

# COMPARATIVE STUDY ON THE INTEREST, VITALITY, AND ACHIEVEMENT FACTORS OF EXTREME AND GENERAL SPORTS ATHLETES

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## ABSTRACT

Extreme sports is a class of athletic exercises carried out to challenge natural physical limits and environmental hurdles. The minute study investigated whether there was a significant difference in interest, vitality, and achievement factors between extreme sports and general sports club members. The participants in the study were 282 men and 342 women. There were 232 extreme activists and 392 general activists. The interesting factor is similar in men's extreme sports with 3.37 points and general sports with 3.35 points, but women's adventure sports with 3.26 points and general sports with 2.76 points. For men, extreme sports were similar to general sports, but extreme sports were higher than general sports for women. The vital factors were 2.88 points for extreme sports and 2.90 points for general sports, similar to that for men, but 2.61 points for extreme sports and 2.19 points for women, showing that extreme sports were higher than general sports. There were significant differences in achievement factors by gender and sports participation events. The achievement factors were 3.90 points for extreme sports and 3.53 points for general sports for men, and 3.33 points for extreme sports for women and 2.77 points for general sports for women. Participation in extreme sports can induce positive interesting, vitality, and achievement emotion.

**Keywords:** Achievement, extreme sports, general sports, interest, vitality.

## INTRODUCTION

Extreme sports or action sports or adventure sports are very activities perceived as involving a high degree of risk. The definition of extreme sports is not exact and the origin of the terms is unclear, but it gained popularity in the 1990s when it was picked up by marketing companies to promote the X Games and when the Extreme Sports Channel and Extreme International launched. The online Oxford University Dictionary (2018) defines "extreme sport" as "Denoting or relating to a sport performed in a hazardous environment and involving great risk." (Kunwar, 2021). Extreme sports is a sub-category of sports that are described as any kind of sport "of a character or kind farthest removed from the ordinary or average" (Willig, 2008). Many people may see extreme sports as a way of living recklessly, foolish or dangerous. But, those in the extreme water sports world may disagree. The sporting world is something that can offer people more than just physical fitness acceleration but can also have a profound effect on your mental health. Extreme sports can train your mentality. Doing activities which requires you to have lots of courage and bravery will eventually teach you control; control over your fears and emotions. The Journal of Health Psychology explained that although extreme sports involve intense fear, the participant will eventually take part of the sports despite their fears, accept that a controlled future is not always possible, and move through these fears to participate fully in the sport (Brymer & Schweitzer, 2013).

Extreme sports are sports with many adventurous elements such as rock climbing, hang gliding, paragliding, and scuba diving, while general sports are sports with relatively few adventurous elements such as badminton, swimming, jogging, and table tennis. Traditional athletics as general sports stay within set regulations, action sports tend to push the boundaries of speed, height, and physical ability.

Sports can teach a person to be strong in body and mind. Sport can evoke various opportunity to explore how emotions operate in people (Kwak et al., 2011). The emotional response from anxiety stems from the perception of a discrepancy (imbalance) between the difficulty of the task and the response capacities. This response would also depend on the importance of success or failure for the subject. Then, from a point of view, a sense of accomplishment in sports can be the vitality of daily life. Sport participation and sport spectating were found to have positive relationships with long- and short-term subjective well-being (Kim & James, 2018).

The hypothesis of this study will differ according to the sports participation event and gender according to fun and vitality. This study aims to analyze the relationship between the fun and vitality of people participating in extreme sports as leisure activities or daily sports and those participating in general sports by gender.

## **METHODOLOGY**

### **Subjects**

The participants in the study were 282 men and 342 women (Table 1). There were 232 extreme activists and 392 general activists. By age, those in their 20s were the most, and those in their 40s were only 19.

### **Limitations of the study**

Extreme sports were limited to skin scuba, windsurfing, paragliding, rock climbing, mountain biking, and water skiing as sports selected in this study, while general sports were limited to jogging, swimming, badminton, and table tennis. In addition, extreme sports restricted the most active age group from 20 to 40.

### **Statistical Analysis**

The average and standard deviation for three factors, including sports participation events and gender, were calculated and charted. Multivariate ANOVA and 2-way ANOVA were conducted to verify the average difference between sports events, gender, and three factors, and only dependent variables that showed significant interaction effects were verified through independent t verification. The significance level ( $\alpha$ ) for determining whether to reject the hypothesis was set to 0.05. All data from this study were calculated using the Window SPSS 18.0 statistical program to calculate the mean and standard deviation through descriptive statistical analysis of the population.

**Table 1. The number and frequency of participants in this sport exercises**

Category			Sports events		Total
			Extreme	General	
Gender	Men	No.	126	156	282
		%	20.0	25.0	45.2
	Women	No.	106	236	342
		%	16.9	37.8	54.8
Total		No.	232	392	624
		%	37.2	62.8	100
Age	20-29	No.	118	288	406
		%	18.9	46.1	65.0
	30-39	No.	103	96	199
		%	16.5	15.3	31.8
	40-49	No.	11	8	19
		%	1.76	1.28	3.04
Total		No.	232	392	624
		%	37.2	62.8	100

## RESULTS AND DISCUSSION

### Interesting

The average and standard deviation of three sub-factors of fun, vitality, and achievement according to sports participation and gender were calculated. The interesting factor is similar in men's extreme sports with 3.37 points and general sports with 3.35 points, but women's adventure sports with 3.26 points and general sports with 2.76 points (Table 2). For men, extreme sports were similar to general sports, but extreme sports were higher than general sports for women. All achievement factors were found to be higher in extreme sports events than in general sports.

Therefore, the interpretation of the main effect was reserved, and the interaction effect was analyzed through independent  $t$  verification (Table 3). First, as a result of conducting an independent  $t$ -test on the score of fun factors for each sports event by gender, there was no difference between genders in extreme sports events ( $t_{567} = 1.851, p > 0.05$ ), but in general sports events, men were significantly higher than women ( $t_{590} = 8.536, p < 0.001$ ).

In addition, as a result of conducting an independent  $t$ -test on gender fun factors according to sports events, there was no significant difference in men's sports participation ( $t_{514} = 0.197, p > 0.05$ ), but women participating in extreme sports had significantly higher scores in fun factors than women participating in general sports ( $t_{643} = 8.723, p < 0.001$ ).

Several scholars therefore point out the usefulness of separating feelings of pleasure from feelings of interest (Hidi & Renninger, 2006; Vittersø et al., 2010; Renninger & Hidi, 2011; Vittersø, 2016). Pleasure, the argument goes, works as a reward when reaching small or big

goals, while interest facilitates learning, growth, and the struggle toward reaching difficult goals (Hetland et al., 2019).

**Table 2. The mean and standard deviation of interesting factors according to sports participation and gender**

Gender	Sports events				Total	
	Extreme		General			
	Mean	SD	Mean	SD	Mean	SD
Men	3.37	0.70	3.35	0.88	3.36	0.79
Women	3.26	0.64	2.76	0.81	3.00	0.77
Total	3.31	0.67	3.01	0.89	3.16	0.80

**Table 3. Results of a two-way analysis of sports events and interesting factors**

Source	<i>DF</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Gender (A)	1	34.883	34.883	60.36	0.00
Exercises (B)	1	19.135	19.135	33.11	0.00
A × B	1	17.143	17.143	29.67	0.00
Error	1157	668.623	0.577		
Total	1160	746.455			

### Vitality

Table 4 showed the average and standard deviation of sports participation events and vitality factors according to gender. The vital factors were 2.88 points for extreme sports and 2.90 points for general sports, similar to that for men, but 2.61 points for extreme sports and 2.19 points for women, showing that extreme sports were higher than general sports. Therefore, Table 6 showed the results of conducting a two-way ANOVA to verify the average difference between sports participation events and gender vitality factors.

**Table 4.** The average and standard deviation of vitality factors according to sports events and gender

Gender	Sports events				Total	
	Extreme		General			
	Mean	SD	Mean	SD	Mean	SD
Men	2.88	0.80	2.90	0.91	2.89	0.86
Women	2.61	0.84	2.19	0.91	2.39	0.90
Total	2.73	0.83	2.50	0.98	2.61	0.91

Multivariate analysis showed that all three factors by gender and sports participation events had significant differences. Therefore, the difference between sports participation events and gender for each of the three sub-factors was analyzed in detail.

Table 5 was shown the results of a multivariate analysis of variance (MANOVA) to find out the overall average difference between interesting, vitality, and achievement according to gender. There was a statistically significant difference between gender (Wilks' Lambda = 0.861,  $F_{5,1153} = 37.192$ ,  $p < 0.001$ ) and sports events (Wilks' Lambda = 0.896,  $F_{5,1153} = 26.666$ ,  $p < 0.001$ ) (Table 5).

**Table 5. Results of multivariate analysis of interesting and vitality according to sports participation and gender**

Variance	Wilks' Lambda	<i>F</i>	<i>Num DF</i>	<i>Den DF</i>	<i>p</i>
Gender (A)	0.861	37.192	5	1153	0.00
Exercises (B)	0.896	26.666	5	1153	0.00
A × B	0.952	11.465	5	1153	0.00

Therefore, Table 5 showed the results of conducting a two-way ANOVA to verify the average difference between sports participation events and gender vitality factors. There were significant differences in vitality factors for both gender and sports participation events ( $F_{1,1157} = 91.55$ ,  $p < .001$ ;  $F_{1,1157} = 14.59$ ,  $p < .001$ , respectively). In addition, there was a significant difference in the interaction effect between sports participation and gender on vitality factors ( $F_{1,1157} = 18.76$ ,  $p < .001$ ).

The statistically significant difference in the interaction effect between sports and gender on vitality factors means that the scores of vitality factors for each sports event vary by gender or the scores of gender vitality factors vary for each sports event.

Therefore, the interpretation of the main effect was reserved, and the interaction effect was analyzed through independent t verification. First, as a result of conducting an independent t-test of the vital factors of each sports event by gender, men were significantly higher in both extreme and general sports events than women ( $t_{567} = 3.889$ ,  $p < .001$ ;  $t_{590} = 9.430$ ,  $p < .001$ , respectively).

In addition, as a result of conducting an independent t-test on the scores of gender vitality factors according to sports events, there was no significant difference for men for each sports event ( $t_{514} = -0.347, p > 0.05$ ), women participating in extreme sports had significantly higher scores of vital factors than women participating in general sports ( $t_{643} = 6.054, p < 0.001$ ). Yazici and Somoğlu (2021) were found that high school students had a high significant positive correlation between subjective happiness and vitality in sports.

**Table 6. Results of a two-way analysis of sports events and vitality factors**

Source	DF	SS	MS	F	p
Gender (A)	1	68.935	68.935	91.55	0.00
Exercises (B)	1	10.988	10.988	14.59	0.00
A × B	1	14.125	14.125	18.76	0.00
Error	1157	871.166	0.752		
Total	1160	970.816			

### Achievement

Table 6 showed the average and standard deviation of achievement factors according to sports participation events and gender. The achievement factors were 3.90 points for extreme sports and 3.53 points for general sports for men, and 3.33 points for extreme sports for women and 2.77 points for general sports for women.

Table 7 showed the results of conducting a two-way ANOVA to verify the average difference between sports participation events and gender achievement factors. As shown in Table 7, there were significant differences in achievement factors by gender and sports participation events ( $F_{1,1157} = 116.34, p < 0.001$ ;  $F_{1,1157} = 56.56, p < 0.001$ , respectively). However, there was no significant difference in the interaction effect between sports participation and gender on achievement factors ( $F_{1,1157} = 2.48, p > 0.05$ ).

**Table 6.** The average and standard deviation of achievement factors according to sports events and gender

Gender	Sports events				Total	
	Extreme		General			
	Mean	SD	Mean	SD	Mean	SD
Men	3.90	0.78	3.53	1.13	3.72	0.99
Women	3.33	1.20	2.77	0.99	3.04	1.13
Total	3.59	1.07	3.10	1.12	3.34	1.12

**Table 7. Results of a two-way analysis of sports events and achievement factors**

Source	<i>DF</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Gender (A)	1	126.429	126.429	116.34	0.00
Exercises (B)	1	61.461	61.461	56.56	0.00
A × B	1	2.696	2.696	2.48	0.00
Error	1157	1257.323	1.086		
Total	1160	1456.735			

Participation in extreme sports can induce positive emotions and resilience, and facilitate the development of skills and physical capacities that support flourishing in everyday life (MacIntyre et al. and Hetland et al.). Especially, MacIntyre et al. (2019) suggested that extreme sport participation, while inherently risky has psychological benefits ranging from evoking positive emotions, developing resilience and life coping skills to cultivating strong affinity to and connection with nature and the natural environment. Although the literature on nature experiences in extreme sports is still scarce, both the extant quantitative and qualitative literature shows how emotional attachment to the natural world as well as expected psychological benefits of being in contact with nature are central to the experience of outdoor recreation and nature-based exercise (Anderson et al., 2009; Calogiuri, 2016; Flowers et al., 2016; Calogiuri & Elliott, 2017).

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