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RESEARCH ARTICLE

Evaluation of Mountaineering Education and Practices in the Perspective of Connectedness to Nature and Environmental Awareness

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Abstract
The aim of this study is to evaluate the theoretical and practical education and practices provided in the "Get in touch with the nature - Live healthy, Protect Your Environment" project in terms of connectedness to nature and environmental awareness. The study group consisted of 46 university students who were members of mountaineering clubs and participated in mountaineering education and practices. In the study, the scale of connectedness to nature adapted by Bektaş et al. (2017) was used. A one-group pretest- posttest design was used. In addition, the answers given to the structured interview questions in the information collection form were evaluated qualitatively. There was a significant difference between pre-test averages and post-test averages in the dimension of being part of the nature ($p<.01$), suggesting that the education and practices influenced the dimension of being part of the nature, a sub-dimension of attachment to nature. An examination of the averages of the integration with nature sub-dimension and the overall averages of the scale revealed that the post-test scores increased. The results revealed that the scale score averages of the participants were increased at the end of the education period. It was also found that the participants' reasons for taking part in outdoor activities changed during the course of the study, with "interest" ranking first in the pre-test being replaced by the "desire to be with friends" in the post-test. The results of the present study suggest that the education had an impact on nature connectedness and environmental awareness.

Keywords
Connectedness to Nature, Environmental Awareness, Mountaineering

INTRODUCTION

Environment is defined as "the physical, biological, social, economic and cultural environment in which humans and other living things interact and maintain their relationships throughout their lives" (Environmental Law, 1983). Forests and mountainous areas are among the most important outdoor sports areas in terms of quality and quantity. Especially activities for nature and environmental awareness are increasing day by day (Atik et al., 2013) and For this reason, sustainability is important in all kinds of outdoor sports activity areas. Human behavior significantly affects environmental health and negative attitudes and misbehaviour lead to environmental problems (Evans et al., 2007). Based on environmental awareness, environmental sensitivity is also formed at an early age. Educators have important responsibilities in environmental education and structuring forming children's relationships with nature, which can positively influence children's behaviors towards the environment (Kahyaoğlu & Yetişir, 2016; Özdemir, 2010). It is important that children become aware of environmental awareness. However, the acquired behaviors also need to be reinforced throughout the lives of individuals. Has this awareness already been formed in university students? Have teachers really done anything to influence this? Considering that

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they participate in a limited number of the nature sports or activities of questionable quality, it is very important to make necessary efforts to ensure that university students have love for, and awareness of, nature.

The Ministry of Youth and Sports supports various projects regarding the nature, one of which is the "Get in touch with the nature - Live healthy, Protect Your Environment". The ministry's support for this particular project can be considered as an indicator of the importance it attaches to the environmental awareness. It is an academic responsibility to determine how the activities carried out within the scope of the project influence the participants and to share the results with the public. Hence, it is important to evaluate this project in which mountaineering education and practice is provided, and to determine and report its positive effects, if any. With the evidence it provides for future studies, this could be a very valuable contribution. It may also be very important that it promotes environmental awareness and encourages participation in outdoor sports. In this way, the number of supported projects will be increased and participation in outdoor sports will be promoted, contributing to the environmental awareness of more people and the formation of a social structure that is connected and sensitive to nature. The form created to collect participant data was used to determine whether the education created behavioral changes in the participants. The obtained results may also contribute to guiding future educations and projects, and establishing quality standards.

The aim of this study is to evaluate the theoretical and practical training provided within the scope of the "Get in touch with the nature - Live healthy, Protect Your Environment" project in terms of connectedness to nature and environmental awareness.

This study is important as it is different from other studies (Çınar & Duran, 2021; Derince, 2019; Kural et al., 2020; Tağrikulu et al., 2021) in that it explains whether there is a change in the current level of connectedness to nature as a result of outdoor sports training and practices as well as measuring their current level of connectedness to nature.

MATERIALS AND METHODS

The present mixed-method experimental study uses a single group pretest-posttest design. Data was collected by using a personal information form and structured interview questions developed by the authors and the scale of connectedness to nature adapted by Bektaş et al. (2017). The connectedness to nature scale (CNS) is a scale developed to measure individuals' experiential and emotional attachment to the nature. The 5-point Likert-type CNS consists of two sub-dimensions and a total of 8 items. It measures the participants' connectedness to nature, scored between Strongly Disagree (1 point) and Strongly Agree (5 points). The closer the average of the CNS scores, the higher the level of connectedness to the nature of the participant is. The reliability coefficient (α) of the CNS is 0.81. The reliability coefficients of the sub-dimensions of the CNS "Being a Part of the nature (BPN)" that consists of items 3 to 8, and "Integration with Nature (IWN)" that consists of items 1 and 2 are α=0.82 and α=0.63, respectively.

Data was collected from the participants before and after the involvement in the education and practice sessions. The data obtained was evaluated by the pretest-posttest comparisons. In addition, the answers to the structured interview questions in the information collection form were evaluated qualitatively.

The ethics committee permission required for the study was obtained from Hitit University Non-Interventional Researches Ethics Committee (Approval Number: 2022/17).

Participants

The study group was comprised of a total of 46 university students (22 female and 24 male) who were members of mountaineering clubs and participated in educations and practices. Participants with missing data in paired sample tests were excluded from the study group, and the data obtained from a total of 36 participants (19 women and 17 men) was analyzed.

Male participants comprised (n=24) 52.2% of the study group and (n=22) 47.8% of the participants were female; half of the participants were aged between (n=23) 18 and 21 years, with the other half between (n=23) 22 and 25 years. An analysis of the distribution of the participants according to their academic grade point average (GPA) showed that that (n=24) 52.2% of them had a GPA average between 2.50 and 2.99, (n=7)

15.2% of them had a GPA average between 2.00 and 2.49, (n=14) 30.4% of them had a GPA average between 2.50 and 3.00, and one participant above 3.50, with no participants having an average below 2.0.

Education Program and Practice Procedure

The program, which included the theoretical subjects of mountaineering and their practices prepared by the researchers, was implemented by athletes, mountaineering coaches and faculty members (researchers) who had completed their basic education in mountaineering. After the education, five practice sessions (applications of the theoretically explained topics) were applied. The content of the theoretical subjects consisted of the physiological, psychological, and sociological effects of sports activities in nature as well as environmental awareness and mountaineering sport-specific subjects. The theoretical education program is presented;

Contents of the education

1. Mountaineering Education and Its Effects
   - Physiological changes and adaptation in mountaineering athletes
   - Psychological effects of mountaineering sport on individuals
   - Sociological effects of mountaineering sport on individuals
   - Mountaineering sport and the process of creating environmental awareness
2. Mountaineering and Education
   - Introduction and definition of mountaineering sport
   - The Importance of Education in Mountaineering
3. Materials Used in Mountaineering and Its Presentation
   - Materials used and their classification
4. Hiking Knowledge and Organization in Mountaineering
   - Basic walking knowledge and organization (Summer and Winter)
5. Camp Site Selection
   - Camping Site Selection and Camping in Mountaineering
6. Direction Finding in Mountaineering
   - Orientation in nature (digital applications and usage)
   - Approaching a route, finding a route, choosing
7. Mountaineering, Accidents and First Aid
   - Accidents in nature, altitude sickness and first aid
8. Mountaineering and Nutrition
   - Nutrition in mountaineering
   - Properties of nutrients
   - Fluid intake
9. Mountaineering and Training
   - Training principles in mountaineering
   - Training Planning
10. Mountaineering and Ecology
    - Environment and ecology in outdoor sports (mountaineering)
11. Mountaineering and Safety
    - Knots in mountaineering
    - Safety in mountaineering, safe climbing and its organization

The education lasted for 7 weeks, one day in the first, second, and the last weeks but two days in the remaining weeks.

After the completion of the education period, the practice sessions started. The post-test data of those who participated in at least three practices were compared with their pre-test data. The practice sessions program is presented below.

Practice

Activity 1: North Campus – Frequency Nature Park 13 km. (Hiking

Activity 2: Hamamlıçay - Kösedağ 15 km. (Hiking)

Activity 3: Çomar Dam Environmental Cleaning

Activity 4: 19 May Commemoration of Atatürk, Youth and Sports Day Parade (İncesu – Çoban Pınarı-Kale–İncesu–Kybele (In the Canyon); 15 km.) (Doğru, 2022b)

Activity 5: Rock climbing (Cımbar Valley) and Emler Summit Climbing (Doğru, 2022a)

Data Analysis

The data was tested for normality to determine which statistical analysis should be used to interpret the responses to the nature connectedness scale.

Since the data was not normally distributed, “being a part of the nature” was analyzed by using a non-parametric test while t-test was used for “overall” and “integration with nature” components which were normally distributed.

RESULTS

Evaluations were made within the framework of the participants' past experiences in hiking / trekking and mountaineering and are presented in Table 1.

Table 1. Description of the study group in terms of the outdoor sports

		Female		Male		Total	
		f	*%*	*f*	*%*	*f*	*%*
Status of taking hiking/trekking education before	Y*	2	9.1	5	20.8	7	15.2
	N*	20	90.9	19	79.2	39	84.8
Status of taking mountaineering education before	Y	3	13.6	5	20.8	8	17.4
	N	19	86.4	19	79.2	38	82.6
Status of participating in hiking/trekking activity before	Y	7	31.8	9	37.5	16	34.8
	N	15	68.2	15	62.5	30	65.2
Status of participating in mountaineering activity before	Y	2	9.1	3	12.5	5	10.9
	N	20	90.9	21	87.5	41	89.1
Status of participating in sport activities in outdoor before participating in the education within the scope of the project	Y	6	27.3	6	25.0	12	26.1
	N	16	72.7	18	75.0	34	73.9

Analysis of the participants' past experiences in hiking/trekking and mountaineering showed that 82.6% of them did not participate any mountaineering education, 84.8% did not participate in any hiking/trekking, 89.1% of them did not participate in mountaineering activities, 65.2% of them had never been hiking/trekking before, and lastly, 73.9% of the participants had not participate in an outdoor sports activity before the project (Table 1).

Table 2. Independent variables and means

				Pre-Test		*Post-Test*	
			n	***X***	***SD***	***X***	***SD***
Gender	BPN*	Female	19	3.39	.937	4.13	.847
		Male	17	3.76	.793	4.03	.780
	IWN**	Female	19	3.57	.753	3.89	.680
		Male	17	3.84	.508	4.11	.595
	Overall	Female	19	3.53	.776	3.96	.687
		Male	17	3.83	.512	4.09	.567
GANO	BPN	3.0 (-)	26	3.54	.824	4.15	.809
		3.0 and (+)	10	3.65	1.055	3.90	.809
	IWN	3.0 (-)	26	3.73	.665	4.04	.635
		3.0 and (+)	10	3.64	.659	3.87	.675
	Overall	3.0 (-)	26	3.68	.672	4.07	.618
		3.0 and (+)	10	3.64	.709	3.88	.664
Receiving status of hikinig/trekking education before	BPN	No	32	3.48	.847	4.03	.822
		Yes	4	4.25	.957	4.50	.577
	IWN	No	32	3.65	.661	3.97	.660
		Yes	4	4.08	.516	4.21	.479
	Overall	No	32	3.61	.670	3.99	.646
		Yes	4	4.13	.569	4.29	.426
Participating status of hiking/trekking activities before	BPN	No	25	3.56	.917	3.94	.821
		Yes	11	3.59	.831	4.41	.701
	IWN	No	25	3.73	.591	3.97	.675
		Yes	11	3.62	.809	4.06	.582
	Overall	No	25	3.69	.627	3.96	.662
		Yes	11	3.62	.797	4.15	.550

**Being Part of the Nature; **Integration with Nature*

Table 2 presents that the lowest and highest means for the pretest are in the dimension of "being a part of the nature". In this dimension, the lowest mean (X=3.39±.937) belongs to the female participants, while the participants who have previously received outdoor sports education have the highest mean (X=4.25±.957). The post-test scores revealed that the participants with a GPA "3.0 and above" had the lowest mean (X=3.87±.675) in the dimension of "integration with nature". The participants who had "previously received trekking education" in the dimension of "being a part of the nature" had the highest mean (X=4.50±.577).

Table 3. CNS: Pre-post test means

Connectedness to Nature (n=36)*	$\bar{X}$	***SS***
Being Part of the Nature (Pre-test)	3.5694	.87955
Being Part of the Nature (Post-test)	4.0833	.80623
Integration with the Nature (Pre-test)	3.7003	.65511
Integration with the Nature (Post-test)	3.9953	.64156

**Paired sample t-Test was conducted, candidates with pre- and post-test data were evaluated.*

It was found that post-test means were higher than pre-test means as presented in Table 3.

Table 4. Being a part of the nature" dimension pre-post test comparison (Wilcoxon)

Pre-test – post-test: Part of the nature	***n***	***Mean Rank***	***Sum of Ranks***	***Z***	***p***
Negative Ranks	5[a]	7.30	36.50	-3.432	.001*
Positive Ranks	20[b]	14.43	288.50		
Ties	11[c]				
Total	36				

a. Post-test: Part of the Nature < Pre-test: Part of the Nature
b. Post-test: Part of the Nature > Pre-test: Part of the Nature
c. Post-test: Part of the Nature = Pre-test: Part of the Nature

**p<.01*

The scores given in the “being a part of the nature” sub-dimension (pre-post test) was not normally distributed. According to the Wilcoxon Signed Ranks Test, which was conducted to determine whether the difference was significant or not, the difference was significant at the p<.01 level, and the theoretical education and practices were effective in the dimension of "being a part of the nature" (Table 4). This effect is a result that emerged without taking into account independent variables such as gender and academic achievement.

Table 5. CNS: Integration with the nature dimension pre-post test comparison

	X	***SD***	***t***	***df***	***p***
IWN** (**Pre**-test)	3.70	.655	-4,673	35	.000*
IWN (**Post**-test)	4.00	.642			
Overall (Pre-test)	3.67	.672	-5,288	35	.000*
Overall (Post-test)	4.02	.628			

**p<.01; **Integration with Nature*

The means of the integration with nature sub-dimension (Table 5) were examined, it is seen that the post-test scores increased. The scores given in this sub-dimension are normally distributed, it was seen that the difference is significant at p<.01 level according to the result of the Paired Sample t-Test conducted to determine whether the difference is significant or not. The theoretical educations and practices made a difference in the participants' integration with nature. This effect is a result that emerged without taking into account independent variables such as gender and academic achievement.

There was no difference in the comparisons made in terms of gender and academic achievement variables. In addition, in the pair group comparisons created by the researchers, these groups were: a) those who had and had not received hiking/trekking education before, b) those who had and had not participated in hiking/trekking activities before, c) those who had and had not participated in Activity #1 (A1), d) those who had and had not participated in Activity #2 (A2), e) those who had and had not participated in Activity #3 (A3), f) those who had and had not participated in Activity #4 (A4), and g) those who had and had not participated in Activity #5 (A5). There was a significant difference between the means of being a part of the nature (post-test) only between those who participated in the final activity of the project (A5) "Rock climbing (Cımbar Valley) and Emler Summit Climbing" and those who did not participate in the project, but there was no significant difference in other comparison tests. Independent sample t-Test was used in the evaluation of Being Part of the nature (Pre-test), Integration with Nature (Pre-test), Integration with Nature (Post-test), Overall (Pre-test) and Overall (Post-test) data. Since the post-test data for the dimension of being a part of the nature were not normally distributed, they were evaluated with the Mann-Whitney U test. The findings related to these analyses are presented in Tables 6 and 7.

Table 6. Participation in Rock Climbing-Emler Summit Climbing activity (t-Test)

		n	*X*	*SD*	*t*	*df*	*p*
BPN* (Pre-test)	No	21	3.52	.798	-.364	34	.718
	Yes	15	3.63	1.008			
IWN** (Pre-test)	No	21	3.64	.604	-.596	34	.555
	Yes	15	3.78	.736			
IWN (Pos-test)	No	21	3.90	.642	-1,094	34	.282
	Yes	15	4.13	.637			
Overall (Pre-test)	No	21	3.62	.596	-.557	34	.581
	Yes	15	3.74	.783			
Overall (Pre-test)	No	21	3.89	.607	-1,503	34	.142
	Yes	15	4.20	.631			

**Being Part of the Nature; **Integration with Nature*

There is no difference between those who participated in rock climbing and summit climbing activities and those who did not in the pre-test of being a part of the nature, the pre-post tests of integration with nature and the pre-post tests of the overall scale (Table 6).

Table 7. Participation in Rock Climbing-Emler Summit Climbing activity (MWU)

		n	*X*	*SD*	*Mean Rank*	*Sum of Ranks*	*U*	*Z*	*p*
BPN** (Post-test)	No	21	3.86	.744	15.43	324.0	93.0	-2,12	.034*
	Yes	15	4.40	.806	22.80	342.0			

**p<.05; **Being Part of the Nature*

Table 7 is examined, it is seen that the post-test means are higher for those who participated in the rock climbing-Emler summit climbing activity than those who did not, and this difference is significant in the dimension of "being a part of the nature" (p<.05).

Table 8. Reasons for participating in outdoor sports (mountaineering)

Pre-test		*Causes*	*Post-test*	
Rank	***n***		***Rank***	***n***
1	29	to have an interest	4	20
2	23	desire to be with friends	1	24
3	22	positive effect on my health	3	21
4	19	to relieve boredom and stress	8	12
5	17	acquiring new skills	2	23
6	15	desire to get rid of monotony	5	20
7	14	integration with nature	6	20
8	14	influence of those around me	7	19
9	11	entering a new environment	11	8
10	9	using the new skills I have acquired	10	11
11	8	relaxing and increasing my work efficiency	9	11
12	5	feeling of loneliness	12	3
13	3	be a well-known	15	2
14	0	being a good role-model to my family	13	2
15	0	being a good role-model to my friends	14	2

When the reasons for participating in outdoor sports are examined, it is seen that the thoughts of the participants has changed during the project. The "area of interest", which ranked first in the pre-test, has been replaced by the "desire to be with friends". The "desire to be with friends", which ranked second, was changed to "acquiring new skills", and the "positive effect on health", which ranked third, remained in place. The options of "being a good role-model to my family and friends" was not selected at all in the pre-test, whereas they were selected as reasons in the post-test, even though it is rare (Table 8).

The researchers asked the participants to write down their positive and negative thoughts about the formation of connectedness to nature and environmental awareness during the educations and practices they participated in. The statements and codes that emerged within this framework were presented in Tables 9 and 10.

Table 9. Participants' statements and categories under the theme of negative thoughts

Expressions	**Categories**
P-04: This is the first time I can say that my legs and ankles hurt so much. P-07: Fatigue P-08: Feeling faster or slower than the team. P-09: For myself, it was the first time I felt so tired, and my pulse rate was high, this was the only negative thing I saw for me. Everyone was very aggressive due to fatigue, and these are the negative aspects for me. P-11: The difficulty of walking with the camp load P-17: I have difficulty in long-term climbs because I don't participate in such activities before. P-19: Having a headache at the altitude I climbed for the first time. P-24: It was the first time I was so dehydrated and weak at the end of the walk. P-28: For the first time in my life, getting sick from fatigue and hurting my hand left me behind in my other work. P-34: Falling down all the time was the first time in my life that I fell down so much. P-35: Fatigue caused by lack of fitness,	Not having adequate physical fitness
P-11: Experiencing fear of heights. P-12: People think negatively about anything, no matter how good the activity is. P-14: Being afraid of heights while rock climbing. P-14: Not trusting the material. P-20: It was the first time I walked in places that required hard struggle. They were high and scary places.	Fears and negative thoughts

Table 9. Continue

P-11: Difficulty of walking at night. Effect of altitude. P-16: The weather is too hot. P-18: Weather conditions P-21: Landing in stony area P-27: I had a headache because the air pressure changed while summit trekking. P-29: It is difficult to walk through the bushes in nature. P-29: It is very muggy and dusty in hot weather. P-32: Animals like ticks are dangerous. P-35: The route is very steep and stony.	Environmental challenges and risks
P-05: When I was climbing, I was very disturbed by the fact that the environment was full of plastic and glass waste, even though there was no human community living around. P-09: The environment is very dirty. P-24: Garbage. I was really surprised and saddened by the fact that people use nature very badly. I realized how much people pollute and misuse nature. P-25: Pollution of the nature	Pollution
P-02: Disruption of group unity P-06: During the activity, there are people who behave in a way that disturbs the peace of the team and ignore the warnings. P-08: Having team members who can make inappropriate jokes even during stress and fatigue. P-10: There were problems due to miscommunication. P-15: There was no team cohesion. P-33: I think that some reluctant friends have a negative impact on us.	Incompatibility and lack of communication (demotivating factors)
P-04: My lack of experience. My body is not used to it. P-26: I learned how important it is to wear a helmet by hitting my head on a stone. P-27: I experienced camping for the first time, and it was difficult to stay in the tent due to the weather conditions. Since it was the first experience of most of my friends, there were situations where we could not adjust the timing well (being late ect.).	Inexperience
P-01: Fall hazard due to not using appropriate materials. P-03: When the necessary materials are not used, the walk is very difficult. P-35: A. Choosing the wrong shoes, B. Mistakes in choosing clothes.	Unsuitable materials / equipment

P-#: Participant number

The reasons that negatively affected the participants in the post-implementation process can be listed under the following main topics:

a) Not having adequate physical fitness,
b) Fears and negative thoughts,
c) Environmental challenges/risks,
d) Pollution,
e) Disharmony, inability to communicate,
f) Not being experienced
g) Unsuitable materials/equipment.

Table 10. Expressions and categories under the theme of positive thoughts of the participants

Expressionss	**Categories**
P-01: Unity and solidarity are at the highest level. P-08: Witnessing that for the most part everyone is well-meaning and helpful. P-10: When a friend of mine moves slowly and falls behind, I take him/her to the front and adjust the speed accordingly. P-10: the importance of acting as a team. P-12: Whenever there is a difficulty, everyone tries to help together. P-16: To act together. P-24: I shared many things with my friends in a different environment from the city. P-27: We acted together and gained different experiences. P-28: I realized and saw how important friendship and help are. P-29: It is very fun to be in a group. P-31: Being with friends	Cooperation, helpfulness, and trust in other
P-12: Increased self-confidence after doing rock climbing activities after saying I couldn't do it. P-18: Increasing my self-confidence, realizing what I can do.	Self-confidence

P-24: It was the first moment we reached the "Çorum Obası". I never expected that we would reach there. P-27: I climbed for the first time, and I felt happy when I realized that it was not as difficult as I thought it would be. P-12: People knowing their limits and going back in order not to disrupt the order of the team.	Self-efficacy Learning their limits (seeing what they can and cannot achieve)
P-13: Gaining experience. P-23: Gained summit climbing experience	to achieve experience
P-14: Seeking and finding a way to overcome my own limitations.	problem solving
P-15: We made new discoveries. P-20: Discovering new places, I discovered new places thanks to this walk. P-21: Exploring new places. P-24: There are many places to explore, and they are very close by. P-31: Discovering new places. P-35: Gaining new experiences. P-05: With my first climb, I experienced a feeling I had never seen or tasted before.	New things, novelty, a sense of novelty
P-17: Climbing for the first time in the project and in my life. P-04: It was the first time I got this close to the sky. P-04: Positively, I stayed in nature for so long for the first time. P-09: I gained rock climbing skills; these are things I have done for the first time in my life. P-09: I had the opportunity to see "Niğde Aladağlar", without such an education, maybe I would never have known that there was such a place.	Firsts, things done for the first time, the feeling of being the first
P-16: Being in touch with nature. P-18: Integration with nature P-31: Integration with nature P-21: Landscapes	Integration feeling as a part of the earth (nature)
P-15: We saw beautiful landscapes. P-19: Capturing beautiful landscapes. P-16: A good experience P-24: As it rises, the view gets better.	Beauty, sense of beauty and fulfillment
P-17: I felt mentally relaxed and more energetic. P-02: Observing that people who go out in nature are happy P-32: We find peace P-35: A state of peacefulness towards the landscape.	Peace, relaxation, and contentment.
P-20: When we reached the summit, we had completely different feelings. P-25: Seeing that beauty with my eyes and being in that environment. P-29: Waking up early and implementing plans in a prepared manner. P-28: I saw that students and professors are actually more sincere, fun and talkative outdoor (in nature). P-03: We try to overcome the difficulties we experience in nature and gain experience. P-35: Sense of accomplishment P-04: Happiness after reaching the summit. P-06: Everyone willingly participates in the activities, and this motivates me	Positive emotions/thoughts
P-27: We gained the experience of living in harmony in nature. P-32: We recognize nature. P-35: Experiencing how to apply the rules applied in nature. P-09: It was a positive aspect for me that the places we visited were common areas for all people and that these areas were used appropriately by people. P-07: Camping and staying in nature. P-28: For the first time, I enjoyed a walk-in nature without being connected to my phone.	Environmental awareness
P-04: I think it positively affects health	Health
P-08: Although it was my first-time trekking, I realized that I was more resilient than I expected.	Self-awareness

P-#: Participant number

The reasons that positively affected the participants in the post-implementation process can be listed under the following main topics:

a) cooperation, helpfulness, and trust in others,
b) self-confidence
c) self-efficacy - learning their limits (seeing what they can and cannot achieve)
d) achieving experience
e) problem solving
f) new things, novelty
g) firsts, things done for the first time, the feeling of being the first
h) integration, feeling as a part of the earth (nature)
i) beauty, sense of beauty and fulfillment
j) peace, relaxation, and contentment.
k) positive emotions/thoughts
l) environmental awareness
m) health
n) self-awareness

It was considered that the positive and negative opinions of the participants are important information to increase the quality and effectiveness of new studies on environmental awareness and connectedness to nature.

In addition, according to the researchers' diaries, participants wore a safety harness during rock climbing, attached to a rope with real mountaineering material, trusted someone else to ensure their belaying, rappelled by trusting an anchor (safety point), climbed using natural handholds and steps, took the belaying (safety) of a friend and ensured that their friends came down safely, spent the night in a tent, woke up early to reach a goal (reach at the Emler summit), felt that their breathing became constricted as they ascended in nature, experienced the difficulty of moving with a camping load in nature, get very tired but happy and witnessed that it was not like any sport practiced in the city for the first time. These are some of the results that the participants expressed during the process and that emerged from the semi-structured interview form and the researchers' diaries.

DISCUSSION

Until the present day, the issues that have emerged from studies on environmental sustainability and that have been of interest are attitudes, persuasion, connectedness, and incentives. Initially, environmental awareness was concerned with specific environmental issues such as garbage disposal and recycling, but now more and more areas of interest and study are emerging. In order to reconceptualize the relationship with nature, initial and limited meanings have been moved beyond. How to increase interest in nature through empathy and how identity is shaped by the natural environment have been discussed (Mayer & Frantz, 2004). Theories are being developed about people's psychological relationship with the natural world. Connecting with nature is now one of the main themes on the agenda of today's people. Fisher (2002) states that when people see the environment (land) as their own community (human, living being), the environment can be used with love and respect. He thinks that people can learn to recognize the natural world as a social and psychological space just like the human community.

The developers of the scale used in this study stated that they tried to "assess whether feeling connectedness to nature actually leads to ecological behavior" (Mayer & Frantz, 2004). Education and practices are evaluated in general; these were seen that the averages of the participants increased numerically at the end of the pre-test and post-test educations. This shows that the educations had an impact on their connectedness to nature and environmental sensitivity (Tables 3 and 4). People who practice nature sports generally have more positive environmental awareness levels (Gökdayı & Demirel, 2018). Individuals interested in nature sports cause less harm to nature (Gürer et al., 2019), for instance, while there are is no sign of environmental pollution in the Geyikbayırı rock climbing area, it is not the same for the picnic areas at the nearby locations. Involving in nature sports creates a significant awareness for the environmental awareness.

Soykan (1999) and Somuncu (2004) indicated that rural tourism has both positive and negative aspects, and points out that the negative aspects can be eliminated through education (education tourism personnel and local people). The current study is one of the special studies that can be cited as an example of user education. Similarly, the alpine National Parks have relied principally on regulations and education. There is a series of seven minimal-impact posters and brochures intended to make users aware of their impacts and ways to minimize them. There are also bans on the use of wood fires and restrictions on

camping in particularly fragile environments such as the catchments of alpine lakes (Buckley et al., 2000, p. 40). Mountains and natural areas are one of the important activity areas in tourism. In this context, Somuncu (2004) stated that on the management of mountain areas must be strived for a careful balance between the protection of natural resources, the needs of local people, and the desire of tourists.

Adventure tourism (outdoor sports can also be included in this) is at the cutting edge of world tourism, and its newness merits a comprehensive examination, unhindered by the confines of traditional delineations (Swarbrooke et al., 2003). Apart from environmental relations, it is also possible to say about some effects on personality, personal characteristics, and behaviors (consumption behavior ect.). Individuals who engage in physical activity, both licensed and recreational, are more likely than individuals who do not engage in physical activity; It has been determined that individuals who do physical activity in nature (outdoor) show a more positive sustainable consumption behavior than those who do not do physical activity and those who do physical activity indoors (Polat et al., 2019). The group of activities carried out for the artificial wall climbing led to a positive development in the children's perception of locus of control and it was seen that children's beliefs on what's happening around them is under their control and they can turn their lives in whichever direction they want were positively influenced (Özen et al., 2018). One of the important findings (Table 10) of the study is its contribution to problem-solving skills revealed in the codes and categories obtained in the qualitative section. Rock climbing activities may have provided this even if they were done for an experience for the short time. Consequently, activities done during artificial wall climbing were shown to cause positive development in problem solving skills and perception levels of the university students (Özen & Vatansever, 2017). It was shown that the activities such as trekking, camping and rock climbing do not have a significant effect on trait anxiety scores of the participants, however; camping and rock climbing cause a significant increase on state anxiety scores. (Özen, 2017). The fact that the participants in the study had little or no previous experience in outdoor sports may have caused them to experience some negative emotions. This is considered as a temporary situation.

One of the important findings of the study (Table 10) is the perceptions of self-confidence and self-efficacy that emerged in the codes and categories obtained in the qualitative section. Yıldız et al. (2016) stated that it could be concluded that the outdoor activity series had a positive effect on the perceived self-efficacy of the participants. The whole camp life and activities created with rope trails have positive impact on perceptions of the participants' self-efficacy (Özen et al., 2014) The thoughts put forward by the participants in this study regarding their perception of self-efficacy (learning their limits - seeing what they can and cannot achieve, etc.) can be explained as the effect of education on this issue. Climbing on artificial walls and real rock surfaces as a leisure activity was found to have a statistically significant and positive effect on the social anxiety levels of subjects in the climbing community (Özen, 2015). First of all, doing activities in nature requires getting away from urban life and the stereotype (clichéd) relationships it brings. People's understanding that they need each other (to keep each other safe and secure, etc.) and to help each other can also help them organize their social relationships. They will be able to make more realistic decisions about what is more important for a quality life. In addition, the activities carried out during this study are also a very important experience for seeing the positive effects of being in a group and acting together.

Nature education allows individuals to learn about natural processes. It increases their predisposition to nature, makes them more sensitive and conscious, and contributes to their becoming more independent, creative and critical thinking individuals (Güler, 2009; Keleş et al., 2010; Phenice & Griffore, 2003; Thoe & Lin, 2006). When the educations and practices are evaluated as a whole, it can be said that the participants in the study had a high level of positive process in terms of "connectedness to nature" and "environmental awareness" according to the results obtained. It was seen that the educations had an impact on nature connectedness and environmental awareness. It was observed that the participants were satisfied with the fact that they had a real nature experience and that they saw (theoretically and practically) many events described. They can ensure that mountaineering

sports and culture are established at their university. Club members can participate in mountaineering and extreme sports activities in a safe, environmentally sensitive manner. They can be organized to do their own mountaineering activities through the education and practices they receive.

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Conflict of interest

No conflict of interest is declared by the authors. In addition, no financial support was received.

Ethics Committee

The ethics committee permission required for the study was obtained from Hitit University Non-Interventional Researches Ethics Committee (Approval Number: 2022/17).

Author Contributions

Study Design, ZD; Data Collection, ZD, YUK; Statistical Analysis, ZD-YUK; Data Interpretation, ZD, YUK; Manuscript Preparation, ZD, YUK; LiteratureSearch, ZD. Thepublishedversion of themanuscript has been read and approved by all authors.

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