

**PHYSICAL ACTIVITIES AS A MODERATOR OF BMI AND SOCIAL
RELATIONS RELATIONSHIPS**

Ljubica Milanovic¹, Bojan Bjelica¹, Borislav Cicovic¹

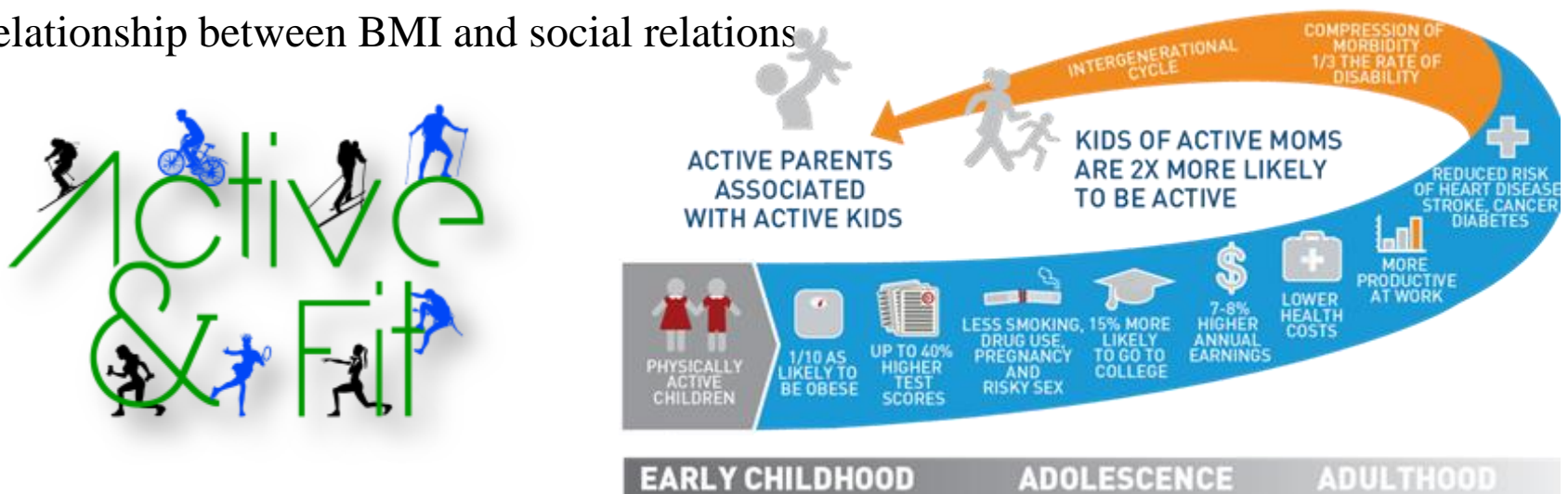
¹Faculty of Physical Education and Sports, University of East Sarajevo

INTRODUCTION

Physical activity is an important factor in maintaining and improving general health status, but also in reducing the prevalence of various chronic non-communicable diseases (Warburton, & Bredin, 2017).

People with a higher body mass index are more likely to experience discrimination based on BMI, also lower self-esteem (Zamani et al., 2021) and physical and mental ill health (Karaca, Yildirim, Cangur, Acikgoz, & Akkus, 2019) which could potentially affect social, educational and outcomes, meaning that the relationship between social factors and BMI can be two-way.

The aim of the research is to determine the influence of physical activity on the relationship between BMI and social relations



METHOD

The population from which the sample of respondents was defined consists of high school students from the Banja Luka region, students of the University of East Sarajevo and educators employed in high schools in the Banja Luka region (Republika Srpska, BiH). Respondents are between 18 and 65 years old. The total sample consisted of 1,500 respondents divided into three subsamples: 500 high school students, 500 students, and 500 professors.

bmi

**WHOQOL
-BREF**

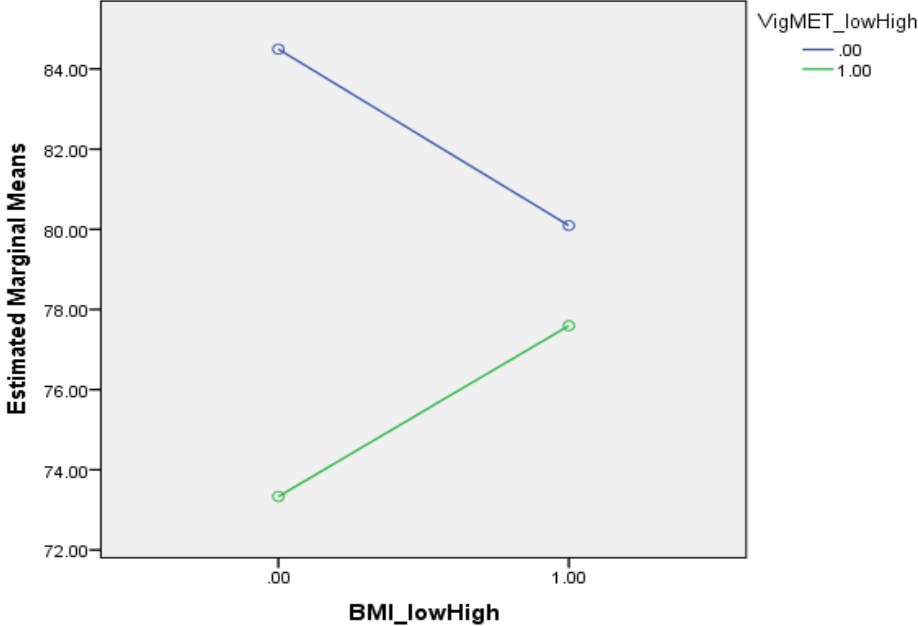


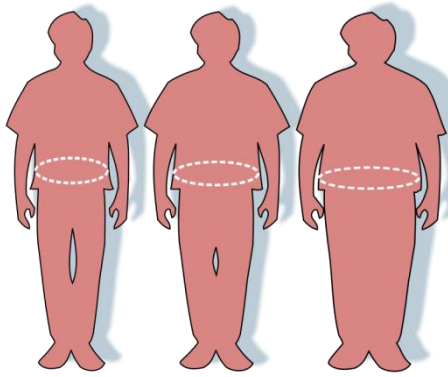
RESULTS

		Ученици				Студенти				Радно активно становништво				
		Beta	Sig	R ² (sig □ R ²)	Sig	Beta	Sig	R ² (sig □ R ²)	Sig	Beta	Sig	R ² (sig □ R ²)	Sig	
Социјални односи	1	ВМІ	-0.174	.051	.030	.051	-0.231	.003	.053	.003	-0.084	.251	.007	.251
	2	ВМІ	-0.229	.013	.078 (.106)	.042	-0.233	.003	.078 (.246)	.012	-0.013	.860	.074 (.005)	.007
		ФА високог интензитета	.170	.126			.159	.046			-0.299	.000		
		ФА умјереног интензитета	-0.135	.219			-0.014	.866			.142	.070		
		ФА ниског интензитета	.192	.034			.008	.918			.034	.651		
	3	ВМІ	-0.192	.218	.114 (.191)	.042	-0.236	.113	.081 (.901)	.065	-0.269	.038	.154 (.001)	.000
		ФА високог интензитета	-2.054	.089			.220	.726			-2.866	.000		
		ФА умјереног интензитета	.565	.545			-0.333	.465			1.312	.085		
		ФА ниског интензитета	1.649	.074			.282	.718			-0.239	.569		
		ВМІ x ФА високог интензитета	2.338	.065			-0.064	.919			2.691	.000		
		ВМІ x ФА умјереног интензитета	-0.760	.425			.323	.483			-1.152	.133		
		ВМІ x ФА ниског интензитета	-1.496	.110			-0.266	.731			.289	.500		

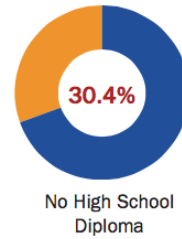
Estimated Marginal Means of kvalitet zivota socijalni odnosi

grupa: radnici

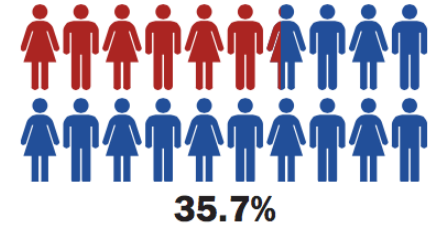




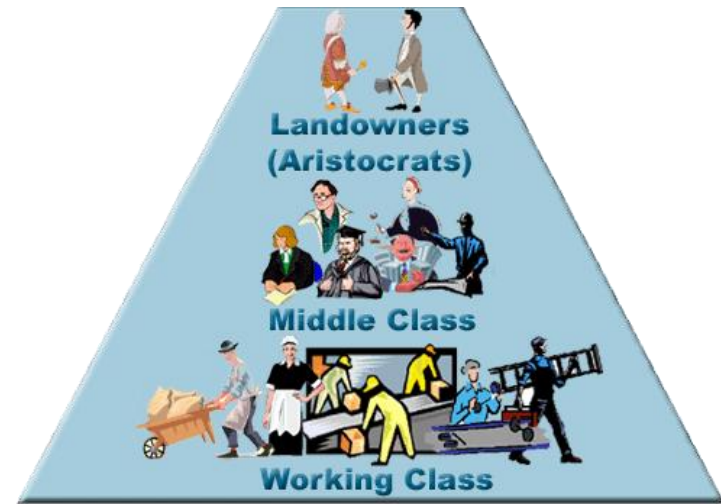
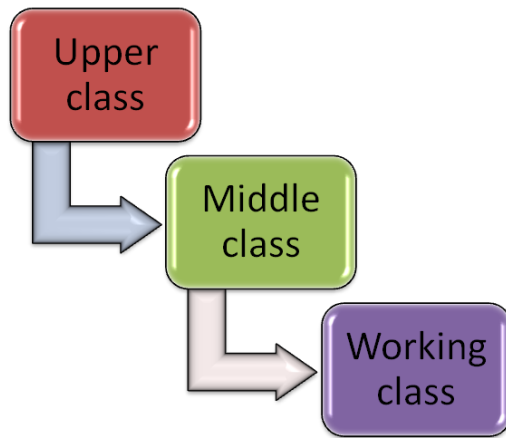
Obesity Rates for Children Based on Parental Educational Attainment



Obesity Rates for Girls Ages 10 to 17 in Lower Socioeconomic Circumstances



In picture no.1 changes in the values of dependent variables in the sample of working population depending on the height of the observed scores of variables participating in the interaction (BMI on the horizontal axis divided into two categories - lower and higher scores) and physical activity variables represented by lines of different colors - blue line scores, and green more scores of physical activity). Crossing lines of different colors or any significant deviation from the parallel relationship indicates the existence of an interaction. Based on the picture 1, where it was determined that the lines of interaction intersect, it can be stated that there are statistically significant interactions, which indicates the existence of a moderator effect of "high intensity FA" on the relationship between the BMI variable and the domain "social relations".



Engaging in low-intensity physical activity reduces the impact of self-assessed health status on quality of life - the domain of social relations in a subsample of students (Figure1). In students whose low-intensity physical activity is not pronounced, the impact of health status on the quality of life is greater - the domain of social relations (students with better self-assessed health status have a drastically better quality of life than students with lower health status). In students with pronounced low-intensity physical activity, the impact of self-assessed health status is significantly weaker and negative (students with better self-assessed health status have a slightly lower quality of life than students with lower self-assessed health status).

CONCLUSION

The body mass index is negatively low correlated with one domain of quality of life "social relationship". Negative correlation means that respondents with higher BMI values correspond to lower scores in the questionnaire for quality of life assessment, but only in the domain "social relations". When social relations are viewed as a dependent variable, it can be seen that in addition to significant impact BMI, there is also an individual impact of high-intensity physical activity in the group of working population. Workers in whom high-intensity physical activity is not affected BMI on the quality of life - social relations is negative. Workers with higher values BMI have a lower quality of life than workers with lower values BMI. High-intensity physical activity statistically significantly directs the relationship between BMI and the social domain of quality of life, in relation to other particles, which are not covered by this research, and which would be interesting and useful to examine in future research.