., money, time, labor) necessary for collective responses to external shocks or social problems (Hwang & Joo, 2020). For instance, New Orleans right after Hurricane Katrina suffered from the government’s inability to provide sufficient and equitable support for hurricane victims, and this exacerbated the already-detrimental outcomes of the hurricane (Aldrich, 2012). In such cases, social capital is integral to how communities respond effectively to the aftermath of natural disasters (Aldrich & Meyer, 2015).

However, charitable giving by individuals differs from corporate philanthropy in many ways (Loayza, Olaberria, Rigolini, & Christiaensen, 2012). While some individuals react by holding back on their financial activity (including charitable giving) following stressful events, others may express more generosity by increasing their giving due to solidarity and empathy with the victims (Kaniasty, 2012).

Actually, charities are an outcome of volunteerism and philanthropy. Muller and Kraussel (2011) looked at charitable donations made by large corporations in the wake of a disaster. In recent years, firm donations have played a vital role in the post-disaster rebuilding period (Muller & Kraussel, 2011).

Environmental Awareness & Environmental Education

The incident of the wildfire in Mati was broadcasted through mass media and social media. Social media is commonly used during natural disasters, environmental disasters, and environmental concerns. It is used to disseminate information, give early warnings, predict where and when a disaster will occur, raise environmental awareness, promote health, and measure public participation during these events (Finch et al., 2016).

Regarding awareness, Palmer (1998) emphasized that students should acquire appropriate range of awareness, understanding, and concepts about the environment so that critical judgment can be achieved. Athman and Monroe (2000) stated that environmental awareness of processes and systems play an important role in EE (Environmental Education).

As mentioned before, education and environmental awareness are interconnected. Furthermore, education helps communities and governments improve their risk management plans. Education in disaster resilience is crucial for the administrators setting up strategies and planning disaster reaction, organizing post disaster

activities and performing danger and weakness evaluations (Perdikou et al., 2014). Environmental education adds to the communication of data and to the advancement of compassion, abilities, perspectives, and standards that have an impact on the behavior of people and communities (Teodorescu & Oros, 2010).

Relating to society, it is discovered that highly educated societies have as a benefit greater financial development (Cuaresma, Samir, & Sauer, 2013; Lutz, Cuaresma, & Sanderson, 2008), further life expectancy, and better democracy (Lutz, Cuaresma, & Abbasi-Shavazi, 2010).

After an extended and systematic research on existing literature (mentioned above), about natural disasters, preparedness, volunteerism, philanthropy, and environmental awareness, and after the catastrophe in Mati, we compared for two populations the dimensions of volunteerism, philanthropy tendencies, and environmental awareness. In continuation to Vallianou, Alexopoulos, Plaka, and Skanavis (2020)'s, research which examined the surrounding the trauma effect of a wildfire through the expressed emotions, as well as how wildfire changes the community sense and place attachment during the reorientation process leading to community resilience, we ended up studying about awareness.

Purpose of the Study

This investigation is based on Vallianou et al.'s (2020) research which analyzed the way that communities' resilience was influenced after a wildfire, as well as how trauma and place attachment played an important role in this reorientation of communities' preparedness. Specifically, Vallianou's goal was to investigate the trauma effect of a wildfire through the expressed emotions, as well as how wildfire changes the community sense and place attachment during the reorientation process leading to community resilience. Based on that peace of research and reviewing the literature concerning the resilience processes as well as the effects on people's behaviors such as volunteerism and philanthropy after natural disasters, the present study attempted to go one step further investigating the above mentioned characteristics in the populations of: (a) Mati where a wildfire took place and (b) Skyros the residents of which are familiarized with environmental awareness as well as volunteer practices.

Hypotheses

In continuation to our study's purpose, we have made some hypotheses that arise from two research questions:

Research question No. 1: Populations of Mati & Skyros had tendencies on volunteerism, philanthropy, and environmental awareness.

From the first research question two hypotheses arise:

- Hypothesis No. 1: Both Mati and Skyros will score high in volunteerism, philanthropy, and environmental awareness.
- Hypothesis No. 2: Mati will score high in volunteerism and philanthropy because previous studies reveal that individuals living near a disaster site report higher levels of negative emotions compared to those living far from the disaster site and that is why a tendency towards volunteerism is observed.

Research question No. 2: How Mati and Skyros differ in regard to volunteerism, philanthropy, and environmental awareness.

From the second research question three hypotheses arise:

- Hypothesis No. 1: Residents of Mati will have stronger tendencies on philanthropy.
- Hypothesis No. 2: Residents of Skyros will be more environmentally aware because of the environmental

summer camp in Linaria, the port of Skyros.

- Hypothesis No. 3: According to Arcury (1990, p.19-25) that “in other studies, younger people are more environmentally concerned than older people”, we expect the younger ones to be more environmentally aware.

Methods

Methods and Study Area

The research was led through questionnaires via telephone interviews and in person, one year after the wildfire. The sample was made of participants from Mati (159) where the study was conducted via phone interviews and in person, and also participants from Skyros Island (120), that was utilized as a benchmark group, where the study was conducted only in person (Vallianou et al., 2020).

Skyros is an island in Greece that belongs in the Sporades complex, which is more than 145 km far away from Mati area, in the Aegean Sea that is part of the regional unit of Euboea. Skyros' population is 3.449 people according to the last census of 2011. Its population is isolated and that's why there are strong family bonds between the residents. We chose to compare Mati with Skyros because there is a Research Centre of Environmental Communication and Education which is active in Skyros and residents of the island are informed about its actions. That's a reason why residents seem to be environmentally aware.

Also, Skyros has a rich heritage of flora and fauna although the northern region is covered with pine forests; however its southern region is rocky. Last decade a significant part of the pine forest was burnt down, although new conifers have been growing rapidly. Mati's vegetation consists of pine trees too (Vallianou et al., 2020).

Mati and Skyros were compared regarding the samples' scores on volunteerism and philanthropy tendencies as well as their environmental awareness. The places of data collection were selected because they are both coastal areas, summer resorts located near Athens, they have common flora, and they are covered with pine forests. Skyros faced a major wildfire in the past, just like Mati did three years ago. Moreover, in Linaria, the port of Skyros, has taken action an environmental campaign, named SKYROS Project, communicated successfully at the Summit's events the message for climate change through the project's actions in Greece (Antonopoulos, Skanavis, & Plaka, 2015; Skanavis et al., 2018; Plaka et al., 2021). As a result, residents of Skyros are familiar with volunteerism and environmental awareness and they do volunteer work. Also, residents of Skyros were informed about the fire incident in Mati mainly through media broadcasting. The study investigates the possible similarities and differences between the two places and the effects of the natural disaster on their behavior tendencies.

Sampling Procedure

The purpose of the study was to investigate general awareness tendencies concerning volunteerism, philanthropy, and environmental issues of people after the appearance of a natural disaster in Mati and Skyros as previous research gives relevant indications. That is why no specific validated instruments were used but phrases indicating tendencies. This is of course a limitation of the presence research as well as the fact that we do not have measurements before the wildfire in order to make comparisons and have more safe and definite results. Future research is suggested measuring volunteerism, philanthropy, and environmental awareness before and after a natural disaster.

Measures

The questions which were used in order to measure volunteerism are:

- Lack of need for participation in social matters;
- Social participation because of a relevant experience.

The “lack of need for participation in social matters” is a variable that has a negative meaning, that’s why we have to highlight that the lowest the grading, the most people tend to believe that others participate in voluntary action.

The questions which were used in order to measure philanthropy are:

- Next generation care;
- Lack of people’s care for the fellow man;
- Money offer for charitable purposes.

The questions which were used in order to measure environmental awareness are:

- Recycling;
- Use of energy save light bulbs;
- Belief that the planet has unlimited resources;
- I enjoy nature walking by the sea;
- I like watching environmental programs;
- Belief that environmental crisis is reversible.

The questions were based on the background of world literature, from which we obtained data about how tendencies on philanthropy and volunteerism are measured (Schuyt, Smit, & Bekkers, 2013; Erez, Mikulincer, van Ijzendoorn, & Kroonenberg, 2008).

All of our questions were measured in a 5-point likert scale where 1 means absolutely disagree and 5 means absolutely agree.

The questionnaires that were used for the research consist of 14 questions, with no validated instruments. First of all, there are three demographic questions that ask the participants about their sex, their age, and whether they have children or not. Afterwards there are two questions about the perception of volunteerism, three questions about philanthropy action, and six questions that are related to participants’ feeling of environmental awareness. In a 5-point likert scale the subjects were asked to indicate the extent to which they agreed or not with the content of the sentences. Also, there is one question about the residents of Mati which examines how long they stayed in Mati after the wildfire and if they left the area, why they made this decision. Last but not least there is a question which examines if residents of Mati did research after the wildfire in order to learn how to face a relevant situation in the future.

Sample Statistics and Demographic Statistics

Sample statistics. The sample consists of 159 people (57%) in Mati and 120 people (43%) in Skyros, in total 279 participants.

Demographic statistics of Mati .It is obvious that the sample of participants consists of 61 men (38.4%) and 98 women (61.6%), in total 159 participants. Also, the sample of participants consists of nine people (5.7%) between the ages of 18-25, 10 people (6.3%) between the ages of 26-35, 20 people (12.6%) between the ages of 36-45, 53 people (33.3%) between the ages of 46-55, 33 people (20.8%) between the ages of 56-65, and 34 people (21.4%) from the age of 65 and above. Furthermore, it is obvious that when participants were asked whether they have children or not, 121 people (76.1%) answered positively and 38 people (23.9%) answered

negatively.

Demographic statistics of Skyros. Moreover, the sample of participants consists of 57 men (47.5%) and 63 women (52.5%), in total 120 participants. The sample of participants consists of 16 people (13.3%) between the ages of 18-25, 15 people (12.5%) between the ages of 26-35, 32 people (26.7%) between the ages of 36-45, 30 people (25%) between the ages of 46-55, 16 people (13.3%) between the ages of 56-65, and 11 people (9.2%) from the age of 65 and above. Additionally, when participants were asked whether they have children or not, 77 people (64.2%) answered positively and 43 people (35.8%) answered negatively.

Results

Descriptive Statistics for the Questions of Volunteerism and Philanthropy in Skyros and Mati

The highest M of volunteerism and philanthropy is observed in Skyros' and Mati's participants in the variable by "Philanthropy1-Next generation care" (Skyros: M = 4.83, S.D. = 0.38, Mati: M = 4.93, S.D. = 0.28). The lowest M of volunteerism and philanthropy is observed by participants in the belief the "Volunteerism1-Lack of need for participation in social matters" (Skyros: M = 3.80, S.D. = 1.07, Mati: M = 3.28, S.D. = 1.15). All of the rest beliefs ("Volunteerism2-Social participation because of a relevant experience" (Skyros: M = 3.84, S.D. = 0.93, Mati: M = 3.53, S.D. = 1.16), "Philanthropy2-Lack of people's care for the fellow man" (Skyros: M = 4.43, S.D. = 0.76, Mati: M = 3.92, S.D. = 1.24), "Philanthropy3-Money offer for charitable purposes" (Skyros: M = 3.39, S.D. = 1.13, Mati: M = 3.54, S.D. = 1.30)) are somewhere in between. Also, the variable with the lowest M is the variable "Volunteerism1-Lack of need for participation in social matters". Concerning the "Volunteerism1-Lack of need for participation in social matters", this variable has a negative meaning, that's why we have to highlight that the lowest the grading, the most people tend to believe that others participate in voluntary action.

Descriptive Statistics for the Questions of Environmental Awareness in Skyros and Mati

Furthermore, the highest M of environmental awareness is observed in Skyros' and Mati's participants by enjoying nature walking by the sea (Skyros: M = 4.60, S.D. = 0.76, Mati: M = 4.80, S.D. = 0.48). The lowest M of environmental awareness is observed by both participants by the variable "Planet has unlimited resources" (Skyros: M = 2.14, S.D. = 1.49, Mati: M = 1.44, S.D. = 0.92). All the rest of the activities ("Recycling" (Skyros: M = 4.38, S.D. = 0.80, Mati: M = 4.38, S.D. = 0.95), "Use of energysave light bulbs" (Skyros: M = 4.36, S.D. = 0.90, Mati: M = 4.50, S.D. = 0.86), "Watching environmental programs" (Skyros: M = 4.03, S.D. = 1.11, Mati: M = 4.10, S.D. = 1.03), and belief that the "Environmental crisis is reversible" (Skyros: M = 3.48, S.D. = 1.12, Mati: M = 3.15, S.D. = 1.10)) are somewhere in between.

Total Environmental Awareness Mati-Skyros

The respondents were divided according to the level of environmental awareness. The M of the six questions was taken as the score of total environmental awareness in this study. In order to add the third item ("Belief that the planet has unlimited resources") with the other items, we had to reverse it due to the fact that it has a negative meaning. When it comes to total environmental awareness the M = 25.15 and S.D. = 3.11.

Correlations

As for correlations, one can see small but statistically significant positive correlations between the variables. For example: Volunteerism1-Volunteerism2 ($r = 0.19$, Sig = 0.00), Volunteerism1-Philanthropy2 ($r =$

0.28, Sig = 0.00), Volunteerism2-Philanthropy2 ($r = 0.21$, Sig = 0.00), Philanthropy3-Philanthropy3 ($r = 0.21$, Sig = 0.00), and Philanthropy1-Total environmental awareness ($r = 0.19$, Sig = 0.00). The variable "Philanthropy2" has medium correlations.

Independent Samples T-Tests for Mati and Skyros

Independent samples T-tests were conducted to compare the scores for the subjects from Mati and the subjects from Skyros, for Volunteerism 1-2, Philanthropy 1-2-3, and for total environmental awareness.

For Volunteerism 1 (lack of need for participation in social matters) there was a significant difference in scores for Mati ($M = 3.28$, S.D. = 1.14) and Skyros ($M = 3.80$, S.D. = 1.07, $T (-3.98)$, Sig = 0.00). The magnitude of the differences was small (Eta. Squared = 0.054). This specific item has a negative meaning so possibly this indicates that participants seem to participate in social matters.

For Philanthropy 2 (lack of people's care for the fellow man) there was a significant difference in scores for Mati ($M = 3.92$, S.D. = 1.23) and Skyros ($M = 4.43$, S.D. = 0.76, $T (-4.28)$, Sig = 0.00). The magnitude of the differences was moderate (Eta. Squared = 0.06). This item has a negative meaning too.

For Volunteerism 2 (social participation because of a relevant experience) there was a significant difference in scores for Mati ($M = 3.53$, S.D. = 1.16) and Skyros ($M = 3.84$, S.D. = 0.93, $T (-2.46)$, Sig = 0.02). The magnitude of the differences was small (Eta. Squared = 0.021).

For Philanthropy 1 (next generation care) there was a significant difference in scores for Mati ($M = 4.93$, S.D. = 0.28) and Skyros ($M = 4.83$, S.D. = 0.38, $T (2.57)$, Sig = 0.01). The magnitude of the differences was small (Eta. Squared = 0.023).

For Environmental Awareness (total environmental awareness) there was a significant difference in scores for Mati ($M = 25.49$, S.D. = 3.10) and Skyros ($M = 24.70$, S.D. = 3.06, $T (2.09)$, Sig = 0.04). The magnitude of the differences was moderate (Eta. Squared = 0.016).

The variable Philanthropy 3 does not have a statistically significant difference for the M of Mati and Skyros.

In Regard to Whether They Remained in Region or Not

When residents of Mati were asked whether they remained in the region or not, 121 people (76.1%) answered positively while 38 people (23.9%) answered negatively.

In regard to Whether They Searched for Copying Strategies' Information

Also, when residents of Mati were asked whether they searched for copying strategies' information in case of a natural disaster, 103 people (64.8%) answered positively and 56 people (35.2%) answered negatively. When residents of Skyros were asked whether they searched for copying strategies' information in case of a natural disaster, 74 people (61.7%) answered positively and 46 people (38.3%) answered negatively.

Total Environmental Awareness in Relation to Age

A Kruskal Wallis Test was used in order to investigate the differences in the age groups. Total environmental awareness refers to people's actions and habits. Specifically in this study the habits and beliefs which were examined are: recycling, use of energy save bulbs, belief that the planet has unlimited resources, enjoying walking by the sea, watching environmental programs, and belief that the environmental crisis is reversible.

The first age group which is more aware about environmental issues is the one of 46-55 concerning the variable of total environmental awareness. The age group which is secondly more aware is the one of 65 and above. The rest of age groups are less concerned about environmental issues.

Discussions

In line to Vallianou's study, our research's purpose is to compare the dimensions of volunteerism, philanthropy tendencies, and environmental awareness for the two populations of Mati and Skyros. Population of Mati has experienced a wildfire lately, while the population of Skyros has not. The sample that we used consists of 159 participants from Mati and 120 participants from Skyros, in total 279 participants. We used data from Skyros due to the fact that we wanted to check participants' answers (who had not experienced a wildfire in a while) in comparison to the population of Mati who experienced the wildfire recently. We also examined whether participants searched for coping strategies' information. As a matter of fact, most participants from Mati are in the age group of 46-55, while residents of Skyros are in the age group of 36-45. Furthermore, most of Skyros' and Mati's participants have children.

Participants from Mati and Skyros tend to believe that they owe a better future to the next generation and, also, they stated that there is a lack of people's care for the fellow man. Furthermore, it is a fact that residents of Skyros and Mati choose to participate in social matters because they have a relevant previous experience. However, most of the participants do not prefer to offer money for charitable purposes. This could be justified because many people do not trust charities in Greece. When it comes to their need to be involved in social matters, participants scored low due to the fact that there is a negative verbiage, which means that they tend to participate in social matters.

It is a fact that most people enjoy walking by the sea. In this case we could say that participants tend to enjoy walking by the sea because they live in a coastal area. Moreover, it is observed by both groups of participants that they do not take for granted the fact that the planet has unlimited resources. When considering participants' habits which indicate their environmental awareness, it is shown that activities such as recycling, use of energy save light bulbs, and watching environmental programs are of great importance for them. Additionally, it is crucial to note that participants of the research believe that the environmental crisis is non reversible.

The generated results of the study indicate that there are correlations between the activities and the beliefs. It is clear that there are small but statistically significant positive correlations between them. The lack of need for participation in social matters with the social participation because of a relevant experience, and the lack of need for participation in social matters with the lack of people's care for the fellow man presented statistically significant correlations. Furthermore, social participation because of a relevant experience in combination with the lack of people's care for the fellow man and money for charitable purposes with money for charitable purposes presented as well, statistically significant correlations. Last but not least, participants' care about the next generation in relation with their total environmental awareness (habits) showed statistically significant correlations. This leads to an assumption that residents of Mati and Skyros try to be as environmentally aware as it could be possible, in order to hand a better way of life to the next generation.

Subsequently, independent samples T-tests were conducted in order to compare the scores for the subjects from Mati and the subjects from Skyros. In the belief that there is lack of need for participation in social matters, residents from Skyros scored higher. Also, residents of Skyros tend to believe more acutely that there is a lack of people's care for the fellow man, in comparison to Mati's residents. Both of the above subjects have a negative meaning and that is why they are presented as a lack of need. Moreover, in the belief that social participation is caused because of a relevant experience, residents from Skyros scored higher in comparison

with residents from Mati. Furthermore, in regard to next generation's care, participants from Mati seem to care more compared to Skyros' participants. Last but not least, residents of Skyros tend to believe more acutely that there is a lack of people's care for the fellow man, in comparison to Mati's residents. However, there are two variables in which there are not statistically significant differences. Independent samples T-tests were also conducted in the total sample, in order to examine whether there is a significant difference for people who had children or not concerning the statement "we owe a better future to the next generation" and "total environmental awareness". No statistically significant differences were found between the two groups for neither of the two variables.

We can surely state that most of the participants from Mati left the area, which is an understandable action because many vacation homes were destroyed. Our research demonstrated that both participants from Mati and Skyros searched for copying strategies' information in case of a natural disaster, in fact that a great percentage of 64.8% from Mati stated that they searched for strategies, and correspondingly a great percentage of 61.7% from Skyros looked for strategies too.

Surprisingly, the age groups which seem to be more environmentally aware are the one of 46-55 and the one of 65 and above. This could be explained by the fact that people at these age groups usually have their own children and try to protect them in every way and set themselves as the good example. A logical explanation could be either the fact that they are afraid of being trapped in the event of a natural disaster, either because at this age they have the wisdom of life and the luxury of memory which means that they have observed the changes that have occurred in the environment. However, it is really interesting the possibility that youngsters seem to be less aware about environmental issues and we suggest that further research should be conducted in order to confirm these predictions.

In conclusion, our study's findings reveal that most of Skyros' and Mati's residents searched for copying strategies' information in case of a natural disaster after having experienced wildfire. Also, most of Mati's residents still live in the area. Furthermore, residents of Mati seem to score higher in environmental awareness in comparison to Skyros' residents who seem to have a stronger tendency on philanthropy. This could be explained by the fact that there are strong family bonds between the residents. Moreover, residents of Skyros face many problems due to the fact that they live on an island and seem to cooperate closely. The age groups which seem to be more environmentally aware are the one of 46-55 and the one of 65 and above. However, in other studies, younger people are more environmentally concerned than older people (Arcury, 1993) because environmentalism is an appropriate outlet of younger people's relatively low commitment to the social order and lower regard of dominant value system. That's why we suggest that further research should be conducted in order to confirm these predictions.

Conclusion

In summary, based on existing literature we confirmed with our study that volunteerism after natural disasters is high. In addition, according to previous research, individuals living near a disaster site report higher levels of negative emotions compared to those living far from the disaster site (e.g., Benzion, Shahrabani, & Shavit, 2009; Rosenboim, Benzion, Shahrabani, & Shavit, 2012; Shahrabani, Benzion, & Shavit, 2009; Weinstein, Lyon, Rothman, & Cuite, 2000) and that is the reason why a tendency towards volunteerism is observed from the residents of Mati. When it comes to philanthropy, previous studies have reported that philanthropy plays a vital role in the post-recovery process and affects people's philanthropy tendencies that

has been confirmed by our hypothesis that residents of Mati will have stronger tendencies on philanthropy after the wildfire. Last but not least, according to the literature, younger people seem to be more environmentally aware, although in our research this was not confirmed.

Limitations and Further Implications of the Research

We have conducted a comparative study between Mati and Skyros concerning the perception of volunteerism, philanthropy tendencies, and environmental awareness, which lead us to our conclusions. Our research was conducted after the wildfire so this, as a fact, cannot assure us that the fire changed participants' answers for the above stated. It is a fact that we did not control the effects of covariates on the compared scores of the items in order to observe the differences between Mati and Skyros and we recognize that this is a limitation in our study. We suggest that further systematic research with validated instruments and data before and after a natural disaster should be conducted in order to create a spherical interpretation and contribute to build more resilient communities in the future.

Public Interest Statement

Based on previous research in the existing literature and after the deadly fire in Mati Greece, July 2018, our study's purpose was to compare for two populations, Mati and Skyros, the dimensions of volunteerism, philanthropy, and environmental awareness. We chose to compare these two populations because Skyros faced a major wildfire in the past, just like Mati did three years ago. In the context of resilient communities we wanted to check how people reacted after a natural disaster in order to observe how their tendencies on volunteerism, philanthropy, and environmental awareness change. Our research is a basis but further research should be conducted with data (such as personality traits or demographics) before and after the natural disaster, in order to see how variables such as personality play an important role in volunteerism, philanthropy, and environmental awareness so that there is an important contribution in building more resilient communities in the future.

References

- Adab, H., Kanniah, K. D., & Solaimani, K. (2013). Modelling forest fire risk in the northeast of Iran using remote sensing and GIS techniques. *Natural Hazards*, 65, 1723-1743. Retrieved from <https://doi.org/10.1007/s11069-012-0450-8>
- Albrecht, G. (2005). Solastalgia, a new concept in human health and identity. *PAN: Philosophy Activism Nature*, 3, 41-55. Retrieved from <https://doi.org/10.4225/03/584f410704696>
- Albrecht, G. (2010). Solastalgia and the creation of new ways of living. In S. Pilgrim and J. Pretty (Eds.), *Nature and culture: Rebuilding lost connections* (pp. 217-234). London: Earthscan.
- Albrecht, G. (2012). Psychoterratic conditions in a scientific and technological world. In P. H. Kahn and P. H. Hasbach (Eds.), *Ecopsychology: Science, totems, and the technological species* (pp. 241-264). Cambridge, MA: MIT Press.
- Albrecht, G., Sartore, G. M., Connor, L., Higginbotham, N., Freeman, S., Kelly, B., ... Pollard, G. (2007). Solastalgia: The distress caused by environmental change. *Australasian Psychiatry*, 15, 95-98. Retrieved from <https://doi.org/10.1080/2F10398560701701288>
- Aldrich, D. P. (2012). *Building resilience: Social capital in post disaster recovery*. Chicago: University of Chicago Press.
- Aldrich, D. P., & Meyer, M. A. (2015). Social capital and community resilience. *American Behavioral Scientist*, 59(2), 254-269.
- Antonopoulos, K., Skanavis, C., & Plaka, V. (2015). Exploiting further potential of Linaria Port-Skyros: From vision to realization. In *Proceedings of the 1st Hellenic Conference on Tourist Port, Marinas, Athens* (pp. 101-111).
- Arcury, A. T., & Eric, H. (1993). Christianson. Rural-urban differences in environmental knowledge and actions. *The Journal of Environmental Education*, 25(1), 19-25.
- Athman, J. A., & Monroe, M. C. (2000). Elements of effective environmental education. In *Elements of effective EE programs* (pp. 37-48). <https://www.semanticscholar.org/>.

- Bassi, S., & Kettunen, M.(2008). *Forest fires: Causes and contributing factors in Europe*. London, United Kingdom:Institute for European Environmental Policy.
- Baytiyeh, H.K., & Naja, M.(2014). Can education reduce Middle Eastern fatalistic attitude regarding earthquake disasters? *Disaster Prevention and Management*, 23(4), 343-355. Retrieved from <https://doi.org/10.1108/DPM-12-2013-0219>
- Below, R., & Wallemacq, P.(2018). *Annual disaster statistical review 2017*. Brussels, Belgium: Centre for Research on the Epidemiology of Disasters.
- Benzion, U., Shahrabani, S., & Shavit, T.(2009). Emotions and perceived risks after the 2006 Israel-Lebanon war. *Mind & Society*, 8, 21-41.
- Cuaresma, J. C., Samir, K. C., & Sauer, P.(June, 2013). Age-specific education inequality, education mobility and income growth. *WWW for Europe Working Papers Series No. 6*.
- Degel, D.(2015). *Innovative location optimization for rescue and emergency medical services adapting to a dynamic environment*. Berlin: Logos Verlag Berlin GmbH.
- Dutta, S.(2017). Creating in the crucibles of nature's fury: Associational diversity and local social entrepreneurship after natural disasters in California, 1991-2010. *Administrative Science Quarterly*, 62(3), 443-483.
- Edwards, J. N., & White, R. P. (1980). Predictors of social participation: Apparent or real? *Journal of Voluntary Action Research*, 9, 60-73.
- Eiser, J. R., Bostrom, A., Burton, I., Johnston, D. M., McClure, J., Paton, D., Van der Pligt, J., & White, M. P.(2012). Risk interpretation and action: A conceptual framework for responses to natural hazards. *International Journal of Disaster Risk Reduction*, 1, 5-16. Retrieved from <https://doi.org/10.1016/j.ijdr.2012.05.002>
- Erez, A., Mikulincer, M., van Ijzendoorn, M. H., & Kroonenberg, P. M. (2008). Attachment, personality, and volunteering: Placing volunteerism in an attachment-theoretical framework. *Personality and Individual Differences*, 44(1), 64-74.
- Finch, K.C., Snook, K.R., Duke, C.H., Fu, K.-W., Tse, Z. T. H., Adhikari, A., & Fung, I. C.-H.(2016). Public health implications of social media use during natural disasters, environmental disasters, and other environmental concerns. *Nat Hazards*, 83, 729-760. Retrieved from <https://doi.org/10.1007/s11069-016-2327-8>
- Górriz-Mifsud, E., Burns, M., & Marini Govigli, V.(2019). Civil society engaged in wildfires: Mediterranean forest fire volunteer groupings. *Forest Policy and Economics*, 102(2), 119-129. Retrieved from <https://doi.org/10.1016/j.forpol.2019.03.007>
- Hwang, H., & Joo, D.(2020). How to be resilient? Local Philanthropy as a collective response to natural disasters. *Voluntas*. Retrieved from <https://doi.org/10.1007/s11266-020-00239-0>
- Hwang, H., & Young, T. A.(2019). Considering the effectiveness of philanthropic collective action: A community ecology perspective. *International Journal of Sociology and Social Policy*, 39(3/4), 201-220.
- Kalish, A.P.(2014). The effect of natural disasters on volunteerism (CMC Senior Theses, Paper 916, Claremont McKenna College, 2014).
- Kaniasty, K.(2012). Predicting social psychological well-being following trauma: The role of post disasters social support. *Psychol Trauma Theory Res Pract Policy*, 4(1), 22-33. Retrieved from <https://doi.org/10.1037/a0021412>
- Karanikola, P., Tampakis, S., Arabatzis, G., & Maheridis, A. (2013). Study on citizens' information about forest fires: The case of Kavala. *Procedia Technology*, 8, 482-487. Retrieved from <https://doi.org/10.1016/j.protcy.2013.11.063>
- Koutsias, N., Arianoutsou, M., Kallimanis, A. S., Mallinis, G., Halley, J. M., & Dimopoulos, P.(2012). Where did the fires burn in Peloponnisos, Greece in the summer of 2007? Evidence for a synergy of fuel and weather. *Agricultural and Forest Meteorology*, 156, 41-53. Retrieved from <https://doi.org/10.1016/j.agrformet.2011.12.006>
- Lazzeretti, L., & Cooke, P.(2015). Introduction to the special issue "the resilient city". *City, Culture and Society*, 6(3), 47-49. Retrieved from <https://doi.org/10.1016/j.ccs.2015.05.001>
- Loayza, N. V., Olaberria, E., Rigolini, J., & Christiaensen, L.(2012). Natural disasters and growth: Going beyond the averages. *World Development, Elsevier*, 40(7), 1317-1336.
- Lutz, W., Cuaresma, J. C., & Sanderson, W.(2008). The demography of educational attainment and economic growth. *Science*, 319(5866), 1047-1048. Retrieved from <https://doi.org/10.1126/science.1151753>
- Lutz, W., Cuaresma, J., & Abbasi-Shavazi, M.(2010). Demography, education, and democracy: Global trends and the case of Iran. *Population and Development Review*, 36(2), 253-281. Retrieved from <http://www.jstor.org/stable/25699060>
- Malik, T., Rabbani, G., & Faruq, M. (2013). Forest fire risk zonation using remote sensing and GIS technology in Kansiao forest range of Rajaji National Park, Uttarakhand, India. *International Journal of Advanced Remote Sensing and GIS*, 2, 86-95.
- Merlo, M., & Rojas-Briales, E.(2000). Public goods and externalities linked to Mediterranean forests: Economic nature and policy. *Land Use Policy*, 17(3), 197-208. Retrieved from [https://doi.org/10.1016/S0264-8377\(00\)00017-X](https://doi.org/10.1016/S0264-8377(00)00017-X)

- Molavi, M.(2018). Measuring urban resilience to natural hazards, TeMA. *Journal of Land Use, Mobility and Environment*,11(2), 195-212. Retrieved from <https://doi.org/10.6092/1970-9870/5485>
- Moreno, J. (2018). The role of communities in coping with natural disasters: Lessons from the 2010 Chile Earthquake and Tsunami. *Procedia Engineering*,212, 1040-1045. Retrieved from <https://doi.org/10.1016/j.proeng.2018.01.134>
- Muller, A., & Kraussel, R. (2011). Doing good deeds in times of need: A strategic perspective on corporate disaster donations. *Strategic Management Journal*,32, 911-929.
- Musick, M. A., Wilson, J., & Bynum W. B. (2000). Race and formal volunteering: The differential effects of class and religion. *Social Forces*, 78, 1539-1571.
- Muttarak, R., & Lutz, W. (2014). Is education a key to reducing vulnerability to natural disasters and hence unavoidable climate change? *Ecology and Society*, 19(1), 42. Retrieved from <http://dx.doi.org/10.5751/ES-06476-190142>
- Pagès, M., Fischer, A., & Van der Wal, R.(2017). The dynamics of volunteer motivations for engaging in the management of invasive plants: Insights from a mixed-methods study on Scottish seabird islands. *Journal of Environmental Planning and Management*, 61,904-923. Retrieved from <https://doi.org/10.1080/09640568.2017.1329139>
- Palmer, A.J. (1998). *Environmental education in the 21st century: Theory, practice, progress and promise*. (A. Mohammad Khorshiddost, Trans.). Tehran: SAMT Press.
- Papaspiliou, K., Skanavis, C., & Giannoulis, C. (2014). Civic ecology education and resilient societies: A survey of forest fires in Greece. *Journal of Education and Training Studies*, 2(2), 48-57. Retrieved from <https://doi.org/10.11114/jets.v2i2.271>
- Payton, R.L. (1988). *Philanthropy: Voluntary action for the public good*. New York: Macmillan.
- Penner, L. A.(2004). Volunteerism and social problems: Making things better or worse? *Journal of Social Issues*,60(3),645-666. Retrieved from <https://doi.org/10.1111/j.0022-4537.2004.00377.x>
- Perdikou, S., Horak, J., Palliyaguru, R., Halounová, L., Lees, A., Ranguelov, B., & Lombardi, M.(2014). The current landscape of disaster resilience education in Europe. *Procedia Economics and Finance*, 18, 568-575. Retrieved from [https://doi.org/10.1016/S2212-5671\(14\)00977-0](https://doi.org/10.1016/S2212-5671(14)00977-0)
- Perry, W. R., & Lindell, M. K. (1978). The psychological consequences of natural disaster: A review of research on American communities. *Mass Emergencies*, 3, 105-115.
- Plaka, V., Sardi, Chr., Psomadaki, I.D., Kouleri, O., & Skanavis, C. (2021). Skyros Island in the front line of sustainable development promotion. In W. Leal Filho (Eds), *Innovations and traditions for sustainable development. World Sustainability Series*. New York: Springer. Retrieved from <https://www.springer.com/series/13384>
- Prior, T., & Eriksen, C. (2013). Wildfire preparedness, community cohesion and social-ecological systems. *Global Environmental Change*, 23(6), 1575-1586. Retrieved from <http://dx.doi.org/10.1016/j.gloenvcha.2013.09.016>
- Ray-Bennett, N.S.(2007). Environmental disasters and disastrous policies: An overview from India. *Social Policy and Administration*, 41,419-424. Retrieved from <https://doi.org/10.1111/j.1467-9515.2007.00564.x>
- Rosenboim, M., Benzion, U., Shahrabani, S., & Shavit, T.(2012). Emotions, risk perceptions and precautionary behavior under the threat of terror attacks: A field study among Israeli college students. *The Journal of Behavioral Decision Making*, 25, 248-256.
- Salvati, R., Salvati, L., Corona, P., Barbati, A., & Ferrara, A.(2015). Estimating the sensitivity to desertification of Italian forests. *IForest-Biogeosciences and Forestry*, 8(3), 287-294. Retrieved from <https://doi.org/10.3832/for1111-008>
- Schuyt, T., Smit, J., & Bekkers, R. (2013). Constructing a philanthropy-scale: Social responsibility and philanthropy. *SSRN Electronic Journal*, 501. doi:10.2139/ssrn.2274558
- Shahrabani, S., Benzion, U., & Shavit, T.(2009). Recall emotions and risk judgments: Field study of the 2006 Israel-Lebanon war. *The Journal of Judgment and Decision Making*, 4, 326-336.
- Skanavis, C., Antonopoulos, K., Plaka, V., Pollaki, S.P., Tsagaki-Rekleitou, E., Koresi, G., & Oursouzidou, Ch. (2018). Linaria Port: An interactive tool for climate change awareness in Greece. In W. Leal Filho, B. Lackner, and H. McGhie (Eds.), *Addressing the challenges in communicating climate change across various audiences* (pp. 281-295). Switzerland: Springer.
- Smith, D. H.(1994). The determinants of voluntary association participation and volunteering: A literature review. *Nonprofit and Voluntary Sector Quarterly*, 23, 243-263.
- Teodorescu, G., & Oros, C.(2010). Development of education on environmental and climate change impacts in Romania. *Procedia Social and Behavioral Sciences*, 2, 5502-5506. WCES-2010 (World Conference on Educational Science).
- Thordardottir, E. B., Valdimarsdottir, U. A., Hansdottir, I., Resnick, H., Shepherd, J., & Gudmundsdottir, B.(2015). Posttraumatic stress and other health consequences of catastrophic avalanches: A 16-year follow-up of survivors. *Journal of Anxiety*

- Disorders*, 32, 103-111. Retrieved from <https://doi.org/10.1016/j.janxdis.2015.03.005>
- Vallianou, K., Alexopoulos, T., Plaka, V., & Skanavis, V. (2020). Building resilient communities: The traumatic effect of wildfire on Mati, Greece. *International Journal of Psychological and Behavioral Sciences*, 14(6), 411-418.
- Verde, J. C., & Zêzere, J. L. (2010). Assessment and validation of wildfire susceptibility and hazard in Portugal. *Natural Hazards and Earth System Sciences*, 10, 485-497. Retrieved from <https://doi.org/10.5194/nhess-10-485-2010>
- Verkerk, P. J., Martinez de Arano, I., & Palahí, M. (2018). The bio-economy as an opportunity to tackle wildfires in Mediterranean forest ecosystems. *Forest Policy and Economics*, 86, 1-3. doi:10.1016/j.forpol.2017.10.016
- Walker, E. T., & McCarthy, J. D. (2010). Legitimacy, strategy, and resources in the survival of community-based organizations. *Social Problems*, 57(3), 315-340.
- Wanderley, J. S. J., João, P. M. S., Santana, L. D., Aloysio, S. M., Cléber, R. S., & Fontes, M. A. L. (2019). The role and the precariousness of volunteer work in Brazilian protected areas. *Global Ecology and Conservation*, 17, e00546. Retrieved from <https://doi.org/10.1016/j.gecco.2019.e00546>
- Weinstein, N. D., Lyon, J. H., Rothman, A. J., & Cuite, C. L. (2000). Changes in perceived vulnerability following natural disaster. *Journal of Social and Clinical Psychology*, 19, 372-395.
- Wenliang, L., Shixin, W., Yi, Z., Litao, W., & Shujie, Z. (June 18-20, 2010). Analysis of forest potential fire environment based on GIS and RS. In *18th International Conference on Geoinformatics* (pp. 1-6). doi:10.1109/GEOINFORMATICS.2010.5567966
- Whittaker, J., McLennan, B., & Handmer, J. (2015). A review of informal volunteerism in emergencies and disasters: Definition, opportunities and challenges. *International Journal of Disaster Risk Reduction*, 13, 358-368.
- Wilson, J. (2009). Volunteering. *Annual Review Sociology*, 26, 215-240. Retrieved from <https://doi.org/10.1146/annurev.soc.26.1.215>
- Xanthopoulos, G. (2008). Who should be responsible for forest fires? Lessons from the Greek experience. In *Proceedings of the Second International Symposium on Fire Economics, Planning, and Policy: A Global View* (pp. 189-201). Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.
- Yamamura, E. (2015). The impact of natural disasters on income inequality: Analysis using panel data during the period 1970 to 2004. *International Economic Journal*, 29(3), 359-374. Retrieved from <https://doi.org/10.1080/10168737.2015.1020323>