INVESTIGATION THE PHYSICAL ACTIVITY LEVEL OF PHYSICAL EDUCATION STUDENTS

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ABSTRACT
The aim of this study was to investigate the physical activity level of the Physical Education and Sport Teacher Departments' Students. Totally 149 student who were study in Çanakkale Onsekiz Mart University Physical Education and Sport Teacher Department, joined to study voluntary. International Physical Activity Questionary (IPAQ) short form used to collect data. One Way Anova, T-Test and Pearson Correlation models used in SPSS 11,5 statistical program. Analysis showed that; participants' physical activitylevels (PAL) of classes1,2,3 and 4 were: 7341,9±3068,7 MET-min/wk, 5817,1±3039,2 MET min/wk, 5686,1±3605,3 MET min/wk, 2780,1±1854,7 MET-min/wk respectively. ANOVA showed that class 4 had significantly lover PAL than the other classes. T-test showedthat females had significantly lover PAL than males. PAL had significant but negative correlation with class and body mass index. As a conlucion; there was significantly differences between classes according the PAL. It is possible to say that; students' PAL should examine regularly and make arrangements on curriculum to help them stayphysically activemay prevent such differencesbetween classes.
Keywords: Sport, Physical activity, Physical education

INTRODUCTION

Along withthe ever-evolvingtechnology as well astheincreasingsedentary lifestyle. Because of the technological machines , people found morefree time, but the quality ofphysical activity was decreased. Thistermdescribes thestate ofinactivity. Theactivitylevel ofinactivityis defined aslessthan 150 minutesper week. The minimumactivity levelthat might be usefulto healtheveryday for at least30 minutesof moderate intensityactivityoractivityhas been reported thatsevere (U.S. Department of Health and Human Services 1996). Lack ofphysicalactivityincreasesthe risk ofheartdisease, obesity, type 2diabetes, colon cancer, reported thatthe relationship betweendepressionandillnessessuch asbreastcancer (Bull et al. 2004). The frequency ofphysicalactivityshould be increasedto avoidinactivity. Physicalactivitydefined asbody movementwhich increasesenergy expenditureabove thebasallevel and produced byskeletal muscleswork (Jassen et al 2006, American College of Sports Medicine 2001, Pate et al 1995). Type ofphysicalactivity, includingviolenceand its purposecan be classifiedin many ways (Baranowski et al. 1992). Activitytakes placein aperson'sor group'sphysicalactivityoftenare classifiedaccording to the environment. Commoncategories, business, homeactivitiesandhome environment, peoplecare,leisure, sportsorincludestransportation (Vanhees et al. 2005). Leisureactivity, racingsports, recreationalactivities(cycling, mountain climbing, etc.). Andalsocan be divided intosub-categories, such as exercise training (Burton and Turrell 2000).

It is possible to say that persons who lead an lifelong active lifestyle become more advantageous situation than the sedentary according to meeting health problems. Especially people who work in physically active job, may reach a more advantageous. Profession of Physical Education Teacher may more preferable in terms of working in physically active job than other professions. In addition,high levels ofphysical activityof individualsis expected to bein thisprofession. Preparation forthe professionisa veryintensive and physically active period In Turkey, but the physical activity level ofstudentsdecreasedover timewas observed. It is may be cause of the numberof appliedcoursesis more thantheoretical in the curriculum. From this situationthe purpose of this study was to investigate the physicalactivitylevel of physical education students'and to compare the physicalactivity level of students according to classes.

METHOD

Subjects
Totally 149 (77 male, 72 female) students (21,3±1,9 years mean age) who study in Çanakkale Onsekiz Mart University Department of Physical Education and Sport Teacher (PEST)participated in to the study voluntary. Althoughthe targetpopulation was 200, 16 participians' survey wereerroneous,

30 participants out of 200 weredidn't exist at the schooland 5 out of 200 weredidn't want tojoin the study, therefore, studywas completedby149participants. Studentsfilled outthe questionnairesat the breaks.

Procedure

Demographic survey sheet which was prepared by researcher, include questions such as gender, class, age, body height, body weight, used to find demographic variables. International Physical Activity Questionnaire Short Form (IPAQ-S) which was performed in different countries by Craig et al (2003) used to evaluate physical activity. IPAQ-S Turkish validity and reliability was made by Öztürk (2005). The IPAQ-S asks participants to report activities performed for at least 10 minutes during the last 7 days. Respondents are asked to report time spent in physical activity performed across leisure time, work, domestic activities, and transport at each of 3 intensities: walking, moderate, and vigorous. Examples of activities that represent each intensity are provided; for example, participants are asked about vigorous activities such as "heavy lifting, digging, aerobics, or fast bicycling." Using the instrument's scoring protocol,(IPAQ research committee 2005) total weekly physical activity was estimated by weighting time spent in each activity intensity with its estimated metabolic equivalent (MET) energy expenditure.(Craig et al 2003, *IPAQ research committee 2005*). The IPAQ scoring protocol assigns the following MET values to walking, moderate, and vigorous intensity activity: 3.3 METs, 4.0 METs, and 8.0 METs, respectively.Calculations and classifications were made according todirectivesin the IPAQ research committee (2005)

Data Analysis

SPSS11.5statisticalanalysisprogram used to analyze data. One Way ANOVA used to compare differences between classes. T-test for independent samples used to compare differences between genders. Pearson correlation used to analyze relation between variables. Findings accepted at p<0,05 level.

RESULTS

Table 1. Comparison the descriptive variables of participants (ANOVA)

Variables	Class	N	X± Sd	F-value	P-value
Age (year)	1	40	18,8±0,7		
	2	34	20,7±0,7		
	3	35	22,4±0,7	222,271	0,001
	4	40	23,3±1		
	Total	149	21,3±1,9		
Body weight (Kg)	1	40	62,7±8,9		
	2	34	65,2±8,3		
	3	35	69,3±8,3	4,672	0,004
	4	40	68,3±8,3		
	Total	149	66,3±8,8		
Body height (cm)	1	40	170,8±7,1		
	2	34	169,6±7,3		
	3	35	168,9±8,8	0,361	0,782
	4	40	169,5±8,1		
	Total	149	169,7±7,8		
Body Mass Index(BMI) (kg/m^2)	1	40	21,4±2,1*		
	2	34	22,6±1,9**		
	3	35	24,2±1,5	17,647	0,001
	4	40	23,7±1,7		
	Total	149	22,9±2,1		
Total Physical Activity Score (FAP) (MET-dk/hf)	1	40	7341,9±3068,7***		
	2	34	5817,1±3039,2		
	3	35	5686,1±3605,3	16,811	0,001
	4	40	2780,1±1854,7****		
	Total	149	5380,3±3371,5		

*: Significant difference on favor of class1when compared with class 3 and4
**: Significant difference on favor of class 2. when compared with class 3
***: Significant difference on favor of class 1. when compared with the other classes
****: Significant difference against class 4. When compared with the other classes.

Comparison thedescriptivecharacteristicsandphysicalactivityscores (mean±standart deviation**)** of participants according to classeswere shownin Table 1. Descriptive findings showed that, totally 149 participants joined in to the study and their total average scores of BMI and PAL were 22,9±2,1 kg/m^{2}and 5380,3±3371,5 MET-dk/hf respectively. Also average BMI scores of classes 1,2,3 and 4 were; 21,4±2,1 kg/m^2, 22,6±1,9kg/m^2, 24,2±1,5kg/m^2, 23,7±1,7 kg/m^2 respectively. Beside average PAL of classes 1,2,3 and 4 were 7341,9±3068,7 MET-min/week, 5817,1±3039,2 MET-min/week, 5686,1±3605,3 MET-min/week,2780,1±1854,7 MET-min/week respectively. Average BMI scores of classes pointed that participants were normal in BMI classification (World Health Organisation 1995). In addition, PAL scores of classes showed that; class 1 was high, class 2, 3 and 4 were moderate in IPAQ classification (IPAQ research committee 2005).

ANOVA analysis proved that; there was statistically significant differences between classes according to BMI and PAL scores (p>0,05). Class 1 had statistically significantlowerBMIscores than the class 3 and 4. Besides class 2 had statistically significantlowerBMIscores than the class 3. Analysis also showed that class 4 had statistically significanthigherPALscoresthan the other classes (p>0,05).

Table 2.Correlation between PAL, BMI and CLASS

Variables		PAL	CLASS	BMI
PAL	r^2	1	-,479**	-,263**
	p	.	,000	,001
	N	149	149	149
CLASS	r^2	-,479**	1	,458**
	p	,000	.	,000
	N	149	149	149
BMI	r^2	-,263**	,458**	1
	p	,001	,000	.
	N	149	149	149

** Correlation is significant at p= 0.01 level

Correlation between PAL, CLASS and BMI was shown in Table 2. Pearson Correlation analysis proved that there was statistically significant correlation between variables. PAL had statistically negative correlation with CLASS and BMI found. This mean, while increasing PAL scores, CLASS and BMI scoreswere decreased. In addition there was statistically positive correlation between CLASS and BMI scores found. This mean while CLASS increasing, BMI scores were increased too.

Table 3. Comparison the BMI and PAL scores according to gender

	GENDER	N	X± Sd	t-value	p-value
BMI	Male	77	23,3±1,6	2,352	0,020
	Female	72	22,5±2,4		
PAL	Male	77	6475,6±3427,3	4,341	0,001
	Female	72	4209,1±2903,1		

T-test anlaysis results of comparison the BMI and PAL scores according to gender were shown in Table 3. Analysis proved that, there was statistically significant differences according to BMI and PAL scores between gender. Femaleshad statistically lower BMI scores than the males. Whereas other findings of analysis was that males had statistically higher PAL scores than the females.

DISCUSSION

The aim of this study was to investigate the Physical Activity Level of the Students who are study in the Department of the Physical Education and Sport Teacher. and to compare the PAL according to classes. At the end of the study it is found that there was statistically significant differenes between classes according to PAL. According to total average PAL score it is found that PEST students were highin PAL classification (5380,3±3371,5 MET-dk/hf). However it is found that classes 1, 2 and 3 were high (7341,9±3068,7 MET-min/wk, 5817,1±3039,2 MET- min/wk, 5686,1±3605,3 MET- min/wk respectively), but class 4 was moderate (2780,1±1854,7 MET-min/wk)according to PAL classification. There wasn't any research in the literature which was compare the physical activity leveles' of PEST students according to classes. After the new researhs' findings, recent findins can discuss. On the other hand past studies investigated differences the PAL between PEST students and other students. They found that PEST stuedents were physically more active than the other students (Tekkanat 2008, Tucel 2009). Although it wasan expected result, more studiesincluded comparisonsbetween the classesis needed.

Recent study found that PAL scores of males were statistically higher than the females.Similar findings detected in the literature.Özdöl (2010) found that male PEST students had higher PAL scores than the female PEST students but there wasn't any statistically significant difference between gender.However Savcı (2006) found that males had statistically higher PAL scores than the females who were study in the Department of Health.In addition Cengiz et al. (2007) found that male students were statistically more physically active than female students. Beside Bloemhoff (2010) reported that male university students are highly significantly more physically active than femalestudents .These findings support the recent findings but there is more findings about PEST student needed.

Another findings of this study was about the students' BMI scores. Analysis showed that according to average BMI scores $(22,9\pm2,1\mathrm{kg/m}^2)$, PEST students were normal in BMI classification (World Health Organisation 1995). Similar findingsreported by Özdöl (2010) that PEST students were normal in BMI classification. These result may cause of PEST students had physically active educational program. On the other side Savcı (2006) found that total BMI scores of students who were study in different departments were higher than $25\mathrm{kg/m}^2$.This finding may be prove that PEST students had more physically active curriculum.Total BMI scores when compared with gender, recent study showed that females had statistically lower BMI scores than the males.Similar findings reported by Savcı (2006) and Aslan (2007). These findings support the recent findings.

Recent study proved that there was statistically negative correlation with BMI and PAL (Table 2). It is possible to say that while increasing BMI scores, PAL scores were decreased or opposite.Similar results found by Hallal et al (2003), Andersen et al. (1998), Kimm et al. (2005). This findings may cause of the curriculum.But there was opposite findings in literature that there wasn't any correlation between BMI and PAL noticed by Aslan et al. (2007) and Raustorp et al.(2004). Beside recent study found that there was statistically positive correlation between CLASS and BMI. On this basis it is possible to say that while passing classes students became less physically active.This study was the first who compared such variables in literature. So that similar studies are needed to discuss the findings.

CONCLUSION

Study showed that by passing the classes students became more inactive. To finding the reason of this stiuation, new studiesshould perform. Nevertheless to keep PAL of students from the first class till the graduate, curriculum may revisedor students encourage to do exercise regularly.

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