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## Physical Activity Facilities of the University and Students' Demands in Campus to Increase Physical Activity

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### ABSTRACT

Physical activity facilities of the universities and university students' demands are important to be understood to maintain university students' sufficient physical activity levels and positive attitudes. In this study it is aimed to evaluate physical activity facilities of university campuses and the demands of the students about physical activity facilities of their university. Sample of this cross sectional research was choosed by simple random and cluster methods. It was done with 620 university students being educated in Zonguldak Bülent Ecevit university between 15.11.2022 and 30.12.2022. The survey including questions about sociodemographic features, international physical activity survey (short form), a scale for attitude towards physical activity were filled by all the participants.  $P < 0.05$  was accepted for statistically significance.

%84.5 of the students find physical activity facilities of the university inadequate. In order to increase physical activity facilities of the university %73.9 of the students demand open areas in campuses for physical activity to be created. %61 demand students sport clubs to be activated. their diversity to be increased and their role to be supported in social activities. %58.5 demand the number of gyms in campuses to be increased. Providing suitable and adequate physical activity facilities for university students may improve their attitude and physical activity levels during university education. The demands of the students about physical activity facilities of the university differ so that these demands should be considered while improving physical activity programmes and physical activity facilities.

**Key Words:** Physical activity. Physical activity demands. Physical activity environment. Physical activity facilities. Physical activity in university.

## Üniversitenin Fiziksel Aktivite İmkanlarının Değerlendirilmesi Ve Üniversite Öğrencilerinin Fiziksel Aktiviteyi Artırmaya Yönelik Talepleri

### ÖZET

Üniversite öğrencilerinin yeterli fiziksel aktivite düzeylerini ve fiziksel aktiviteye karşı olumlu tutumlarını sürdürmek için üniversitelerin fiziksel aktivite olanakları ve üniversite öğrencilerinin taleplerinin anlaşılması önemlidir. Bu çalışmada üniversite kampüslerindeki fiziksel aktivite olanakları ve öğrencilerin üniversitelerindeki fiziksel aktivite olanaklarına ilişkin taleplerinin değerlendirilmesi amaçlanmıştır. Bu kesitsel araştırmanın örneklemini basit rastgele ve kümeleme yöntemleriyle seçilmiştir. Bu çalışma 15.11.2022-30.12.2022 tarihleri arasında Zonguldak Bülent Ecevit Üniversitesinde eğitim gören 620 üniversite öğrencisi ile yapılmıştır. Sosyodemografik özelliklerle ilgili soruların yer aldığı anket, uluslararası fiziksel aktivite anketi (kısa form), fiziksel aktiviteye yönelik tutum ölçeği tüm katılımcılar tarafından doldurulmuştur.

Öğrencilerin %84,5'i üniversitenin fiziksel aktivite olanaklarını yetersiz bulmaktadır. Üniversitenin fiziksel aktivite olanaklarını artırmak için öğrencilerin %73,9'u fiziksel aktivite için kampüslerde açık alanlar oluşturulmasını, %61'i öğrenci spor kulüplerinin aktif hale getirilmesini, çeşitliliğinin artırılmasını ve rollerinin desteklenmesini talep etmektedir. Üniversite öğrencilerine uygun ve yeterli fiziksel aktivite olanaklarının sağlanması üniversite eğitimi

## INTRODUCTION

It is known that sufficient amount of physical activity done prevents individuals from chronic and mental disorders (1-2).

Inadequate facilities of the university campuses as well as insufficient time, reluctance, fear of being injured, thinking of being incompetent can be the reason for negative attitude towards physical activity and insufficient physical activity levels among university students [3].

For this reason it is important to detect physical activity facilities of the campuses that university students spend huge amount of their time during their education and demands of the students about physical activity facilities in the campuses as well as detecting their attitudes and physical activity behaviors to promote positive attitude towards physical activity and increase their physical activity levels.

Making clear what kind of physical activity facilities in the campuses that university students need to develop positive attitude and increase their physical activity levels will help authorities to take appropriate actions to improve physical activity facilities and create physically active campuses.

In this study it is aimed to detect attitudes towards physical activity, physical activity behaviors of the university students, physical activity facilities of the university campuses and demands of the university students about physical activity facilities of the campuses while they are educated to increase their physical activity.

## METHOD

This research was approved by Zonguldak Bülent Ecevit University Human Research Ethic Committee with protocol number:375 in the date of 09.11.2022. This research was carried out on humans in accordance with the principles of the Declaration of Helsinki.

Universe of this research is composed of 18 231 students being educated in İbni Sina, Farabi, Ereğli campuses of Zonguldak Bülent Ecevit University. Sample size was calculated as 843 students with %95 confidence interval. Sample of the research was choosed by simple random and cluster methods. This research was designed as cross sectional study.

This research was done with 620 university students being educated in licence programmes of one of the İbni Sina, Farabi, Ereğli campuses of the Zonguldak Bülent Ecevit University between 15.11.2022 and 30.12.2022. Firstly students were informed about the research. Participants signed informed consent paper for voluntary participation. The survey including questions about sociodemographic features, international physical activity survey (short form), a scale for attitude towards physical activity were filled by all the participants(4)(5).

First 5 questions of the survey were about the sociodemographic features of the participants, physical activity behaviors, physical activity facilities of the university and the demands of the students about physical activity facilities of their campuses. These first 5 questions were created based on the literature research.

Another part of the survey were composed of the scale for attitude towards physical activity including 25 questions with 5 likert answers for each to detect attitude of the students towards physical activity and the international physical activity survey (short form) including 7 questions to detect physical activity levels of the students. According to international physical activity survey (short form) physical activity levels of the students were categorised as category 1 (inactive), category 2 (minimally active), category 3 (active).

It was shown that datas were fit normal distrubution according to Kolmogrov Smirnov test. ( $p=0.041$ ).

Student T test for binary variables, ANOVA test for multiple variables were used in comparison of continous variables. Cross tables and chi square analysis were used in comparison of categorical variables .  $P=0.005$  was considered as statictically significance.

## RESULTS

**Table 1.** Sociodemographic Features, Physical Activity Attitude, Physical Activity Levels of Participants

Sociodemographic features			Physical Activity Attitude		Physical activity Level					
					Category					
					1	2	3	P		
					(Inactive)	(Minimally active)	(Active)			
	n	%	Mean $\pm$ SD	P	n	%	n	%	n	%
Female	405	65.30	92.3 $\pm$ 12.00	0.46	271	66.9	109	26.90	25	6.20
Male	215	34.70	93.4 $\pm$ 12.60		142	66.0	55	25.60	18	8.40
<b>İbni Sina Campus</b>				0.03	200	58.30	114	33.20	29	8.50
Faculty of Medicine	179	28.70	93.53 $\pm$ 12.23							
Faculty of Dentistry	36	5.80								
Faculty of Farmacy	79	12.70								
Faculty of Health Science	49	7.90								
<b>Farabi Campus</b>					110	76.40	27	18.80	7	4.90
Faculty of Fine Arts	8	1.30	90.40 $\pm$ 12.68							
Faculty of Science	3	0.50								
Faculty of Theology	11	1.80								
Faculty of economics&adm	91	14.70								
<b>Ereğli Campus</b>					103	77.40	23	17.30	7	5.03
Faculty of Education	72	11.60	93.18 $\pm$ 11.70							

Physical activity/sport facilities of the university is inadequate	523	84.50	88.91±12.47	0.01	72	75	19	19.80	5	5.20	0,001
Physical activity/sport facilities of the university is adequate	96	15.50	93.42±12.13		340	65	145	27.70	38	7.30	

As it is seen in Table 1 ,

This research was done with 620 university students in Zonguldak Bülent Ecevit University. 405 (%65.3) of the students are female and 215 (%34.7) are male.

343 (%55.3) of the students study in İbni Sina campus. 144 (%23.2) in Farabi campus and 133 (%21.5) in Ereğli campus.

523 (%84.5) of the students find physical activity facilities of the university inadequate and 96 (%15.5) adequate.

There is no statistically significant difference between physical activity attitude mean scores of female and male students.

The physical activity attitude mean scores of the students who find physical activity facilities of the university inadequate are significantly higher than the ones finding the facilities adequate ( $p=0.001$ ).

The physical activity attitude mean scores of the students who study in İbni Sina campus (93.53) and Ereğli campus (93.18) are significantly higher than the ones studying in Farabi campus (90.40) ( $p=0.03$ ).

There is no significant difference between physical activity levels of the female and male students.

Most of the students in each of three campuses are found as physically inactive. The students who study in Ereğli campus (%77.4) have significantly lower level of physical activity than the students studying in Farabi (%76.4) and İbni Sina (%58.3) ( $p<0.001$ ).

Students who find physical activity facilities of the university inadequate have significantly higher level of physical activity than the ones finding the facilities adequate ( $p=0.001$ ).

**Table 2.** Adequacy of physical Activity Facilities

Sociodemographic features	Is physical activity/sport facilities of the university adequate ?			
	Adequate		Inadequate	P
	n	%	n	%
Female	51	12.60	353	87.40

<b>İbni Sina Campus</b> Faculty of Medicine Faculty of Dentistry Faculty of Farmacy Faculty of Health Science	44	12.80	299	87.20	<0.0001
<b>Farabi Campus</b> Faculty of Fine Arts Faculty of Science Faculty of Theology Faculty of economics&adm	40	27.80	104	72.20	
<b>Ereğli Campus</b> Faculty of Education Faculty of Maritime Faculty of Turism	12	9.00	121	91	

As it is seen in Table 2,

523 (%84.5) of the students find physical activity facilities of the university inadequate and 96 (%15.5) adequate.

Female students (%87.4) find physical activity facilities of the university significantly more inadequate than male students (%79.1) ( $p < 0.05$ ).

Most of the students in each campuses find physical activity facilities of the university inadequate. Students in Ereğli campus (%91) find physical activity facilities of the university significantly more inadequate than the students in Farabi campus (%72.2) and İbni Sina campus (87.2) ( $p < 0.001$ ).

**Table 3.** Demands of The Students to Promote Positive Attitude and Increase Physical Activity Levels in University

Demands of the students to promote positive attitude and increase physical activity levels in university		Gender			Campus				Is physical activity/sport facilities of the university adequate ?			
		Female	Male		İbni Sina	Farabi	Ereğli		Inadequate	Adequate		
		n %	n %	P	n %	n %	n %	P	n %	n %	P	
Activating students sport clubs. increasing their diversity	Yes	246 60.70	132 61.40		216 63	77 53.50	85 63.90		324 62	53 55.20		

												21
Creating open areas for physical activity in campuses	Yes	301 74.30	157 73	0.72	269 78.50	91 63.20	98 73.70	0.00	409 78.20	49 51	0.00	
	No	104 25.70	58 27		74 21.60	53 36.80	35 26.30		114 21.80	47 49		
Organising tournaments in University	Yes	139 34.30	90 41.90	0.06	125 36.40	57 39.60	47 35.30	0.73	193 36.90	36 87.50	0.91	
	No	266 65.70	125 58.10		218 63.16	87 60.40	86 64.70		330 63.10	60 62.50		
Increasing the number of gyms	Yes	235 58.00	128 59.50	0.71	213 62.10	74 51.40	76 57.10	0.08	326 62.30	37 38.50	0.00	
	No	170 42	87 40.50		130 37.90	70 48.60	57 42.90		197 37.70	59 61.50		
Arranging the swimming pool hours as outhur than curriculum hours	Yes	128 31.60	67 31.20	0.91	119 34.70	48 33.30	28 21.10	0.01	163 31.20	32 33.30	0.67	
	No	277 68.40	148 68.80		224 65.30	96 66.70	105 78.90		360 68.80	64 66.70		
Providing dance/Folk dance opportunities	Yes	91 22.50	54 25.10	0.45	84 24.50	29 20.10	32 4.10	0.57	127 24.30	18 18.80	0.23	
	No	314 77.50	161 74.90		259 75.50	115 79.90	101 75.90		396 75.70	78 81.30		
Support of staff in faculty of physical education and sports for physical activities	Yes	103 25.40	55 25.60	0.96	92 26.80	35 24.30	31 23.30	0.68	142 27.20	16 16.70	0.03	
	No	302 74.60	160 74.40		251 73.20	109 75.07	102 76.70		381 72.80	80 83.30		
Opening of halls and indoor areas for physical activity	Yes	237 58.50	119 55.30	0.44	220 64.10	64 44.40	72 54.10	0.00	317 60.60	39 40.60		
	No	168 41.50	96 44.70		123 35.90	80 55.60	61 45.90		206 39.40	57 59.40		

In order to increase physical activity facilities of the university %73.9 of the students demand open areas in campuses for physical activity to be created, %61 demand students sport clubs to be activated. their diversity to be increased and their role to be supported in social activities, %58.5 demand the number of gyms in campuses to be increased, %57.4 demand halls/indoor areas in campuses for physical activity to be opened, %36.9 demand tournaments all over the university to be organised, %31.5 demand the swimming pool hours to be rearranged as other than curriculum hours, %25.5 demand to be supported by staff in faculty of physical education and sports during physical activities, %23.4 demand dance/folk dance opportunities to be provided.

There is not significant difference in the demand of students sport clubs to be activated. their diversity to be increased and their role to be supported in social activities in terms of gender. campuses and whether university physically activity facilities are found adequate or inadequate.

There is not significant difference in demand of open areas for physical activity in campuses to be created in terms of gender.

Students studying in İbni Sina campus (%78.5) demand open areas in campuses for physical activity to be created more than the students studying in Farabi campus (%63.2) and Ereğli campus (%73.7) ( $p<0.001$ ).

Students finding physical activity facilities of the university inadequate (%78.2) demand open areas in campuses for physical activity to be created more than the students finding adequate ( $p<0.001$ ).

There is not significant difference in demand of tournaments all over the university to be organised in terms of gender, campuses and whether university physically activity facilities are found adequate or inadequate.

There is not significant difference in demand of the number of gyms in campuses to be increased in terms of gender, campuses. Students finding physical activity facilities of the university inadequate (%62.3) demand the number of gyms in campuses to be increased more than the students finding adequate (%38.5) ( $p<0.001$ ).

There is not significant difference in demand of the swimming pool hours to be rearranged as other than curriculum hours in terms of gender, campuses. and whether university physically activity facilities are found adequate or inadequate.

There is not significant difference in demand of dance/folk dance opportunities to be provided in terms of gender, campuses and whether university physically activity facilities are found adequate or inadequate.

There is not significant difference in demand to be supported by the staff staff in faculty of physical education and sports during physical activities in terms of gender and campuses.

Students finding physical activity facilities of the university adequate (%16.7) demand to be supported by the staff in faculty of physical education and sports during physical activities less than the students finding inadequate (%27.2) ( $p<0.05$ ).

There is not significant difference in demand of halls/indoor areas in campuses for physical activity to be opened in terms of gender.

Students studying in İbni Sina campus (%64.1) demand halls/indoor areas in campuses for physical activity to be opened more than the students studying in Farabi campus (%44.4) and Ereğli campus (%54.1) ( $p<0.001$ ).



## DISCUSSION

In this study it is evaluated that the physical activity facilities of the university and the demands of the students relating to physical activity facilities of the university to be physically more active in campuses as well as students attitude and physical activity levels.

It has been currently leading research to determine in detail the demands of the university students about physical activity facilities of university to have positive attitude and increase their physical activity levels .

In this research there is not significant difference in physical activity attitudes and physical activity levels in terms of gender. Oppose to this finding In the research by Aydınır at al in 2017 and in the research by Ramezankhani in 2013 it is shown that physical activity attitude of males are more positive than the females (6)(7) and also in the systematic review by Irwin at al in 2004 . In the research by Faragaz at al in 2015 and in the research by Dayı at al in 2017 it is shown that males are more physically active than females (8)(9)(10). Reason for this discrepancy between the results of this research and the others may be due to lack of physical activity facilities of the university which provide more suitable physical activity facilities for preferences of females than males's . In the research by Wilson at al in 2022 it is shown that types of physical activity that females and males prefer differ and having the opportunity to utilize the facilities for physical activity type that they prefer effect their physical activity attitude and their levels of physical activity (11).

While physical activity attitudes of the students in İbni Sina and Ereğli campuses are better than the ones in Farabi campus. The students in İbni Sina campus are more physically active than the others. Reason for having more physical activity levels and better attitudes in health campus may be due to having education in field of health and being informed about health benefits of physical activity (12).

The students in Ereğli campus find physical activity facilities of the university more inadequate than the students in İbni Sini and Farabi campuses. It may explain the lower level of physical activity of the students in Ereğli campus comparing the physical activity levels of the students in other campuses.

Physical activity attitude of the students finding the physical activity facilities of the university inadequate is better and their physical activity levels are higher than the students finding facilities adequate. It may show that if sufficient physical activity facilities are provided in campuses . positive attitudes towards physical activity may be expected to lead higher levels of physical activity.

%85 of the students find physical activity facilities of the university inadequate. This result is similar to the result of the research by leslie at al in 2001 showing that physical activity facilities of the universities in Australia can not always be provided sufficiently and properly and there are some physical activity programmes in the university campuses in America but these programmes are not provided in all campuses but generally in small ones (13).

Female students find physical activity facilities of the campuses more inadequate than the male students. It may be due to the fact that the types of physical activity facilities that university have currently are less preferable by females than males. In the research by Keating at al in 2005 it is shown that types of physical activity that females and males prefer differs (14).

The physical activity facilities of the universities should be suitable for the type of physical activity preferences of the students who spend their big amount of time during their education period in the university to promote their positive attitude and increase their physical activity levels. In the research by Kaeting at al 2005 it is shown that preferences of the type of physical activity can vary depending on the gender, pleasure, physical activity experiences of people (14).

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