

## DIFFERENCES IN PSYCHOLOGICAL CHARACTERISTICS BETWEEN DIFFERENT PHYSICAL ACTIVE FEMALE STUDENTS

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### Abstract

The aim of the study was to determine differences in the psychological characteristics in students that are different physically active. The study included 2849 students of undergraduate studies at the University of Split, ages 19-25 years. Physical education engagement was conducted through three sub-variables: sports, recreation and walking, while the psychological characteristics collected by Rosenberg self-esteem Scale, which consists of 10 items. Differences in quantitative predictive variables (psychological characteristics) between the different levels of engagement Kinesiology determine the multivariate and univariate analysis of variance. Relations between the criterion variable and categorical predictive variables determine the nonparametric chi-square test. The values of these methods to determine the differences are defined with error  $p < 0.05$ . Significant differences between different levels of self-esteem and recreation in their free time in college ( $p = 0.00$ ). On the other hand, no significant differences in levels of self-esteem and sports ( $p = 0.069$ ) and different levels of self-esteem and dealing with walking ( $p = 0.56$ ). In conclusion, motivation is an extremely important component of participation in programs of physical activity and staying active. Physical activity has an irreplaceable instrumental value, since it represents the best means of achieving and maintaining health. In addition, physical activity has intrinsic value because it enables the implementation and improvement of human motor skills and achievements. We believe that neglecting the physical - health aspect undermines the integrity of the personality, and therefore everyone has a reason for regular physical exercise.

**Key words:** motivation, self-esteem, active physical education, students

### Introduction

Psychology, as an important factor in the equation specification of the training itself greatly affects the level of self-esteem, especially among students of different studies. Studies have shown that aerobic physical activity has a positive effect on boosting self-esteem and decrease anxiety in adolescents. There are also studies that are related to physical activity during the transition from high school to college. The results showed that about 66 % of students engaged in activities in high school , and this percentage dropped to about 44 % at the universities. This points out to how students are lack of free time in participation in any physical activity during the studies. Also established was a negative correlation between physical activity and stress in students, that they are more concerned with a particular physical activity, to the stress and depression as a clinical psychological disorders were diminished. Results in other studies only confirm the positive effects of physical activity on mental and physical, overall health aspects of man. Dealing kinesiology activities capacitate positive personality traits, affects self-esteem, which is the subject of this study, motivation and mental health.

### Methods

#### Participants

The study was conducted on a sample of 2849 regular student of the University of Split.

They were aged 19-25 years. We are talking about a representative sample that covers a large part of the students of Split University and in which participated girls from almost all of Split Faculties: Faculty of Medicine, Faculty of Philosophy, Faculty of Electrical engineering, mechanical engineering and shipbuilding, Natural-mathematical faculty, Faculty of Law, Faculty of Economics, Chemical engineering Department and faculty of Kinesiology.

#### Sample of variables

The pattern of variables is defined with with kinesiology engagement as criterion variable and variables for anthropological and health assessment status as predicted variables. Kinesiology contribution as criterion variable will be estimated in three variables: a) four levels of kinesiology engagement in the form of extensiveness of walking (up to one hour per week, between 1 and 2 hours per week , between 2 and 4 hours per week and more than 4 hours per week); b) four levels of recreational kinesiology engagement in terms of dealing with free recreational activities (no recreational activity, recreational activity in duration of 1-2 hours per week, recreational activity in duration of 3-4 hours per week and recreational activity in duration of 5 or more hours per week); c) four levels of sports kinesiology involvement in the form of dealing with institutional sports (any sport activity, sports activity in duration

of 1-2 hours per week, sports activity in duration of 3-4 hours a week and sports activity in duration of 5 or more hours per week). For the assessment of psychological status will be used standard ten-item Rosenberg self-esteem scale (Rosenberg Self-Esteem Scale), which is a self-assessment of general self-esteem in the form of a general assessment of the respondents about their own value as a human being (Pullman and Alik, 2000). As previously mentioned, private health category of smoking shall be asked as part of the questionnaire, as well as the level of Kinesiology engagement survey respondents. For the purposes of parametric statistical processing will be formed and the cumulative variable self-esteem as the sum of all positive assertions. 1. I am generally satisfied with myself, 2. Sometimes I think that I worth nothing, 3. I think I have a lot of good qualities, 4. I am capable of doing regular stuff as the general population, 5. I think that I can not brag with stuff I have done so far, 6. Sometimes I feel completely useless, 7. I feel equally valuable as other people, 8. I would like to respect myself little bit more, 9. I think that I am a complete failure, 10. I have positive attitude towards myself.

#### Statistical methods

Collecting data on the anthropological and health status of students and their kinesiology permanent engagement was carried out in the student clinic in Split by authorized doctors County Department of Public Health. The study is therefore carried out with the consent and active participation of competent doctors and service of the Institute.

Due to the nature of research and the permanence of the data collection component of regular systematic medical examinations, all data were collected and statistically analyzed. Parallel data collection was conducted, processed, analyzed, interpreted, and the results were presented in study. In the context of data processing, according to psychometric characteristics of individual variables, parametric and nonparametric statistical procedures were used. For quantitative variables distributed on metric scale we used distribution parameters: mean (XA), minimum and maximum value of the results (MIN, MAX), standard deviation (SIG), asymmetry (Sk) and the curvature distribution (KU). Testing for normality of distribution was carried out by the method of Kolmogorov - Smirnov (Max D). For categorical variables (health characteristics and smoking status) was determined the representation in terms of frequency and percentage accounts. Relations between the criterion variable and categorical predictive variables was determined the nonparametric chi-square test. Package Statistica for " Windows Ver.7.0 was used for processing.

#### Results

The research results are presented in table 1, as the ratio of Kinesiology engagement and levels of self-esteem among students in numbers and in percentage form. The results were designed in a way that looked at the level of self-esteem associated with sport, recreation or walking through a variable duration of each exercise in a week.

Table 1. Relations between kinesiology engagement and self-esteem among female students

	DOING SPORTS		DOING RECREATION		DOING WALKING	
	>SELF-ESTEEM	<SELF-ESTEEM	>SELF-ESTEEM	<SELF-ESTEEM	>SELF-ESTEEM	<SELF-ESTEEM
never/up to 1 hour	1260 (85,02% -53,12%)	1112 (81,35% -46,88%)	738 (49,80% -56,99%)	557 (40,75% -43,01%)	33 (2,23% -51,56%)	31 (2,27% -48,44%)
1-2 hours	142 (9,58% -46,71%)	162 (11,85% -53,29%)	562 (37,92% -48,62%)	594 (43,45% -51,38%)	613 (41,36% - 53,54%)	532 (38,92% - 46,46%)
3-4 hours	42 (2,83% -44,68%)	52 (3,80% -55,32%)	145 ( 9,78% -45,89%)	171 (12,51% -54,11%)	501 (33,81% - 51,49%)	472 (34,53% - 48,51%)
5 hours or more	38 (2,56% - 48,10%)	41 (3,00% - 51,90%)	37 (2,50% - 45,12%)	45 (3,29% -54,88%)	335 (22,60% - 50,22%)	332 (24,29% - 49,78%)
Pearson Chi-square	7,098		24,502		2,032	
p	0,06887		<b>0,00002</b>		0,56584	

#### Discussion

Distribution of observed frequencies of the relationship between weekly sports and overall self-esteem scales student University of Split was shown in table 1. The resulting frequencies showed that the total number of students tested, 83.26 % or 2372 were in no way involved in sports.

Of that number, 53,12% or 1,260 students with severe lower self-esteem, and 46.88 % or 1,112 students with higher self-esteem expressed. 304 students of the total sample (10.67 %) practiced weekly from 1-2 hours of sports of which were 142 students (46.71 %) with severe lower self-esteem and 162 students (53.29 %) were expressed with higher self-esteem.

A very small percentage of students were involved in sports for more than three hours. 94 students or 3.30 % played sports 3-4 hours, and 79 students (2.77 %) were engaged in a sport weekly 5 hours or more. We concluded that in college we had a statistically insignificant difference on the general scale of self-esteem in relation to the weekly sports participation and the level of statistical significance greater than  $p = 0.05$ . The results told us that students who had low self-esteem in the same manner practiced playing sports as well as students with higher levels of self-esteem. If we compare the relationship between sports and self-esteem scale dealing with recreation and self-esteem scale in table 1, we could see on the basis of observed frequencies to a greater number of girls engaged in a week of recreation than sport.

Distribution of observed frequencies of the relationship between weekly dealing with recreation and overall self-esteem scales student University of Split showed that the total number of students tested, 45.45 % or 1295 were in no way involved in recreation and of that number, 56.99 % or 738 were students with expressed lower self-esteem and there were 43.01 % or 557 students with higher self-esteem expressed. From 1-2 hours weekly recreation practiced 1156 student of the total sample (40.58 %) of which were 562 students (48.62 %) with severe lower self-esteem and 594 students (51.38 %) were expressed with higher self-esteem. Students engaged in recreation 3-4 hours were 316 or 11.09 %, and 82 students (2.88 %) were engaged in a week of recreation five hours or more. The value of relationships observed frequency of weekly dealing with recreation and self-esteem scale was 24.502 and a statistically significant, which is  $p= 0.000002$ . Based on these results, we concluded that there were statistically significant differences between the observed frequency of weekly status dealing with recreation and general self-esteem scales student at the University of Split on the statistical level of  $p= 0.05$ . Relations between the distribution of observed frequencies weekly practicing walking and overall self-esteem scales student University of Split showed that the total number of students tested, them 2.25 % or number 64 dealing walking up to one hour per week of that number, 51.56 % or 33 students with severe lower self-esteem and give 48.44 % or 31 students with higher self-esteem expressed. From 1-2 hours a week walking practiced 1145 student of the total sample (40.19

%) of which were 613 students (53.56 %) with severe lower self-esteem and 532 students (46.46 %) were higher with severe self-esteem. The number of students engaged in weekly walking 2-4 hours was 973 students, or 34.15 %, and 667 students (23.41 %) were engaged in a week walking four hours and more. The value of relationships observed, frequency of weekly practicing walking and self-esteem scale was 2.032 and a statistically significant, which is  $p= 0.56584$ .

We concluded that students who were engaged in different time of a week walking, no statistically significant difference in self-esteem. Students with a higher level of self-esteem in the same manner practiced kinesiology engagement of walking as well as students with lower levels of self-esteem.

### Conclusion

Physical activity has an irreplaceable instrumental value because it represents the best means of achieving and maintaining health. In addition, physical activity has intrinsic value because it enables the implementation and improvement of human motor skills and achievements. Motivation is a very important component of participation in programs of physical activity and staying active. It was shown that featured a fun component of physical activity brings improved quality of life to a greater extent than focusing on the example of the aesthetic goals such as weight loss or change in the appearance of the body. This fact is of great importance for practical advice and kinesiology and medical professionals.

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## RAZLIKE PSIHOLOŠKIH ZNAČAJKI IZMEĐU RAZLIČITO TJELESNO AKTIVNIH STUDENTICA

### **Sažetak**

Cilj istraživanja bio je utvrditi razlike u psihološkim karakteristikama u studentica koje su različito fizički aktivne. U istraživanju je sudjelovalo 2.849 studenata dodiplomskog studija na Sveučilištu u Splitu, u dobi od 19 do 25 godina. Praćenje tjelesnog angažmana je provedeno kroz tri pod-varijable: sport, rekreacija i šetnja, a psihološke karakteristike prikupljene su Rosenbergovom skalom samopoštovanja, koja se sastoji od 10 predmeta mjerenja. Razlike u količinskim prediktivnim varijablama (psihološke karakteristike) između različitih razina kineziološkog angažmana određene su multivarijantnom i univarijantnom analizom varijance. Odnosi između kriterijske varijable i prediktivnih varijabli određene su neparametrijskim hi-kvadrat testom. Značajnost je određena na razini pogreške  $p < 0,05$ . Dobivene su značajne razlike između različitih razina samopoštovanja i rekreacije u slobodno vrijeme na fakultetu ( $p = 0,00$ ). S druge strane, nema značajne razlike u razinama samopoštovanja i sporta ( $p = 0,069$ ) i različite razine samopoštovanja i šetnje ( $p = 0,56$ ). U zaključku, može se reći da je motivacija vrlo važna komponenta sudjelovanja u programima tjelesne aktivnosti. Tjelesna aktivnost ima nezamjenjivu instrumentalnu vrijednost, jer predstavlja najbolje sredstvo za postizanje i održavanje zdravlja. Osim toga, tjelesna aktivnost ima intrinzičnu vrijednost jer omogućuje provedbu i poboljšanje ljudskih motoričkih sposobnosti i postignuća. Vjerujemo da zanemarujući fizičko zdravlje - narušava se i integritet osobnosti, i zato svatko ima razloga za redovito fizičko vježbanje.

**Ključne riječi:** motivacija, samo-poštovanje, aktivno tjelesno vježbanje, studentice

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