

Article

The motric, Educational, Recreational and Satisfaction Impact of Adventure Education Activities in the Urban Tourism Environment

Dana Badau ^{1,2}  and Adela Badau ^{3,*} 

¹ Department of Human Movement Sciences, University of Medicine and Pharmacy of Tirgu Mures, Tirgu Mures 540139, Romania; dana.badau@umftgm.ro or danabadau.brasov@gmail.com

² Interdisciplinary Doctoral School, Transilvania University of Brasov, Brasov 500036, Romania

³ Department of Physical Education, University of Medicine and Pharmacy of Tirgu Mures, Tirgu Mures 540139, Romania

* Correspondence: adela.badau@umftgm.ro; Tel.: +40-723-261-514

Received: 16 May 2018; Accepted: 15 June 2018; Published: 20 June 2018



Abstract: (1) Background: The study aims to highlight the impact of educational, recreational, motric and satisfaction of adventure education activities in the urban tourism environment; (2) Methods: The study included 48 students with specialization in physical education. The adventure education program included two specific activities and the evaluation focused on: the students' choice in choosing and crossing the routes from the Adventure Park in Brasov according to their difficulty; the distance covered within the Photo Trip Brasov Adventure. At the end of program a questionnaire contained 20 items divided into two parts of 10 items for each of the two activities: Adventure Park Brasov Challenge and Photo Trip Brasov Adventure, was used to assess the educational, recreational and satisfaction impact of the urban adventure tourism activities. The results were processed using SPSS 20; (3) Results: At the Adventure Park Brasov Challenge the girls have accumulated 118 points (29.7%), and the boys 280 points (70.3%). For Photo Trip Brasov Adventure, the average distance covered by the 12 teams was 5.516 ± 0.240 . The results are statistically significant for $p < 0.05$. The Cronbach's Alpha coefficient for the whole questionnaire was $\alpha = 0.933$; for the Adventure Park Brasov Challenge was $\alpha = 0.811$; for Photo Trip Brasov Adventure was $\alpha = 0.924$, suggesting that the items had a very high internal consistency; (4) Conclusions: Participation in the Education program through adventure in urban tourism environment highlighted the expansion and improvement of the physical, technical, educational, recreational potential and participation of the students. The analysis of the results of the questionnaire revealed that the students mostly appreciate the satisfaction and recreational parameters and in the lower the educational and motric parameters.

Keywords: adventure education; urban tourism; education; satisfaction; fitness; recreation; loisir; environment; students of physical education

1. Introduction

Involvement of young people in outdoor recreational activities in tourist areas aims at increasing their awareness and participation by experimenting different forms of activity in different environments. Stimulating the young generation's interest in actively participating in recreational activities, adventure and leisure education constitutes an important premise that needs to be strengthened and diversified in relation to the development of tourism.

The modern global trends in the implementation of sustainable tourism strategies focus on experimenting new programs and activities in different environments with cultural and educational implications [1].

Adventure tourism is, by definition, a highly sustainable form of tourism and includes three basic elements, namely: the pursuit of physical activity, the existence of the natural environment and the cultural immersion [2].

The researchers divided adventure tourism in 2 categories: hard adventure tourism that claims a good level of physical fitness due to the high level of physical stress and risk taking and soft adventure tourism characterized by a moderate level of physical exercise [2–4].

Sustainability of tourism in Romania follows the European trend, so the historical and cultural centers of the main cities represent the main attractions for tourists interested in the authentic cultural and historical heritage [5–7]. Turning the urban forest areas in adventure parks and organization of tourist and recreational activities in historical centers facilitate valorisation and increase of the tourism impact and is a way of economic and social efficiency of these areas.

Many studies approached adventure aspects, in this respect we considered useful to delimit the concepts and contexts of the adventure education and the adventure tourism.

Numerous studies on educational, cultural and loisir impact have been made in urban and rural tourist areas [8–11]. Adventure tourism is an attractive and popular form of tourism that focuses on optimizing four aspects: sustainable development, environmental protection, entrepreneurial development and improvement of the quality of life [12–14]. Besides general aspects of area development and sustainability, the benefits of urban adventure tourism at the individual level [15], contributes to the formation of proactive behaviors in accordance with the preferences, the intrinsic and extrinsic motivations and expectations of tourists [16–18].

Adventure education as an academic discipline involves interdisciplinary and transdisciplinary knowledge of history, psychology, education, ecology, geography, philosophy, culture [19–23]. The competences acquired by students through the organization and conduct of adventure education activities are: motric, technical, safety, organizational, instructional, facilitation, flexible leadership, experience-based judgment, collaboration [24,25]. Adventure education activities stimulate physical, mental, social and cultural skills by experimenting in real circumstances human limits, risk taking, emotional stimulation, novelty, challenge and maximum involvement [26,27]. Diversifying the academic curriculum for students from Physical Education and Sports through the inclusion of a new Education discipline through adventure (AE) is part of the modern trends in leisure and in the European curricular modernization [28]. Adventure is a complex and dynamic form of education, representing a challenge of awareness and growth of physical, cognitive and emotional possibilities through specific activities carried out in a real natural environment and which provide satisfaction by assuming risks and uncertainties regarding the final result [29–31].

In this study we combined an adventure education program with adventure tourism by experimenting with two specific activities that were designed for students from the physical education and sports program and aimed at using the touristic and recreational facilities of the urban environment.

The novelty of the study consists in assessing the educational, motric, recreational and satisfaction impact by introducing the organization and development of a sports-recreational adventure program developed in the urban area of Brasov. It is worth mentioning that this program is a premiere in Romania, and the two activities designed and developed for this study are included in the curriculum content of the Adventure education discipline for the students studying Physical education and sports.

The program that takes place through the two specific activities in different environments: a cultural one: the historical center of the city and a forestry center, in the recreation area of Brasov. The program aims at improving motor skills and expanding knowledge about: the environment, culture and history of Brasov.

Brasov was based on its potential for touristic development due to its elements of attraction: diversified topography, mountain scenery, cultural heritage—authentic history, accommodation capacity, diversity of tourist offer, infrastructure for recreational sports and tourism activities, quality of environment etc. [32,33].

Attracting and involving students in tourism and leisure activities in the urban area is a viable premise for the extension of their professional training to support tourism and sustainability in Brasov and contributes to the expansion of good urban tourism practices.

2. Materials and Methods

2.1. Aims

The study aims to highlight the impact of at the educational, recreational, motric and satisfaction of adventure education activities in the urban tourism environment.

The study focused on the following specific objectives of the academic activity included in the discipline Education through adventure for students with the specialty of physical education and sports, namely:

- identifying students' choices in choosing and going through the three mandatory routes in relation to their difficulty in the Adventure Park Brasov Challenge activity;
- improving the motric performance, expressed in the distance traveled within the Adventure Photo Trip Brasov activity;
- highlighting the relevance of educational, recreational, motric and satisfaction with the two activities specific to the adventure education program: Adventure Park Brasov Challenge and Photo Trip Brasov Adventure.

2.2. Research Design

The research was conducted between April–May 2017. The study was organized in two stages. The first stage consisted in carrying out 2 specific physical activities, included in the program of practical applications from the academic curriculum in Education through Adventure: Adventure Park Brasov Challenge and Photo Trip Brasov Adventure. In the second stage of the study was applied a questionnaire on the assessment of the educational and recreational impact of recreational tourism activities for students from physical education and sport that targeted specific activities: Adventure Park Brasov Challenge and Photo Trip Brasov Adventure.

2.3. Participants

The study included 48 students from the Physical Education and Sports specialization from University of Medicine and Pharmacy from Tirgu Mures, from which: 30 male subjects (62.5%) and 18 female subjects (37.5%). The average age of the group $X \pm SD$ 23.87 ± 2.24 , for female 22.88 ± 1.23 ; for male 24.46 ± 2.51 . All participants in this study were volunteers. The ethics aspect is very important in the research area [34], and in this respect the study was conducted in accordance with the Ethics Committee of Transilvania University of Brasov.

2.4. Data Collection Instruments and Procedure

The program took place in the form of a camp for 2 days, during which the two activities were carried out in the following order: Adventure Park Brasov Challenge and Photo Trip Brasov Adventure.

At the end of the two physical activities, the students completed the questionnaire on educational impact and satisfaction of tourism—recreation activities. We mention that the participants in the study are the students from the University of Medicine and Pharmacy from Tirgu Mures, and the location of the adventure education program was the city of Brasov. Brasov is situated 170 km away from Tirgu Mures and is the most tourist city in Romania, located in the mountain area and with the most developed mountain tourism infrastructure, according to the National Statistics Institute [35]. The subjects of the study did not participate before in any action in Adventure Park Brasov, and the center of the old city of Brasov was relatively unknown to most of the participants.

The study comprised 3 assessments: the assessment of the types of routes covered by the students at Adventure Park Brasov Challenge; evaluating the walking distance (kilometers) of the specific activity (km) of Photo Trip Brasov Adventure and application of the assessment questionnaire of the educational, recreational and satisfaction impact of urban adventure tourism.

At Adventure Park Brasov Challenge, students had to choose and walk individually three different routes from the 11 ones that are arranged in Adventure Park Brasov. For this activity, the evaluation consisted in identifying the types they preferred and covered routes by the students, depending on the degree of difficulty. The routes have been rated with 1 to 5 points depending on their difficulty, as follows: 1 point for the 3 yellow low-difficulty beginners route, the yellow routes do not exceed a height of 3 meters; 2 points for the 3 green easy routes, the height does not exceed 6 meters; 3 points for the 2 blue medium difficulty routes; 4 points for the 2 red routes of great difficulty; 5 points for the only black route, very difficult from a physical and technical point of view.

Photo Trip Brasov Adventure activity consisted in identifying 10 cultural and tourist sights in the old center of Brasov. The travel, in order to identify the 10 tasks was done only by foot. Each team was made up of 4 subjects (minimum one girl). Reporting on the number of our group of 48 subjects for this activity, 12 teams were formed. The main task was to identify 10 images (which highlighted: monuments, facades of buildings considered cultural monuments, emblems on historic buildings, information boards on memorial houses, monument restaurants) in the historical center of Brasov. Each team received a document with photos of the 10 tourist attractions, randomly and differently ordered for each team. The order of goal identification by each team was randomized. For each team was recorded the distance covered in kilometers, and they were required to identify the 10 pictures indicating the 10 tourist objectives. Verifying goal identification consisted in making a group photo catching each objective (self-photo group). The distance covered was measured using the Polar Flow 2017, for each team.

At the end of the two practical activities, each student had to fill in the questionnaire for assessing the educational, motoric, recreational and satisfaction impact of urban adventure tourism. The questionnaire contained 20 items divided into two parts of 10 items for each of the two activities: Adventure Park Brasov Challenge and Photo Trip Brasov Adventure. Each of the four parameters targeted in the study, namely: educational, motor, leisure and satisfaction, was addressed by specific items corresponding to the two activities. For Adventure Park Brasov Challenge, the educational parameter was targeted by the items: 1, 5, 6; the motor parameter by items: 3, 4; the recreational parameter of items: 8, 9; the satisfaction criterion of items: 2, 7, 10. For A Photo Trip Brasov Adventure, the educational parameter was targeted by the items: 11, 12, 13; the motor parameter by items: 15, 16; the recreational parameter of items: 18, 19; the items of satisfaction criterion: 14, 17, 20.

The questionnaire was developed with the Google Form and was provided directly to the students at the end of the practical activities, including Likert answers (5 points), 1 point representing the minimum level and 5 points the maximum level of appreciation.

2.5. Statistical Analyses

The results were statistically processed with SPSS 20. The statistical analysis included: the arithmetic average, standard deviation, medium error deviation, t-student test, and Kolmogorov-Smirnov Test (Z) for the significance threshold $p < 0.05$. We calculated the PCA for the dataset: the Bartlett's sphericity test and the Kaiser-Meyer-Olkin (KMO). To evaluate the reliability or the internal consistency of the questionnaire, Cronbach's alpha statistical index was calculated. In order to evaluate the relevance of the items, we calculated the number of points and the percentage assigned by the subjects of the study.

3. Results

In this section were presented the most relevant results and descriptive information of the study regarding the educational, recreational and the satisfaction level of the two specific practical activities included in the curriculum of the Discipline of Education through adventure to the students from physical

education specialization. The statistical analysis allowed us to confirm the impact of the adventure education program in order to improve the motric, tourism and leisure competencies of our study subjects.

According to Table 1, the total number of students' options for the yellow route was 17, of which the girls covered the route 12 times and the boys 5 times. For the green route there were 50 options, of which the girls performed 26 routes and the boys 24 routes. The blue route was preferred and covered by students 36 times, of which: 10 times by the girls and 26 times by boys. The red route had 32 options, of which the girls performed 6 routes, and the boys 28 routes. The black route was chosen only by the boys being covered 9 times (Table 1).

Table 1. Descriptive statistics for the results of students route options at Park Adventura activity.

Routes	Gender	Options (N) Female	Options (N) Male	Options (N) Total
Yellow route	route 1	2	-	2
	route 2	3	2	5
	route 3	7	3	10
Green route	route 1	9	7	16
	route 2	8	9	17
	route 3	9	8	17
Blue route	route 1	6	14	20
	route 2	4	12	16
Red route	route 1	4	14	18
	route 2	2	12	14
Black route	route 1	-	9	9

N—the number of options for travelling the routes by the subjects.

The differences in average scores between girls and boys were 2.778 points (Table 2). Girls have accumulated 118 points (29.7%), boys 280 points (70.3%), the differences between the two samples being 162 points. The results at specific samples from Adventure Park Brasov were statistically significant for $p < 0.05$.

Table 2. Descriptive statistics for the results of Park Adventura Brasov Challenge.

Gender	N (%)	X (points)	SD	Σ (Points)	t	p
Female	18(37.5)	6.55	1.68	118	16.47	0.00
Male	30(62.5)	9.33	2.13	280	23.90	0.00
Total	48 (100)	8.29	2.38	398	24.06	0.00

N—number of subject; %—percent, X—average; SD—standard deviation; Σ —sum; t—Student t values; p—level of probability.

The best result of the study (Table 3) was registred for team number 2, which identified the 10 touristic objectives by walking 5.2 km, and the worst result was registred by team number 11, which covered 6.2 km to fulfill the tasks of the activity. The average of the distances covered by the 12 teams was $X \pm SD 5.51 \pm 0.24$, the results being statistically significant for $p < 0.05$.

Table 3. Descriptive statistics for the results of Photo Trip Brasov Adventure.

Team (T)	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	
X (km)	5.8	5.2	6.1	5.5	5.3	5.5	5.9	5.2	5.7	5.5	6.2	5.4	
X							5.51						
SD							0.24						
t							58.11						
p							0.00						

X—distance average; SD—standard deviation; t—Student t values; p—level of probability.

For 20 items, the Cronbach's Alpha coefficient was $\alpha = 0.93$, for Adventure Park Brasov Challenge the coefficient was $\alpha = 0.81$, and for Photo Trip Brasov Adventure it was $\alpha = 0.92$ suggesting that the items had very high internal consistency. For Adventure Park Brasov Challenge (Table 4), the average of points awarded for the maximum 5 points was $X \pm SD 29.60 \pm 9.19$ (59.2%), the best score was obtained by item 2 regarding the attractiveness of the Adventure Park Brasov Challenge program and by item 10 on the degree of satisfaction of Adventure Park Brasov Challenge, both achieving a total of 38 points (79.2%). The average score for the answer with maximum 4 points was $X \pm SD 10.90 \pm 3.84$ (21.8%), the best score being obtained by item 6 regarding the appreciation of the natural environment protection within the Adventure Brasov Park with a total of 19 points (39.6%). The average of the points awarded for the answer with maximum 3 points and the answer with maximum 2 points, it was $X \pm SD 5.30 \pm 4.54$ (10.6%), respectively 2.20 ± 5.61 (4.4%). The best score was obtained from item 5 regarding the risk assessment within Adventure Park Brasov Challenge program with a total of 17 points (35.4%), respectively 18 points (37.5%).

For Photo Trip Brasov Adventure (Table 4) the average of the points awarded for the answer with maximum 5 points was $X \pm SD 31.30 \pm 6.75$ (62.6%), the best score being obtained by item 11 regarding the educational relevance of Photo Trip Brasov Adventure with a total of 37 points (77.1%). The average of points awarded for the answers with maximum 4, 3, 2 was $X \pm SD 10.70 \pm 3.59$ (21.4%)/ 5.10 ± 2.07 (10.2%) and 1.90 ± 1.91 (1.8%), obtained by item 16 regarding the appreciation of the physical effort within the program Photo Trip Brasov Adventure with a total of 19 points (39.6%)/9 points (18.8%), respectively 6 points (12.5%).

The analysis of the results on the whole questionnaire (Table 4) highlights the following: for the answer with maximum 5 points the average was $X \pm SD 30.45 \pm 7.89$ (60.9%); for the answer with maximum 4 points, it was $X \pm SD 10.80 \pm 3.62$ (21.6%); for the answer with maximum 3 points, it was $X \pm SD 5.20 \pm 3.44$ (10.4%) and for the answer with maximum 2 points, it was $X \pm SD 1.55 \pm 4.13$ (3.1%). The results obtained for scores with maximum 5–3 points were statistically significant for $p < 0.05$ and the results of maximum 2 points, they were statistically insignificant. We mention that there was no answer with 1 point for any item in the questionnaire.

The analysis of the parameters highlighted by the arithmetic mean of the points for both specific activities reveals that the most appreciated parameters were satisfaction and recreation (Table 5). For the whole program including the program the values of the parameters of the questionnaire were the following: the educational parameter with a total of 1238.00 points, $X \pm SD 4.40 \pm 0.03$ points; the motric parameter with an amount on the 4 items of 831.00 points, $X \pm SD 4.33 \pm 0.55$ points; recreational parameter cumulative on the 4 items of the questionnaire 879.00 points, $X \pm SD 4.58 \pm 0.15$ points; satisfaction parameter with a total score of 6 items of 1335 points, $X \pm SD 4.64 \pm 0.10$ points.

For the Adventure Park Brasov Challenge activity (Table 6), an average of $\pm SD$ of 4.41 ± 0.50 , t (df 9) 27.71 was recorded for the 10 items of the questionnaire, the values being statistically significant for $p < 0.05$. The 10 items of the questionnaire related to the activity Photo Trip Brasov Adventure $X \pm SD 4.50 \pm 0.24$; t (df9) 57.56, the results being statistically significant for $p < 0.05$ (Table 6). In the case of the group of students for the part of the questionnaire about Adventure Park Brasov Challenge, the Keiser-Meyer-Olkin measure verified the sampling adequacy for analysis, $KMO = 0.74$, which are above Keiser's criteria (>0.5). Bartlett's test of sphericity χ^2 (45) = 257.21, $p < 0.00$, indicated that the correlation between items was sufficiently large for PCA. In the case of the group of students for the part of the questionnaire about Photo Trip Brasov Adventure, the Keiser-Meyer-Olkin measure verified the sampling adequacy for analysis, $KMO = 0.73$, which are above Keiser's criteria (>0.5). Bartlett's test of sphericity χ^2 (45) = 535.54, $p < 0.00$, indicated that correlation between items was sufficiently large for PCA.

Table 4. The statistical analysis of the average responses according to the Likert scale (5) per item in the questionnaire evaluating the educational, recreational and satisfaction impact of the urban adventure tourism activities.

Activity	Items	5 Points N (%)	4 Points N (%)	3 Points N (%)	2 Points N (%)	1 Point N (%)
Park Adventura Brasov Challenge	Item 1. How do you evaluate the educational-formative relevance of the activities?	35 (72.9)	10 (20.8)	3 (6.3)	-	-
	Item 2. How do you appreciate the attractiveness of your activities?	38 (79.2)	8 (16.7)	2 (4.2)	-	-
	Item 3. How do you appreciate the complexity of the routes?	33 (68.8)	12 (25)	3 (6.3)	-	-
	Item 4. How do you appreciate the physical effort of the routes?	28 (58.3)	11 (22.9)	9 (18.8)	-	-
	Item 5. How do you rate the risk of activity?	7 (14.6)	6 (12.5)	17 (35.4)	18 (37.5)	-
	Item 6. How do you appreciate the protection of the natural environment within Adventure Park Brasov?	23 (47.9)	19 (39.6)	4 (8.3)	2 (4.2)	-
	Item 7. How do you rate the activity recommendation for different age categories?	31 (64.6)	10 (20.8)	5 (10.4)	2 (4.2)	-
	Item 8. How do you appreciate the tourist relevance of the activity?	34 (70.8)	11 (22.9)	3 (6.3)	-	-
	Item 9. How do you assess the leisure relevance activity?	29 (60.4)	15 (31.3)	4 (8.3)	-	-
	Item 10. How do you rate the satisfaction of the activity?	38 (79.2)	7 (14.6)	3 (6.3)	-	-
Photo Trip Town Adventure	Item 11. How do you assess educational relevance of the activity?	37 (77.1)	6 (12.5)	5 (10.4)	-	-
	Item 12. How do you assess the aspects of collegiate collaboration and assistance in order to fulfill the specific tasks within the activity?	32 (66.7)	9 (8.8)	7 (14.6)	-	-
	Item 13. How do you assess the cultural relevance of the activity?	33 (68.8)	10 (20.8)	5 (10.4)	-	-
	Item 14. How do you appreciate the attractiveness of the activity?	36 (75)	8 (16.7)	4 (8.3)	-	-
	Item 15. How do you appreciate the complexity of the activity?	28 (58.3)	13 (27.1)	7 (14.6)	-	-
	Item 16. How do you appreciate the physical effort of the activity?	14 (29.2)	19 (39.6)	9 (18.8)	6 (12.5)	-
	Item 17. How do you rate the degree of recommendation of the program for different age categories?	34 (70.8)	10 (20.8)	3 (6.3)	1 (2.1)	-
	Item 18. How do you appreciate the tourist relevance of the activity?	36 (75)	10 (20.8)	2 (4.2)	-	-
	Item 19. How do you appreciate the leisure relevance of the activity?	29 (60.4)	13 (27.1)	4 (8.3)	2 (4.2)	-
	Item 20. How do you rate satisfaction of the activity?	34 (70.8)	9 (18.8)	5 (10.4)	-	-

N—Number of answers of the subjects, %—percentage of total responses per item.

Table 5. The statistical analysis of the average and sum per parameters of educational, motric, recreational and satisfaction of the questionnaire.

Activity	Parameters	Items Number	Σ Points	X Points	SD
Adventure Park Brasov Challenge	Educational	1, 5, 6	577	4.01	0.85
	Motric	3, 4	433	4.49	0.16
	Recreational	8, 9	440	4.58	0.09
	Satisfaction	2, 7, 10	669	4.65	0.16
Photo Trip Brasov Adventure	Educational	11, 12, 13	661	4.59	0.07
	Motric	15, 16	398	4.14	0.41
	Recreational	18, 19	439	4.57	0.19
	Satisfaction	14, 17, 20	666	4.63	0.04

X—average; SD—standard deviation; Σ —sum.

Table 6. The statistical analysis of the responses according to the Likert scale (5) per item in the questionnaire evaluating the educational, recreational and satisfaction impact of the urban adventure tourism activities.

Activity	Items	One-Sample T-Test				Kolmogorov-Smirnov Test	
		X	SD	t	p	Z	p
Photo Trip Brasov Adventure	Item 1.	4.66	0.59	54.29	0.00	3.05	0.00
	Item 2.	4.75	0.52	62.57	0.00	3.28	0.00
	Item 3.	4.62	0.60	52.89	0.00	2.90	0.00
	Item 4.	4.39	0.79	38.45	0.00	2.49	0.00
	Item 5.	3.04	1.05	20.05	0.00	1.69	0.00
	Item 6.	4.31	0.80	37.20	0.00	1.96	0.00
	Item 7.	4.45	0.84	36.36	0.00	2.66	0.00
	Item 8.	4.64	0.60	53.55	0.00	2.98	0.00
	Item 9.	4.52	0.65	48.04	0.00	2.58	0.00
	Item 10.	4.72	0.57	57.09	0.00	3.27	0.00
Photo Trip Brasov Adventure	Item 11.	4.66	0.66	48.75	0.00	3.20	0.00
	Item 12.	4.52	0.74	42.12	0.00	2.82	0.00
	Item 13.	4.58	0.67	46.76	0.00	2.89	0.00
	Item 14.	4.66	0.63	51.30	0.00	3.12	0.00
	Item 15.	4.43	0.74	41.48	0.00	2.49	0.00
	Item 16.	3.85	0.98	26.99	0.00	1.70	0.00
	Item 17.	4.60	0.70	45.13	0.00	2.91	0.00
	Item 18.	4.70	0.54	59.94	0.00	3.14	0.00
	Item 19.	4.43	0.82	37.36	0.00	2.47	0.00
	Item 20.	4.60	0.67	47.18	0.00	2.97	0.00

X—mean arithmetic; SD—standard deviation; p—level of probability.

Assessment of the questionnaire evaluating the educational, leisure and tourism relevance of the specific education activities (Table 6), the recorded values were statistically significant for $p < 0.05$, thus $X \pm SD 4.46 \pm 0.38$; t (df 9) 51.25. The normality of the results for each item of the questionnaire highlighted by the Z values of the Kolmogorov-Smirnov test was statistically significant for $p < 0.05$.

In the case of the group of students for the whole questionnaire, the Keiser-Meyer-Olkin measure verified the sampling adequacy for analysis, $KMO = 0.85$, which are above Keiser's criteria (>0.5). Bartlett's test of sphericity $\chi^2(190) = 1016.74$, $p < 0.00$, indicated that correlation between items were sufficiently large for PCA.

4. Discussion

Through the results obtained, our study contributes to highlighting the motric, educational, recreational and satisfaction aspects of adventure education programs in the urban tourist environment.

Adventure Park Brasov Challenge has highlighted the fact that students chose their routes in accordance with the difficulty of the routes due to the growth of: courage, driving skills, exploitation desire and new risks and self-provocation.

Photo Trip Brasov Adventure has revealed that the physical activity materialized by the distance traveled (average distance traveled between 5.2 km and 6.2 km) is optimally combined with the exploitation of the historical and cultural center of a tourist town.

In the questionnaire evaluating the educational, recreational and tourist relevance of specific adventure education activities through the Adventure Park Brasov Challenge activity, the highest scores were obtained by: item 1—the educational-formative relevance of the activity, item 2—activity attractiveness, item 3—complexity of the routes, item 8 regarding tourism relevance of the activity and item 10—the degree of satisfaction of the survey subjects regarding the activity.

The results of the Photo Trip Brasov Adventure questionnaire showed that the highest scores were obtained in: item 11—educational relevance of the activity, item 14—activity attractiveness, item 17—the degree of recommendation of the activity for different age categories, item 18—tourist relevance of activity and item 20—the degree of satisfaction of the participants in the activity.

Regarding the level of impact of the questionnaire parameters according to the mean of the points on the corresponding items, the study revealed the following hierarchy for Adventure Park Brasov Challenge activity: on the first position the satisfaction parameter, on the second position the recreational parameter, third position for the motric parameter, and the last position the educational parameter. For Photo Brasov Trip Adventure Activity, the ranking of the parameters of the questionnaire according to the mean values was: on the first position the satisfaction parameter, in the second position the educational parameter, the third position the recreational parameter and the last position the motor parameter. The current study was based on a previous study conducted in 2015–2017 including students in the physical education program which highlighted the major impact of the content of the discipline of Education through adventure on the aspects of satisfaction and education for students from the specialization of physical education and sports. The study highlights a large effect ≥ 0.80 for the following items: the complexity of curricular theoretical themes included in the AE discipline, the complexity of curricular theoretical themes included in the AE discipline, the educational relevance of the theoretical EA specific concepts, the educational relevance of the Adventure Park Brasov Challenge activity, the Photo Brasov Trip Adventure activity, complexity of the practical work topics included in the discipline, the efficiency of the EA discipline implementation within the academic curriculum for training future physical education and sports teachers [28].

The results of our study complete other studies in adventure education and urban adventure tourism. Thus, a study on adventure tourism made in 2017 revealed that 40% of the questioned people, motivated their choice because of: the need for exercise, adrenaline, the freedom to practice adventure sports [2]. One study on 115 sport students analysed the effectiveness of sports activities with an emphasis on adventure-based learning, experimental and outdoor education during modules aiming at developing a modification of behaviour. The investigations showed a positive effect—the

improvement of various facets of self-esteem, as well as the differentiation of the results within the sub-scales (consequently different effects can be distinguished here) for the experimental group [36]. The results of previous studies are also confirmed by our study, being highlighted by the high scores obtained by the items specific to the parameters: satisfaction, recreational and motric.

Photo Trip Brasov Adventure study confirms other studies in urban or rural areas that use photography to identify cultural and tourist objectives and improve physical fitness. Thus, an exploratory study conducted on two groups of volunteers (residents and tourists) analyzed through photography and filling in questionnaires, investigation of the perception of the level of tourism and the way of life of the inhabitants and tourists in the urban environment on the seaside. The study concluded that residents and tourists tend to adopt similar ways of exploring destinations [37]. Another study, including 28 tourists on the Appalachian route in the Smoky Great Mountains National Park, aimed at examining the perceptions of tourists, using a route impact assessment through photography, and a short post-travel interview. The results confirmed that using photography could help improving the understanding of the relationship between the resource impacts, perceptions and outdoor recreation experiences [38], which is in accordance with the results of our study. Numerous studies highlight the tourist impact of some routes or destinations through the use of photographs taken in the mountains, coastal and urban or rural areas and are in agreement with the results of our study [37,39–42].

Studies on adventure education programs for students have highlighted that they were perceived more competent in the following aspects: intra-professional, ethical, and theoretical aspect of the profession [20,43]. Numerous studies confirm that adventure activities in specially arranged parks or in different natural environments contribute to the development of physical, mental, social capacities, and to the formation of proactive behaviors [44–46].

Study limitations: the small number of students involved in the study, quantification of the motric and functional parameters during the activities, lack of cultural, tourist and urban geography knowledge of the students participating in the study. The analysis of items highlights some very high average values especially for those who are impacting: educational, attractiveness, tourism, leisure and satisfaction. We considered this a limitation on the reason that it was due to the large impact of the development environment and the way the program was organized, thus the subjects of the study overrated certain items because they did not have previous comparative benchmarks.

Strengths of the study are: students involvement from physical education in Tirgu Mures city in an adventure education program in Brasov, the most touristic city in Romania, carrying out two different activities in terms of: the content, the environment and the imposed tasks ; evaluating the motric aspects of Photo Trip Brasov Adventure activities, assessing students' options on the routes covered according to the degree of difficulty; the students were physically, psychically, culturally and socially involved; application of a satisfaction questionnaire after the two activities of the adventure education program.

5. Conclusions

The activities within Adventure Park Brasov Challenge and Photo Trip Brasov Adventure highlighted an active involvement of the subjects due to the high degree of: education, attractiveness, satisfaction, physical and intellectual challenge and novelty as a form of practicing leisure activities and adventure education. By participating in the adventure education program, the physical, technical, educational, recreational and participatory potential of the subjects has improved and expanded. The analysis of the results of the applied questionnaire revealed that the students appreciate mainly the satisfaction parameter and the recreational parameter and in the lower the educational parameter and the motor parameter. Modernization of the academic process by experimenting sports and recreational adventure programs contributes to increasing the physical, intellectual, cultural, social potential of students from the physical education and sports program.

The curriculum content of physical education and sports should be diversified by the use of various terrestrial, aquatic and aerial environments: indoor and outdoor, and by updating teaching

methods in order to improve: motric deployments, technical skills, theoretical and professional knowledge, cultural, environmental, geographic and turistic knowledge.

Extending the ways of practicing leisure and tourism activities in order to fit in the modern educational and recreational trend. Our study highlights that implementing of adventure education discipline within the academic curriculum in the field of physical education can be a viable and attractive alternative to the modernization of practical didactic activity.

Adventure education activities using the urban touristic area allow students to adapt their knowledge and abilities to different backgrounds (historical city center, adventure parks, etc.) in order to expand professional skills.

Future studies should focus on assessing several parameters: motric, functional, educational and recreational activities specific to adventure education in the urban and rural tourist environment.

Author Contributions: Conceptualization, B.A. and B.D.; Methodology, B.A. and B.D.; Software, B.A. and B.D.; Validation, B.A. and B.D.; Formal Analysis, B.A. and B.D.; Investigation, B.A. and B.D.; Resources, B.A. and B.D.; Data Curation, B.A. and B.D.; Writing-Original Draft Preparation, B.A. and B.D.; Writing-Review & Editing, B.A. and B.D.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Buffa, F. Young Tourists and Sustainability. Profiles, Attitudes, and Implications for Destination Strategies. *Sustainability* **2015**, *7*, 14042–14062. [[CrossRef](#)]
2. Bogan, E.; Constantin (Oprea), D.M.; Dirloman, G. The Adventure tourism in the Brasov Country: The attraction and retention of the tourists. *Qual.-Access Success* **2017**, *18*, 73–80.
3. Rantala, O.; Rokenes, A.; Valkonen, J. Is adventure tourism a coherent concept? A review of research approaches on adventure tourism. *Ann. Leis. Res.* **2016**, *1*–14. [[CrossRef](#)]
4. UNWTO. *Global Report on Adventure Tourism*; World Tourism Organization: Madrid, Spain, 2014; p. 12.
5. García-Hernández, M.; de la Calle-Vaquero, M.; Yubero, C. Cultural Heritage and Urban Tourism: Historic City Centres under Pressure. *Sustainability* **2017**, *9*, 1346. [[CrossRef](#)]
6. Nocca, F. The Role of Cultural Heritage in Sustainable Development: Multidimensional Indicators as Decision-Making Tool. *Sustainability* **2017**, *9*, 1882. [[CrossRef](#)]
7. Aranburu, I.; Plaza, B.; Esteban, M. Sustainable Cultural Tourism in Urban Destinations: Does Space Matter? *Sustainability* **2016**, *8*, 699. [[CrossRef](#)]
8. Leanza, P.M.; Porto, S.M.C.; Sapienza, V.; Cascon, S.M. A Heritage Interpretation-Based Itinerary to Enhance Tourist Use of Traditional Rural Buildings. *Sustainability* **2016**, *8*, 47. [[CrossRef](#)]
9. Meyer, D. *Tourism Route and Gateways: Key Issues for the Development of the Tourism Route and Gateway and Their Potential for Pro-Poor Tourism*; Overseas Development Institute: London, UK, 2004.
10. Sharpley, R. Rural tourism and the challenge of tourism diversification: The case of Cyprus. *Tour. Manag.* **2002**, *23*, 233–244. [[CrossRef](#)]
11. Camarda, A.; Plesa, D.; Badau, D. Changing the attitudes of the factors involved in the tourism industry. In Proceedings of the 8th WSEAS International Conference (MMF 10), Panang, Malaysia, 23–25 March 2010.
12. Andreiana, V.A.; Stefan, M.C.; Panagoret, D. The analysis of degree of practicing the adventure tourism—An opportunity of attracting tourists in Dambovita Country. *J. Sci. Arts* **2017**, *1*, 95–106.
13. Pop, C. Self-Esteem and Body Image Perception in a Sample of University Students. *Eurasian J. Educ. Res.* **2016**, *64*, 31–44. [[CrossRef](#)]
14. Ahuja, R.M. *A Hand Book of Adventure Tourism*; Summit Enterprises: New Delhi, India, 2011; p. 296. ISBN 13 978-8184202854.
15. Eagles, P.F.J.; McCool, S.F.; Haynes, C.D.A. *Sustainable Tourism in Protected Areas: Guidelines for Planning Management*; IUCN: Gland, Switzerland; Cambridge, UK, 2002.
16. Oh, C.O.; Draper, J.; Dixon, A.W. Comparing resident and tourist preferences for public beach access and related amenities. *Ocean Coast. Manag.* **2010**, *53*, 245–251. [[CrossRef](#)]

17. Koemle, D.B.; Morawetz, U.B. Improving mountain bike trails in Austria: An assessment of trail preferences and benefits from trail features using choice experiments. *J. Outdoor Recreat. Tour.* **2016**, *15*, 55–65. [CrossRef]
18. Dumitras, D.E.; Muresan, I.C.; Jitea, I.M.; Mihai, V.C.; Balazs, S.E.; Iancu, T. Assessing Tourists' Preferences for Recreational Trips in National and Natural Parks as a Premise for Long-Term Sustainable Management Plans. *Sustainability* **2017**, *9*, 1596. [CrossRef]
19. Plaut, L. Degree-Granting Programs in Adventure Education: Added Value? *J. Exp. Educ.* **2016**, *24*, 136–140. [CrossRef]
20. Badau, D. Interrelation triangle: Adventure education—Learning adventure—Experiential education. In Proceedings of the International Scientific Conference Effects of Physical Activity Application to Anthropological Status with Children, Youth and Adults, Belgrade, Serbia, 11–12 December 2014.
21. Stremba, B. *Teaching Adventure Education Theory: Best Practice*; Human Kinetics: Champaign, IL, USA, 2009; pp. 3–6. ISBN 13 9780736071260.
22. Karpinen, S.J.A. Outdoor adventure education in a formal education curriculum in Finland: Action research application. *J. Adventure Educ. Outdoor Learn.* **2012**, *12*, 41–62. [CrossRef]
23. Norton, C.N.; Hsieh, C.M. Cultural bridging through shared adventure: Cross-cultural perspectives on adventure therapy. *J. Adventure Educ. Outdoor Learn.* **2011**, *11*, 173–181. [CrossRef]
24. Priest, S.; Grass, M.A. *Effective Leadership in Adventure Programming*, 2nd ed.; Human Kinetics: Champaign, IL, USA, 2005; pp. 3–6. ISBN 13 9781492547860.
25. Badau, A.; Badau, D.; Serban, C.; Tarcea, M.; Rus, V. Wellness integrative profile 10 (WIP10)—An integrative educational tool of nutrition, fitness and health. *J. Pak. Med. Assoc.* **2018**, *68*, 882–887.
26. Swarbrooke, J.; Beard, C.; Leckie, S.; Pomfret, G. *Adventure Tourism: The New Frontier*; Butterworth Heinemann, SUA: Burlington, MA, USA, 2003.
27. Moldovan, E.; Enoiu, R.S. Knowing the tourist phenomenon from the student's point of view regarding the formative aspect. *Bull. Transilv. Univ. Brasov Ser. IX: Sci. Hum. Kinet.* **2015**, *8*, 59–64.
28. Badau, D. The educational impact of implementation the education through adventure discipline in physical education and sports academic curriculum. *Phys. Educ. Stud.* **2017**, *1*, 108–115. [CrossRef]
29. D'Amato, G.L.; Krasny, M.E. Outdoor Adventure Education: Applying Transformative Learning Theory to Understanding Instrumental Learning and Personal Growth in Environmental Education. *J. Environ. Educ.* **2011**, *42*, 237–254. [CrossRef]
30. Cooley, S.J.; Burns, V.E.; Cumming, J. Using Outdoor Adventure Education to Develop Students' Groupwork Skills: A Quantitative Exploration of Reaction and Learning. *J. Exp. Educ.* **2016**, *39*, 329–354. [CrossRef]
31. Potter, T.; Socha, T.; O'Connell, T. Outdoor adventure education (OAE) in higher education: Characteristics of successful university programs. *J. Adventure Educ. Outdoor Learn.* **2012**, *12*, 99–119. [CrossRef]
32. Popescu, R.I.; Corbos, R.A. The role of urban tourism in the strategical development of Brasov area. *Theor. Empir. Res. Urban Manag.* **2010**, *7*, 69–85.
33. Candrea, A.N.; Ispas, A. Promoting tourism destinations through sport events. *The case of Brasov. J. Tour. Stud. Res. Tour.* **2015**, *10*, 61–67.
34. Marginean, O.; Brinzaniuc, K.; Marginean, C. Ethical consideration in the child's obesity. *Rev. Rom. Bioet.* **2013**, *11*, 12–20.
35. Institutul National de Statistica. Available online: http://www.insse.ro/cms/files/IDDDT2012/index_IDDDT.htm (accessed on 9 May 2018).
36. Gatzemann, T.; Schweizer, K.; Hummel, A. Effectiveness of sports activities with an orientation on experiential education, adventure-based learning- based learning and outdoor education. *Kinesiology* **2008**, *40*, 147–153. Available online: <https://hrcak.srce.hr/30814> (accessed on 9 May 2018).
37. Garrod, B. Exploring place perception a photo-based analysis. *Ann. Tour. Res.* **2008**, *35*, 381–401. [CrossRef]
38. Dorwart, C.E.; Moore, R.L.; Leung, Y.F. Visitor employed photography: Its potential and use in evaluating visitors' perceptions of resources impacts in trail and park settings. In Proceedings of the 2006 Northeastern Recreation Research Symposium, Bolton Landing, 9–11 April 2006.
39. Deale, C.S. Students' Photo Perceptions of Hospitality and Tourism in a Community: A Scholarship of Teaching and Learning Case study. *J. Teach. Tour.* **2014**, *4*, 1–21. [CrossRef]
40. Garood, B. Understanding the Relationship between Tourism Destination Imagery and Tourist Photography. *J. Travel Res.* **2009**, *47*, 346–358. [CrossRef]

41. Tasci, A.D.A.; Gartner, W. Destination Image and its Functional Relationships. *J. Travel Res.* **2007**, *45*, 413–425. [[CrossRef](#)]
42. Foris, D.; Nicolau, C.; Foris, T.; Grecu, V. By bike to urban or mountainous Romania? Developing the market of bikeparking adventure tourism, political sciences, law, finance, economics and tourism. In Proceedings of the International Multidisciplinary Scientific Conferences on Social Sciences and Arts, Sofia, Bulgaria, 1–9 September 2014.
43. Marinho, A.; Mari dos Santos, P.; Manfro, M.N.; Figueiredo, J.P.; Zeilmann, B.B. Reflections about outdoor adventure sports and professional competencies of physical education students. *J. Adventure Educ. Outdoor Learn.* **2017**, *17*, 38–54. [[CrossRef](#)]
44. Kruger, M.; Van der Merwe, P.; Bosch, Z.; Saayman, M. Adventure activity preferences in South Africa national parks. *S. Afr. J. Res. Sport Phys. Educ. Recreat.* **2018**, *40*, 1–23.
45. Smith, M.K.; Roux, D.J.; Hayes, J. Adventure racing enables access to cultural ecosystem services at multiple scales. *Ecosyst. Serv.* **2017**, *28*, 149–161. [[CrossRef](#)]
46. Saarinen, J. Tourism and Tourists in Nature, National Parks, and Wilderness. In *Wiley Blackwell Companion to Tourism, Series: Blackwell Companions to Geography*; John Wiley & Sons Inc.: Hoboken, NJ, USA, 2014; pp. 500–512.



© 2018 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).