SPORT TK: Revista Euroamericana de Ciencias del Deporte, vol. 9 n.º 1, (Supl. 1).
Monográfico: Turismo de aventura y deportes al aire libre, 15-20
Recibido: Octubre 2018
Aceptado: Agosto 2019

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Murcia (España)
ISSN edición web (*http://revistas.um.es/sportk*): 2340-8812

Comparison of motivational factors between the practice of sports of nature, competitive adventure and leisure

Comparación de factores motivacionales entre la práctica de deportes de naturaleza, aventura competitiva y ocio

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Abstract: The main aim of this study was to compare sports practitioners of a competitive and leisure nature sports regarding their motivations for practice. The sample consisted of 631 adults (504 men and 127 women) who practiced nature and adventure sports. Participants answered an assessment protocol composed of a sociodemographic form and the Exercise Motivation Inventory - 2 (EMI-2) questionnaire. Among leisure and competition practitioners, variations were analyzed using standardized effect size differences (ES) with 90% Confidence Interval (CI). The following scale was used to interpret the magnitude effect: <0,2, *trivial*; 0,2-0,6, *small*; 0,6-1,2, *moderate*; > 1,2, *large*. The probabilities were tested considering the *smallest worthwhile changes* (SW, 0,2 x between SD subjects). The following scale was used for qualitative probabilities: 25-75%, *possibly*; 75-95%, *likely*; 95-99% *very likely*; e> 99% *almost certain*. Differences in variables were tested regarding the following factors: Social Recognition, Positive Health, Weight, Stress Management, Revitalisation, Enjoyment, Challenge, Affiliation, Competition, Health Pressures, Health Avoidance, Appearance, Strength & Endurance and Nimbleness. Only the variables Enjoyment and Competition had moderate magnitude when comparing leisure to competitive practitioners. When comparing within gender, we found that the variable Competition is more noticeable in females compared to leisure having a probability of *almost certain* with *large* magnitude on the Enjoyment variable -29.2% [-36.8;-20.6]; ES: -2.17 [-2.89;-1.45] and competition -50.7% [-60.6;-38.4]; ES: -1.52 [-2.00;-1.04]. Understanding the motives that fit the practice of a particular sport is essential to tailor a strategy and make sports plans more appealing and interesting for their practitioners. The Enjoyment and Competition factors were the most significant, which influenced the gender differences between and when comparing the profile of leisure and competitors.
Keywords: adventure and nature sports, motivation, physical exercise, competition, enjoyment.

Resumen: El objetivo principal de este estudio fue comparar a los profesionales de los deportes de naturaleza competitiva y de ocio con respecto a sus motivaciones para la práctica. La muestra consistió en 631 adultos (504 hombres y 127 mujeres) que practicaban deportes de naturaleza y de aventura. Los participantes respondieron un protocolo de evaluación compuesto por una forma sociodemográfica y el cuestionario Inventario de Motivación del Ejercicio - 2 (EMI-2). Entre los profesionales del ocio y la competencia, las variaciones se analizaron utilizando las diferencias de tamaño del efecto (EE) estandarizadas con un intervalo de confianza (IC) del 90%. Se utilizó la siguiente escala para interpretar el efecto de magnitud: <0,2, trivial; 0,2-0,6, pequeño; 0,6-1,2, moderado; > 1,2, grande. Las probabilidades se probaron considerando los cambios más pequeños que merecen la pena (SW, 0,2 x entre sujetos SD). Se usó la siguiente escala para las probabilidades cualitativas: 25-75%, posiblemente; 75-95%, probable; 95-99% muy probable; e> 99% casi seguro. Se evaluaron las diferencias en las variables con respecto a los siguientes factores: reconocimiento social, salud positiva, peso, control del estrés, revitalización, disfrute, desafío, afiliación, competencia, presiones de salud, evitación de la salud, apariencia, fuerza y resistencia y agilidad y agilidad. Solo las variables disfrute y competencia tuvieron una magnitud moderada al comparar el ocio con los profesionales de la competencia. Cuando se comparan dentro del género, encontramos que la variable competencia es más notable en las mujeres en comparación con el ocio que tiene una probabilidad de casi certeza con una gran magnitud en la variable de disfrute -29.2% [- 36.8; -20.6]; ES: -2.17 [-2.89; -1.45] y competencia -50.7% [-60.6; -38.4]; ES: -1.52 [-2.00; -1.04]. Comprender los motivos que se ajustan a la práctica de un deporte en particular es esencial para diseñar una estrategia y hacer que los planes deportivos sean más atractivos e interesantes para sus practicantes. Los factores de disfrute y competencia fueron los más significativos, lo que influyó en las diferencias de género entre y cuando se comparó el perfil de ocio y competidores.
Palabras clave: aventura y deportes de naturaleza, motivación, ejercicio físico, competición, disfrute.

Introduction

Identifying the main reasons that motivate people to engage in nature and adventure sports is extremely important, helping people practice safer and structured physical exercise. This characterization might help not only to improve the nature and adventure sport programs, but also to finding the most appropriate strategies to remove possible barriers to this type of sports.

Currently, part of our population already had an experience in nature and adventure sports (NAS), especially considering that our society has the need to experience new activities. After the experience, comes the continuity, having

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an increase of practitioners in this type of sports and at the recreational level (Marinho & Inácio, 2007).

Brandão, (2018) considers NAS as a form of physical activity, because through its practice, the subject has an improvement of his physical, technical and cognitive condition, overcoming the obstacles placed by the surrounding space, with nature as is base.

In this framework, according to Bessy (2005), this sport was only practiced by the most fearless sportsmen, people with the will to feel the extreme. Nowadays, according to Brandão (2016), this sport opens up to a vast public, whether it is walking, climbing, swimming, flying, or seeking to occupy a special place in contemporary sports behaviour. As in fitness, despite the great expansion observed in recent years in the practice of NAS, studies regarding the motives that lead to this type of physical activity are making the first steps making it difficult to adapt the training to the continuous practice of physical exercise within the NAS (Baptista, Monteiro, Alves, Cid, & Moutão, 2014). However, practitioners of sports nature need to perceived these activities as a sport, in which physical activity is implied. When we refer to physiological factors as a risk component, we state the importance of regular physical activity that increases physical ability and fitness, thus having benefits for the health of the practitioner and a better aptitude for the practice of the modality (Brandão et al., 2018; Ferré & Leroux, 2009). The physical preparation of the practitioners must be framed in the aims of the activity to be performed, and should follow recommendations regarding the duration, intensity, frequency and content of the activity (Potteiger, 2017). Therefore, it is important to study what motivates individuals to initiate and maintain physical activity in NAS, which is extremely important to help people get involved and adhere to physical exercise in an outdoor space.

The understanding of the reasons that lead to the practice of a specific sport allows NAS professionals to define the most appropriate actions to implement strategies that will increase the practice of this sport while, at the same time, will help to remove the possible barriers of their practice. The main aim of this study was to compare sports practitioners of a competitive and leisure nature sports regarding their motivations for practice.

Methods

Sample

This study comprised the participation of 631 Portuguese sports practitioners of nature and adventure sports in the following modalities: Canyoning, BTT, Paragliding, Climbing, Trail, Hiking, Canoeing. The participants had a mean age of 37.49 ± 10.07. Of these practitioners, 111 practice the modality competitively (mean age 36.05 ± 10.07) and 561 practice for leisure (mean age 38.06 ± 10.03). Regarding male practitioners, 54 practice the sport competitively (mean age 34.09 ± 11.48) and 450 practice for leisure (mean age 37.69 ± 10.36). From the female practitioners, 16 practice the modality competitively (mean age 39.94 ± 7.42) and 111 practice for leisure (mean age 38.56 ± 8.13).

Instruments

The Portuguese version of the Exercise Motivations Inventory-2 (EMI-2) adapted to the Portuguese population (Alves & Lourenço, 2003) was used. It is na instrument consisting of 51 items answered on a Likert scale ranging from 0 to 5, (0 = "not true for me" to 5 = "completely true to me"). Subsequently, items are grouped into 5 dimensions (psychological motives; interpersonal motives; health motives; body-related motives; and fitness motives) and 14 factors: Social Recognition, Positive Health, Weight, Stress Management, Revitalisation, Enjoyment, Challenge, Affiliation, Competition, Health Pressures, Health Avoidance, Appearance, Strength & Endurance and Nimbleness (Markland & Ingledew, 1997).

Data collection procedures

The contact with the practitioners of Nature and Adventure Sports (NAS) was made through clubs, associations, federations and social networks. Participants signed a free consent term.

All data was collected and analyzed anonymously, guaranteeing the principle of confidentiality. We applied the online questionnaire on the Survey Monkey platform tested by 5 NAS practitioners and 3 portughese teachers. They gave their opinions on legibility and functionality and researchers make the suggested adjustments. Participants took 15-20 minutes to respond.

Analyses

Between-playing positions variations were analysed using the standardized differences of effect size (ES) with 90% of Confidence Interval (CI) (Cohen, 1988). The following scale was used to interpret the magnitude of changes (Batterham & Hopkins, 2006) <0.2, trivial; 0.2-0.6, small; 0.6-1.2, moderate; >1.2, large. Probabilities were tested considering the smallest worthwhile changes (SW, 0.2 x between-subjects SD) (Hopkins, Marshall, Batterham, & Hanin, 2009). The following scale for qualitative probabilities was used (Hopkins et al., 2009): 25-75%, possibly; 75-95%, likely; 95-99% very likely; and >99% almost certain. The computation of statistical procedures was made in a specific spreadsheet of Hopkins.

Results

The results obtained, when comparing the practitioners of nature adventure sports that practice for leisure vs competition, regarding the factors of the EMI-2, are shown in Figure 1. With the analysis of graph 1, it is verified that the Enjoyment and Competition factor have an effect of most certain moderate magnitude -18.6% [-22.6;-14.3]; ES: -0.69 [-0.87;-0.52]) e -47.7% [-53.0;-41.7]; ES: -1.00 [-1.17;-0.84]) respectively, when compared to NAS practicing leisure vs competitive.

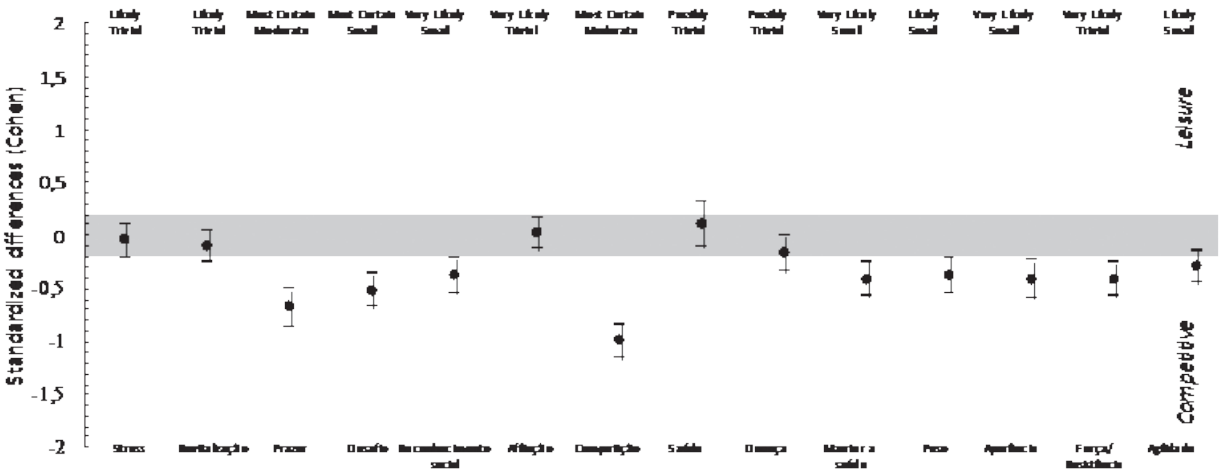

Figure 1. Comparison of NAS practitioners for leisure vs. competition.

When comparing leisure men vs. competitive men on Figure 2, we verified that the factors Enjoyment and Competition also had a most certain moderate magnitude -17.5% [-21.7;-13.2]; ES: -0.75 [-0.95;-0,52] e -47.1% [-53.3;-40.2]; ES: -0.93 [-1.11;-0.75] respectively.

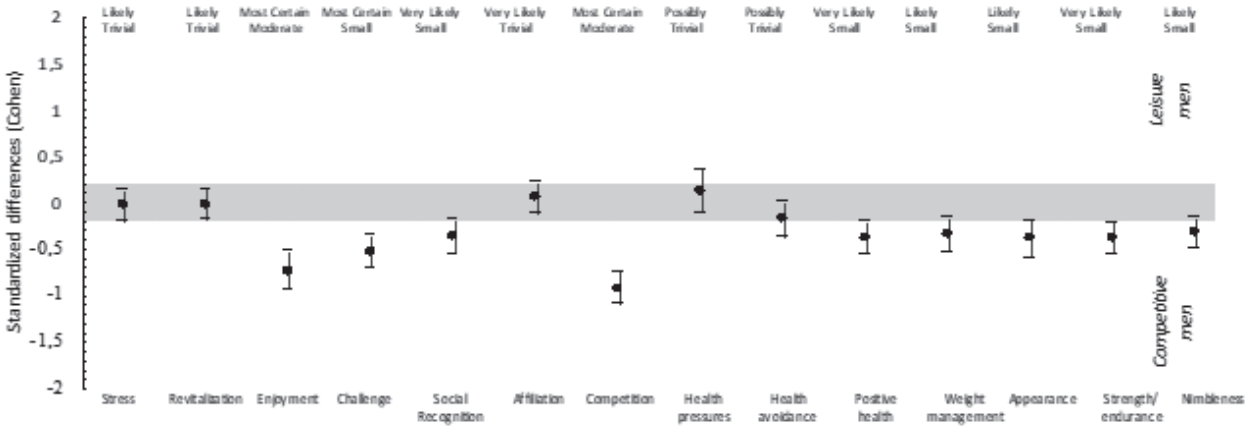

Figure 2. Comparison of NAS practitioners between leisure men vs. competitive men.

When comparing leisure women vs. competitive women, on Figure 3, it is possible to verify that Revitalisation and Strength & Endurance factors present a likely moderate magnitude effect -9.5% [-14.9;-3.7]; ES: -0.63 [-1.01;-0.24] and very likely moderate -28,5% [-41.3;-13.0]; ES: -0.65 [-1.02;-0.27] respectively. In Enjoyment and Competition factors, effects of most certain large magnitude were found -29.2%[-36.8;-20.6]; ES: -2.17 [-2.89;-1.45] and -50.7% [-60.6;-38.4]; ES: -1.52 [-2.00;-1.04] respectively.

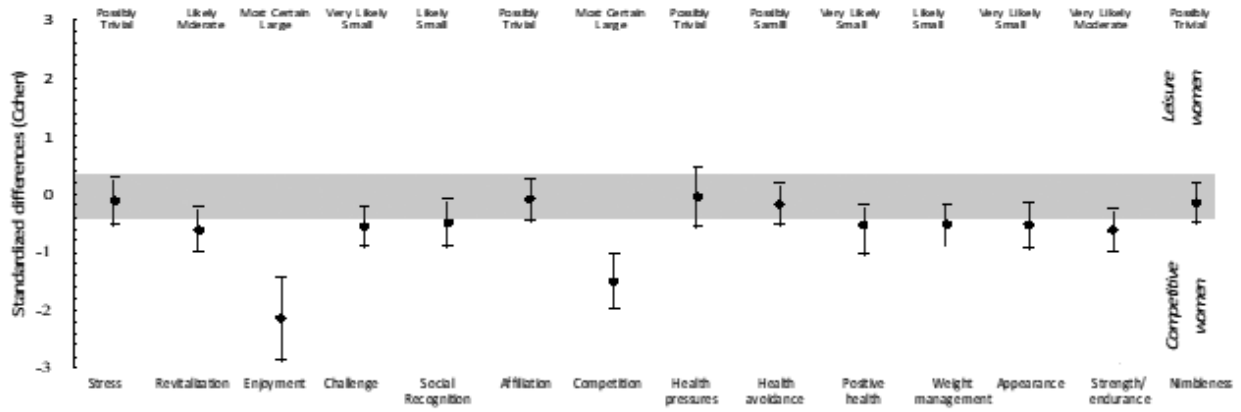

Figure 3. Comparison of NAS practitioners between leisure women vs. competitive women.

When comparing leisure men vs. leisure women no significant differences were found between the factors with the same results when comparing competitive men vs. competitive women (Table 1). Analysing the average values of the factors, only the factor Affiliation presented higher values when comparing leisure vs. competitive, both in man and woman, with 3.50±1.11 and 3.49±1.29, against 3.44±1.02 e 3.34±1.34 respectively even though it can not be considered significant.

Table 1. Correlation between leisure man vs. Leisure women in the application of the questionnaire EMI-2

				% difference		Standardized Cohen		
Leisure Men vs. Leisure Women		Men M ± SD	Women M ± SD	Value	(90%CI)	Value (*Magnitude*)	(90%CI)	% greater/similar/ lower
Psychological motives	Stress Management	3.09±1.21	3.33±1.27	-14.7	[-28.4;.6]	-0.24 *Small*	[-0.50;0.02]	0/40/59 Possibly
	Revitalisation	3.96±0.87	4.00±0.82	-5.4	[-12.1;1.8]	-0.22 *Small*	[-0.52;0.07]	1/44/55 Possibly
	Enjoyment	3.56±1.21	3.41±1.14	0.4	[-13.9;16.9]	0.01 *Trivial*	[-0.26;0.27]	11/79/10 Likely
	Challenge	2.92±1.17	2.81±1.28	9.9	[-5.9;28.5]	0.15 Trivial	[-0.10;0.39]	36/63/1 Possibly
Interpersonal motives	Social Recognition	0.84±1.04	0.46±0.71	3.9	[-25.9;45.8]	0.05 Trivial	[-0.40;0.50]	29/53/18 Possibly
	Afiliation	3.50±1.11	3.49±1.29	11.4	[-0.1;24.2]	0.22 *Small*	[0.00;0.43]	55/45/0 Possibly
	Competition	1.53±1.35	1.18±1.28	-8.6	[-32.0;22.9]	-0.11 *Trivial*	[-0.47;0.25]	8/58/34 Possibly
Health reasons	Health Pressures	0.64±0.97	0.47±0.80	-30.1	[-50.8;-0.9]	-0.50 *Small*	[-1.00;-0.01]	1/14/85 Likely
	Health Avoidance	1.81±1.55	1.46±1.46	-35.8	[-52.0;-14.2]	-0.57 *Small*	[-0.94;-0.20]	0/5/95 Likely
	Positive Health	3.00±1.51	2.93±1.56	-27.0	[-38.1;-13.9]	-0.59 Small	[-0.90;-0.26]	0/2/98 Very Likely
Body Related Reasons	Weight Management	1.63±1.48	1.11±1.21	-16.3	[-37.1;11.5]	-0.21 *Small*	[-0.55;0.13]	2/46/52 Possibly
	Appearance	1.03±1.24	0.84±1.13	-36.0	[-55.0;-9.1]	-0.53 *Small*	[-0.94;-0.11]	0/9/90 Very Likely
Physical condition motives	Strengh & Endurance	2.51±1.44	2.43±1.47	-14.7	[-30.5;4.6]	-0.21 *Small*	[-0.48;0.06]	1/46/53 Possibly
	Nimbleness	2.45±1.46	2.55±1.50	-25.3	[-38.0;-10.0]	-0.49 *Small*	[-0.80;-0.17]	0/6/93 Likely
Competitive Men vs. Competitive Women								
Psychological motives	Stress Management	3.09±1.27	3.22±1.19	-5.6	[-16.4;.6.5]	-0.15 *Trivial*	[-0.47;0.16]	3/57/40 Possibly
	Revitalisation	3.97±0.81	4.36±0.64	-10.4	[-15.1;-5.3]	-0.59 *Small*	[-1.03;-0.34]	0/1/99 Almost
	Enjoyment	4.19±0.83	4.21±0.97	2.1	[-8.9;14.4]	0.05 *Trivial*	[-0.22;0.32]	18/75/7 Likely
	Challenge	3.53±0.97	3.54±1.22	2.9	[-10.3;18.0]	0.06 Trivial	[-0.22;0.34]	20/73/7 Possibly
Interpersonal motives	Social Recognition	1.49±1.35	1.13±1.32	6.3	[-21.4;43.9]	0.07 Trivial	[-0.29;0.44]	28/61/11 Possibly
	Afiliation	3.44±1.02	3.34±1.34	-5.3	[-15.3;5.9]	-0.15 *Trivial*	[0.45;0.16]	3/58/39 Possibly
	Competition	3.15±1.38	2.60±1.50	-0.2	[-15.0;17.2]	-0.00 *Trivial*	[-0.35;0.34]	16/66/17 Possibly

				% difference		Standardized Cohen		
		Men M ± SD	Women M ± SD	Value	(90%CI)	Value (*Magnitude*)	(90%CI)	% greater/similar/ lower
Health reasons	Health Pressures	0.69±0.96	0.53±0.80	-7.6	[-32.3;26.2]	-0.12 *Trivial*	[-0.58;0.35]	13/49/38 Possibly
	Health Avoidance	2.20±1.41	1.88±1.55	9.0	[-14.9;39.7]	0.11 *Trivial*	[-0.21;0.43]	32/62/5 Possibly
	Positive Health	3.61±1.22	3.60±1.26	-5.4	[-14.9;5.2]	-0.17 Trivial	[-0.51;0.16]	3/52/45 Possibly
Body Related Reasons	Weight Management	2.22±1.43	2.19±1.51	8.6	[-16.6;41.5]	0.09 *Trivial*	[-0.21;0.39]	28/67/5 Possibly
	Appearance	1.68±1.30	1.65±1.23	-0.2	[-21.5;26.8]	0.00 *Trivial*	[-0.33;0.33]	15/69/16 Possibly
Physical condition motives	Strengh & Endurance	3.34±1.20	3.19±1.16	-1.1	[-15.6;15.9]	-0.02 *Trivial*	[-0.33;0.28]	12/72/17 Possibly
	Nimbleness	3.08±1.28	2.79±1.34	5.3	[-9.6;22.7]	0.11 *Trivial*	[-0.21;0.42]	31/64/5 Possibly

90% CI: Confidence interval of 90%; M: mean; SD: standard deviation

Discussion

Understanding what motivates people to practice a specific sport has a dual function. On the one hand, it allows professionals working in the area to plan activities that meet what the practitioners of the modality may enjoy the most. On the other hand, it allows the same professionals to remove potential barriers to their practice. This way, the motivation and adherence of the practitioners may increase while the withdrawals may decrease. In fact, literature has reinforced that the use of standard practices may not be as beneficial as it may look, not only for the practice of physical exercise (Moutão, 2016) but also in spots practice.

In this study it was verified that, of the motives that were studied for the practice of these sports, only the Enjoyment and Competition variables had moderate magnitude when comparing leisure versus competitive. These two variables will, in fact, meet the true nature of the modalities studied. If, on the one hand, who competes should have higher levels of the competition factor when searching for the motives for the practice of the modality, on the other hand, leisure may be more related to the practice of a non-competitive sport. In effect, and despite the instrument chosen to evaluate the motives for the practice do not differentiate intrinsic and extrinsic motifs, factors such as Enjoyment tend to have a more intrinsic nature (Moutão, 2016) which is generally related to the practice of nature sports.

Sequentially, it is natural that there is a highlight of the Competition factor when assessing a practitioner at a competitive level. Having high levels of competitiveness may be essential for those who want, for instance, to become one of the best athletes of his modality and, in a way, justifies the choice of the practice of the modality.

Another important result of this study regards gender differences. In fact, it was found that the Competition variable is more marked in females compared to leisure. Literature in the area has reported gender differences (Cruz, 1996; Moutão, 2016). However, some of the results are contradictory with this result. Moreover, studies searching for the motives for the practice of physical activity (and not sports) refer that males tends to mention more the Competition to justify the practice of physical exercise than, for instance, for body image motives that are usually more referred from females (Egli, Bland, Melton, & Czech, 2011).

The results of this study are important by pointing out that if there are gender differences in the motives for the practice of the modality, it means that searching for the motives that lead people to practice a particular modality may be essential to the practice itself.

Conclusions

The results of this study may help improve the knowledge in the area of the motives for the practice of physical exercise in the nature and adventure sports since it may help increase the performance of people who practice this modality in a recreational way, providing more safety to the practice of the modality. Although this study have limitations, it may contribute to a more systematic knowledge of this sport that has been increasing the number of practitioners. More research in this area is needed in other countries to provide a more detailed analysis of the reasons for its practice. Moreover, researching the motives for the practice should be studied in different sports, in nature and adventure sports and comparing sports to physical exercise. The more we know regarding the motives for the practice of sports, the more we are helping people to engage in a more fun and safer way.

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