

# Exercise Participation Motives and Engaging In Sports Activity among University of Ljubljana Students

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## Abstract

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**AIM:** The main aim of this study was to examine differences in sport participation motives, the frequency of engaging in sports activities according to gender, region and field of study, but also the association between the incidence of engaging in sports activity and the motivation for sports activity of students at the University of Ljubljana.

**MATERIAL AND METHODS:** Five thousand two hundred seventy-one students completed The Exercise Motivations Inventory (EMI-2), with additional questions about 12 socio-demographic parameters.

**RESULTS:** The results reveal that most of the students are engaged in unorganized sports activities. Male students engage in sports activity more often than female students do. For male students, dominant participation motives are enjoyment, challenge, social recognition, affiliation, competition and strength but also endurance, for female students these are: stress and weight management, revitalisation, ill-health avoidance, positive health, appearance and nimbleness. Gender differences in participation motives are partly reflected also in differences according to the field of study. The correlations between the frequency of engaging in sports activity and the participation motives are mainly statistically significant. We did not find any significant differences in participation motives by region.

**CONCLUSION:** In spite of these discouraging findings, increasing physical activity among students continues to be a national priority.

## Introduction

Sports activity has an important and irreplaceable role in all stages of life, especially in adolescence. However, the habits ('cultures') of physical exercising are very different in certain periods of life in different environments, such as countries and regions, rural or urban areas.

Sports activity is very important pre-condition for the health and normal biological, social, and psychological development of young people. Regular and suitable sports activity maintains vitality, protects against diseases and creates a better quality mature period of life. Significant leverage in the promotion of sports activities is offered by the curriculum of physical education in which children and young people learn about the importance of movement,

sport, fitness activities and a healthy lifestyle [1, 2]. The position of physical education in higher education differs from that in primary and secondary schools where physical education is given a place in the curriculum.

Every activity of man, including sport, is closely related to the structure of his personality along with his mental, motor and other abilities, education and tradition, social determinants of his environment and others. A lack of motivation is one of the biggest problems of engaging in sports activity. The cause is often an improperly selected sports activity. Motivation is often weak because the individual is unaware of what drives him/her and what motives should be fulfilled [3, 4]. When selecting a sports activity, an individual is often influenced by trends and does not listen to himself/herself; his/her body and selects activities unsystematically, in an uncontrolled way and without setting goals. The result is a lack of enjoyment

that ends up in terminating the engagement in the sports activity [5].

Students' motivation in physical education and organised sports activities can be partly influenced [6]. By strengthening the motivational factors of each, one can ensure that the effects of these activities will be transferred to a student's life after graduation. The probability that a person will be involved in sports activity during their studies and also later, not only depends on their motivational structure (interests, attitudes, motives) but also on the available conditions and opportunities [7].

The main motivational factors for students to engage in sports activities are health pressures, enjoyment, physical fitness, stress management and well-being [8-12]. The results of several studies show that men and women have different motives for participating in sports activities [11, 13-16]. A comparison between men and women in all age groups shows greater motivation and a higher level of participation in sports activity among men than among women. About both genders, negative factors observed for non-engaging in sports activity are a lack of interest and limited time [14].

The present study attempted to examine the interest of University of Ljubljana students in sports activity and to obtain an insight into the differences in students' motivation for sports activity. Namely, students' motives for the participation in sports and their actual level of participation in such activities could depend about the roles of several factors. Thus, the aims of this study were to determine: gender differences in sport participation motives among students of the University of Ljubljana, as well as in their the frequency of engaging in sports activities; the differences in sport participation motives according to region where they live and their field of study; the association between the frequency of engaging in sports activities and sport participation motives at the same students. The initial hypotheses relate to the appearance of statistically significant gender and regional differences in motives for participating in sport and the frequency of engaging in sports activities. Finally, we expected positive and significant correlations between the motives for participating in sport and the frequency of engaging in sports activities.

## Methods

### Participants

The participants in our research were 5,271 students of the University of Ljubljana, which represents a 9.8 percent sample of University of Ljubljana students in the 2010/2011 academic year.

The age of the participants was between 19 and 42 years. Majority of the responded students (25.6%) were enrolled in the first year of study. The data were collected by questionnaires, which were sent to respondents by e-mail with instructions. The data were collected based on of personal data sheets completed when the students were enrolling in the University of Ljubljana.

### Procedure

We have disseminated questionnaires to 43,751 students of the University of Ljubljana (81.6% of all enrolled students). According to the instructions provided, 5,486 of them returned the questionnaires. In the study we considered the responses of 5,271 students – 2,033 male (38.5%) and 3,238 female (61.5%). Improperly completed questionnaires (215) were excluded from further processing.

### Instruments

Within this research project, we have used the questionnaire the EMI-2, the Exercise Motivations Inventory [17] which has been widely used in several studies of motivation. The EMI-2 was developed as a means of assessing participation motives in order to examine issues such as the influence of motives on exercise participation, how such motives might influence the choice of activities undertaken, how affective responses to exercising may be influenced by reasons for exercising and how involvement in sports activity might have a reciprocal influence on participation motives. In particular, the authors developed the instrument to examine questions concerning the functional significance of exercise motives from the perspective of Deci and Ryan's [18] self-determination theory. The EMI-2 may be used without the authors' permission. It comprises 51 questions in the area of motives for participating in sports activities. A six-point Likert scale was used. Participants answered the stem "To have a healthy body...", indicating their preferences from 0 ("not true at all") to 6 ("very true"). Also, we added 12 socio-demographic parameters to the EMI-2 (faculty, year of study, gender, age, a region of residence and residence at the time of the study, engagement in sports activities, etc.).

### Data analysis

The data were processed with the IBM SPSS Statistics (20.0) software. The basic descriptive parameters were calculated (mean, standard deviation, the frequency of answers). Univariate ANOVA was used to test the differences in the motives according to gender, region and field of study. Pearson's correlation coefficient was used to test the correlations between the frequency of engaging in two

types of sports activity (as well as the measure of overall engagement in sports activity) and the motivation for sports activity. The reliability of the measurement instrument was also checked. Verification of the hypotheses was conducted at a 5-percent level of statistical risk ( $P \leq 0.05$ ).

## Results

According to ANOVA, numerous statistically significant gender differences in sport participation motives are found. For male students (as compared with females), statistically significant higher motives are found in aspects: enjoyment, social recognition, challenge, affiliation, competition, health pressures, strength and endurance. As compared to males, females have statistically significant higher exercise participation motives in the aspects of stress management, revitalization, ill-health avoidance, positive health, weight management and appearance (Table 1).

**Table 1: Gender differences in certain exercise participation motives (ANOVA)**

Motives	Male students		Female students		F	F-sign
	Mean	SD	Mean	SD		
Stress Management	13.95	4.86	14.54	4.97	<b>18.04</b>	<b>0.00</b>
Revitalization	11.79	3.21	12.17	3.27	<b>16.39</b>	<b>0.00</b>
Enjoyment	15.49	4.88	15.07	5.10	<b>8.80</b>	<b>0.03</b>
Challenge	12.66	5.17	11.68	5.30	<b>43.52</b>	<b>0.00</b>
Social Recognition	8.05	5.40	5.57	4.92	<b>292.78</b>	<b>0.00</b>
Affiliation	11.35	5.60	9.59	5.76	<b>120.14</b>	<b>0.00</b>
Competition	9.43	6.48	4.86	5.47	<b>754.28</b>	<b>0.00</b>
Health Pressures	3.40	3.09	3.19	3.31	5.51	0.19
Ill-Health Avoidance	9.06	4.20	9.91	4.01	<b>53.98</b>	<b>0.00</b>
Positive Health	11.76	3.36	12.23	3.16	<b>27.15</b>	<b>0.00</b>
Weight Management	10.25	5.46	12.80	5.41	<b>275.29</b>	<b>0.00</b>
Appearance	12.62	5.53	14.60	5.05	<b>178.21</b>	<b>0.00</b>
Strength & Endurance	14.61	4.56	14.25	4.48	<b>7.95</b>	<b>0.01</b>
Nimbleness	11.07	3.39	11.53	3.29	<b>23.28</b>	<b>0.00</b>

Legend: Bold – statistically significant differences ( $p < 0.05$ ).

Most of the students are engaged in unorganised sports activities and are on average active almost 3 hours per week. According to ANOVA, statistically significant gender differences are found in all three aspects of engaging in sports activities. Male students statistically significant engage in sports activities more often than female students, in all three aspects of engaging in sports activities. Male students are on average active almost 5 hours per week, while

female students are on average active 3.5 hours per week. Students who are engaged in organised sports activities are on average active slightly more than 1 hour per week (Table 2). Students engaged in organised sports had been active in at least one sports activity organised by the Centre for University Sport (CUS), whereas students engaged in the unorganised sport were included in sports activities without the support of the CUS.

**Table 2: Gender differences in frequency engaged in organised sports activity (ANOVA)**

Engaging in sports activities	Male students		Female students		F	F-sign
	Mean	SD	Mean	SD		
Organized engaging in sports activities	79.65	143.12	59.49	114.51	<b>31.79</b>	<b>0.00</b>
Unorganized engaging in sports activities	206.87	154.65	151.77	119.86	<b>210.11</b>	<b>0.00</b>
Overall engaging in sports activities	286.52	206.11	211.26	164.92	<b>213.76</b>	<b>0.00</b>

Legend: Bold – statistically significant differences ( $p < 0.01$ ).

According to ANOVA, statistically significant differences in sport participation motives are found, according to the field of the study. Social science students (as compared with natural students), showed statistically significant higher sport participation motives: weight management and appearance. In contrast, natural science students showed statistically significant higher sport participation motives: enjoyment, challenge, social recognition, affiliation and competition (Table 3).

**Table 3: Differences in certain exercise participation motives according to the field of study (ANOVA)**

Item	Natural sciences		Social sciences		F	F-sign
	Mean	SD	Mean	SD		
Stress Management	14.32	4.91	14.31	4.96	.00	.96
Revitalization	12.01	3.19	12.03	3.31	.07	.79
Enjoyment	15.45	4.85	15.05	5.16	<b>8.48</b>	<b>.00</b>
Challenge	12.22	5.23	11.93	5.30	<b>4.01</b>	<b>.05</b>
Social Recognition	6.88	5.27	6.24	5.22	<b>19.43</b>	<b>.00</b>
Affiliation	10.71	5.63	9.91	5.85	<b>25.41</b>	<b>.00</b>
Competition	7.33	6.32	6.05	6.20	<b>54.94</b>	<b>.00</b>
Health Pressures	3.34	3.24	3.22	3.22	2.00	.16
Ill-Health Avoidance	9.51	4.13	9.64	4.09	1.49	.22
Positive Health	12.02	3.26	12.08	3.23	.44	.51
Weight Management	11.37	5.56	12.18	5.55	<b>28.01</b>	<b>.00</b>
Appearance	13.35	5.40	14.24	5.23	<b>36.88</b>	<b>.00</b>
Strength & Endurance	14.45	4.57	14.33	4.47	1.03	.31
Nimbleness	11.34	3.36	11.37	3.31	.11	.74

Legend: Bold – statistically significant differences ( $p < 0.05$ ).

Applying Pearson's correlations, the correlations between the frequency of types of engaging in sports activity and the sport participation motives are determined.

**Table 4: Correlations between the frequencies of engaged in organised sports activity and certain exercise participation motives**

Item	Stress Management	Revitalization	Enjoyment	Challenge	Social Recognition	Affiliation	Competition	Health Pressures	Ill-Health Avoidance	Positive Health	Weight Management	Appearance	Strength & Endurance	Nimbleness
Organized engaging in sports activities	0.11**	0.12**	0.23**	0.18**	0.26**	0.25**	0.28**	0.04**	-0.03	0.06**	-0.04**	-0.00	0.12**	0.12**
Unorganized engaging in sports activities	0.25**	0.27**	0.34**	0.23**	0.17**	0.12**	0.17**	0.02	0.06**	0.18**	0.01	0.05**	0.20**	0.16**
Overall engaging in sports activities	0.25**	0.27**	0.34**	0.23**	0.17**	0.12**	0.17**	0.02	0.06**	0.18**	0.01	0.05**	0.20**	0.16**

Legend: \* Correlation significant with  $p < 0.05$  (two-tailed); \*\* Correlation significant with  $p < 0.01$  (two-tailed).

However, in spite of the fact that most of the correlations are a statistically significant (mainly because of a large sample of participants) low size or negligible. Thus, the association between sport participation motives and the engagement in sports activities could be estimated as minor (Table 4).

## Discussion

The main finding of the research is the fact that most of the students are engaged in unorganised sports activities, on average active almost 3 hours per week. Moreover, male students are engaged in sports activities more often than female students, in all three aspects of engaging in sports activities (organised, unorganised and overall). Dominant male students' sport participation motives are enjoyment, social recognition, challenge, affiliation, competition, health pressures, strength and endurance. Female students mainly participate in sports activities because of: stress management, revitalisation, ill-health avoidance, positive health, weight management and appearance.

Santos Legnani et al. [11] found that the main factors motivating students to engage in sports activities are: health pressures, enjoyment, fitness, stress management and well-being. The results of several studies, which observed gender differences, showed that men and women have different motives for participating in sports activities. Shao-Hua et al. [13] established gender differences in motives for participating in sports activities, as well as interest in sports activities, training methods and engaging in unorganised sports activity. Santos Legnani et al. [11] found statistically significant differences in five motivational factors (affiliation, competition, weight management, rehabilitation and social recognition).

Women are more often motivated to engage in sports activity due to their appearance. Even eating problems are statistically significantly associated with the motive: appearance [19]. Motives associated with weight control, rehabilitation, appearance and health pressures are significantly higher among overweight students while dominating motives among students with a normal body weight are enjoyment, affiliation and stress management [20]. Students who engage in sports activity due to appearance enjoy those activities the least.

Foreign research shows that first place among female students is held by the motive social contacts, followed by competition and health [14]. Female students are more motivated by external factors (weight management, appearance) [15, 16]. In our research, the female students attributed higher values to the motives stress management,

revitalisation, ill-health avoidance, positive health, weight management, appearance and nimbleness. It would, therefore, make sense to include sports programs about the importance of health and the maintenance of appropriate body weight.

Sirard et al. [14] found that male students' main motives for participating in sports activity are competition, social recognition and health. The results of research by Egli et al. [15] and Guedes et al. [16] showed that male students are motivated more by internal factors (power, competition, challenge and fitness). Motives that are valued more highly by the male students in our research are enjoyment, social recognition, challenge, affiliation, competition, health pressure, strength and endurance. On this basis, the offer should also include varied programs of competitive sport.

In our research, the differences in sports motivation according to the field of study are the most probably mainly influenced by gender differences (natural science students are mainly male and students of social studies female). Social science students have as the dominant sport participation motives weight management and appearance. Natural science students have dominant sport participation motives: enjoyment, challenge, social recognition, affiliation and competition. However, explanations regarding specific interests could not be neglected: for example, preferences towards arts could be reflected in the importance of weight management and appearance.

The correlation between sport participation motives and the engagement in sports activities in our study are very low and practically could be neglected. A simple explanation of this finding can be given within the framework of social values. The sport has probably very low importance for generations who are growing up in the world of modern technology, which offers easy enjoyment 'without sweat'.

Every activity of a human, including sports activity, is closely related to the structure of his personality. A lack of motivation in humans is one of the biggest problems of engaging in sports activity. The cause is allegedly improperly selected sports activities. Motivation is often weak because the individual is unaware of what drives him and what motives should be fulfilled. When selecting sports activities, an individual is often influenced by trends and does not listen to himself and his body; he chooses activities unsystematically, in an uncontrolled way and without setting goals. The result is a lack of enjoyment that ends up in terminating the engagement in the sports activity. To some extent, we can influence the motivation for sports activity of young people in higher education via physical education and organised sports activities. By strengthening the motivational factors of each, we can ensure that the effects of these activities will be

transferred to their life after graduation. The likelihood that a person will be involved in sports during their studies and also later depends not only on their motivational structure (interests, attitudes, motives) but also on the conditions and options that are available.

Sports programs should allow students an individual choice of content and impart an awareness of the positive value of sport and sports activities in the later stages of life. In order to increase the number of physically active male and female students, along with students' frequency and involvement in organized sports activities during their studies at the University of Ljubljana, physical education should be re-classified as a compulsory subject at least in the first year of the first-level study programs of the University of Ljubljana and provide a varied range of (co-)funded extracurricular sports activities for students in other classes.

Most of the students engage in unorganised sports activities. Male students engage in sports activity more often than female students do (organised and unorganised). Nuviála Nuviála, A., Goomez-Lopez, Perez Turpin, & Nuviála Nuviála, R. [21] also found that more male students than female students engaged in sports activity along with an increase in the number of students engaging in unorganised sports activity. Depending on the recommendations of experts who advocate moderate to strenuous sports activity under control, which should last from 30 to 45 minutes 3 to 5 times per week [22], University of Ljubljana students are not active enough in organised sports activities. It would, therefore, be reasonable to continue offering organised and professionally managed sports programs to students during their studies at the University of Ljubljana. When planning sports activities within individual faculties and academies, planners could also take account of the differences in the students' evaluations of motives according to the field of study.

The current program structure of extracurricular sports activities at the University of Ljubljana already includes different groups of sports activities: ECTS-evaluated subjects, sports recreational programs and sports holidays. These programs are organised by the Center for University Sport. Students can also participate in the competition programs organised under the umbrella of the Sports Association of the University of Ljubljana. All of these programs are open to every student of the University of Ljubljana. The idea of sports activities being organised as a compulsory subject and as extracurricular activities evaluated by ECTS points is consistent with the opinion of the students who participated in the survey. The inclusion of more students in the programs requires more and various forms of sports activities and an adequate financial, organisational, personnel, material, formal legal and IT substructure.

The advantage of the research is an examination of current (actual), large and representative sample of students at the University of Ljubljana, with selected socio-demographic features, relevant for this research.

The limitations of the research are reflected in results: it could be possible that there are some interactions between gender, type of study and region from which students come from. Moreover, in spite of large sample of participants, only students from the University of Ljubljana were included in the research.

The recommendation for future research can involve using more sophisticated statistical methods (for example, general linear model, with two-factorial or three-factorial ANOVA or MANOVA), as well as extending this investigation to students of different universities and faculties in different cities in Slovenia, or on the international level.

In our research, we found that most of the students engage in unorganized sports activity, but not very often. The results revealed that male students are engaged in sports activity more often than female students are, while statistically significant differences in sport participation motives are found according to gender and the field of the study. Further, we have found statistically significant but very low (in fact negligible) correlations between the frequency of engaging in sports activity and the motivation for sports activity. We did not find any relevant differences in motives to engage in sports activity by region of residence (this is only rejected initial hypothesis). Unfortunately, our young people live in a social and physical environment that makes it easy to be sedentary and inconvenient to be active. The sport has been promoted for its positive impact on young people's physical health, but an increasing body of international evidence suggests that increased participation in sport and physical activity can also lead to improved academic and social outcomes, benefitting students at universities around the world. Increasing physical activity among students continues to be a national priority due to the positive physical and mental health benefits associated with an active lifestyle.

### **Ethical considerations**

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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