Ovidius University Annals, Series Physical Education and Sport / SCIENCE, MOVEMENT AND HEALTH
Vol. XXI, ISSUE 2, 2021, Romania
The journal is indexed in: Ebsco, SPORTDiscus, INDEX COPERNICUS JOURNAL MASTER LIST,
DOAJ DIRECTORY OF OPEN ACCES JOURNALS, Caby, Gale Cengage Learning, Cabell's Directories

Science, Movement and Health, Vol. XXI, ISSUE 2, 2021
June 2021, 21 (2): 129 - 134
Original article

INVESTIGATION OF SOME PHYSICAL CHARACTERISTICS OF UNIVERSITY STUDENTS (WITH HEALTH REPORT) PARTICIPATING IN PHYSICAL EDUCATION SPORTS LESSONS AND INDIVIDUAL EXERCISES

EMRAH GÜNGÖREN[1], DCİPARKUL ABDYRAKHMANOVA[1], BİLAL DEMİRHAN[2], KANAT DZHANUZAKOV[1], EMİRHAN DEMİRHAN[2]

Abstract

Objective: This study was performed Kyrgyzstan-Turkey Manas University course in physical education in line with the curriculum and sports service course and a doctor's report by taking into account health problems for students who can not attend the classes included in the lessons with individual prepared therapeutic exercise college students to compare the physical properties. The research was conducted on 53 male and 44 female students who took physical education and sports service lessons and 16 male and 25 female students with a health report.

Methods: Students who took physical education and sports service lessons were given exercises within the framework of the physical education lesson plan, while individual exercises were made to the reported student group considering their health reasons. At the end of sixteen weeks, the subjects' body circumference measurements, skinfold thickness measurements, and BMI calculations were recorded, and the data obtained were evaluated in the SPSS 15 package program.

Results: As a result of the research, the average body fat percentage of female students with health reports were found to be lower than the other group ($p < 0.05$). BMI and body circumference measurements were found to be statistically similar ($p > 0.05$). There was no statistically significant difference between male students who took physical education and sports lessons and the students who were planned individual exercises according to their report status ($p > 0.05$).

Conclusions: As a result According to the results of our research data, it is concluded that even if there is a report from exercise activities due to regional health reasons, one should not stay away from exercise. In addition, it was concluded that individual exercise practices, which were planned in a way that would not pose a health risk, would reflect positive results in physical properties.

Key words: Exercise, anthropometry, body fat, BMI.

Introduction

The World Health Organization (WHO) has defined health not only as the absence of illness, but also as a state of complete physical, mental and social well-being (WHO, 2021). Many diseases such as muscular weakness, postural disorder, diabetes, especially obesity and cardiovascular diseases, which are described as one of the most important diseases of recent years, are more common in sedentary and sedentary individuals (Cox1 et al. 2001; Guo, et al. 1999).

Studies have reported that regular physical exercise is beneficial for mental illnesses as well as physical benefits (Raglin and Wilson, 2012; Warburton et al. 2006). In addition, it has long been recognized that physical exercise and stress are closely related (Klaperski et al. 2014).

It is possible for the exercise to be successful and to serve its purpose by planning and applying the programs in accordance with the purpose. In this sense, exercise protocols should be planned according to different age groups and gender specific (Kaplan, 2016; Günay et al, 2006), and according to the special circumstances and limitations of exercise participants.

In a study examining the effects of 12-week aerobic exercises on body profiles in women, it was reported that they had positive effects on body circumference measurements (Engelson et al. 2006). Another study found positive effects on the body fat percentage of women. (Gilliat-Wimberly et al. 2001). In addition, many studies have clearly demonstrated that body compositions are positively affected as a result of regular exercises (Amano et al. 2001; Chyu et al. 2013; Kaplan, 2016).

Physical education and sports courses are included in the curriculum as a compulsory course for all departments in some universities. However, it

[1] Kyrgyz Turkish Manas University, School of Physical Education and Sport, Bishkek, Kyrgyzstan
[2] Bartın University, Faculty of Sport Sciences, Bartın, Turkey
Email: bilaldemirhan55@gmail.com
Received 23.03.2021 / Accepted 18.05. 2021

is applied as an elective course in many universities. If the research is done in Kyrgyzstan Turkey Manas University, all students are required to take physical education and sports lessons. In case of failure, it is necessary to repeat a semester at school as in other compulsory courses. Students who have a health problem at a level that cannot take the course are reported by the doctor to be unable to actively participate in the course by stating the reason. In the university where the study was conducted, these students are subjected to physical education sports lessons planned with individual exercise models that will not affect or treat the health cause stated in the report.

This information is made in our research conducted in light of the direction of the curriculum Kyrgyzstan-Turkey Manas University course in physical education and sports service course and a doctor's report by taking into account health problems for students who can not attend the classes individually prepared treating of university students included in the exercise for the investigation of some physical properties.

Methods

Research Kyrgyzstan - Turkey Manas University, 2015 - 2016 fall semester of the academic year physical education classes and sports fields and health reporting is done on the students. 69 male and 69 female students between the ages of 17-26 were included in the study.

Data collection

Students who took physical education and sports service lessons were given exercises within the framework of the physical education lesson plan, while individual exercises were made to the report group of students considering their health reasons. Body circumference measurements, skinfold thickness measurements, and BMI calculations of the subjects were recorded at the end of sixteen weeks.

Measurement methods

Body weight of the participants was measured in a sensitive (Angel brand) scale up to 20 grams. Length measurements of the participants were measured with a Holtain sliding caliper with 1mm measuring range. Body circumference measurements were made with an anthropometric tape measure (Gulick Meter) with ± 1mm precision. Skinfold thickness were made with a Holtain brand caliper from the thigh measurements, Triceps, Abdominal, subscapula, Suprailiac chest regions with a precision of 0.2 mm (Heyward, 1991; Morrow et al. 1995). BMI values were calculated with the following formula using body weight and height- BMI Formula: BMI (kg / m2) = Body weight (kg) / Length (m^2).

Statistical analysis

Data Due to the fact that the data did not show a normal distribution, Student's t-test could not be fulfilled prerequisites. For this reason, taking into account the fact that individuals in different groups are different and independent from each other, the Mann Whitney u test, one of the non-parametric tests, was used to determine the difference between groups. The level of difference was taken as $p < 0.05$.

Results

The gender, physical education and sports class, and numerical distribution of the participating students are given in Table 1.

Table 1. Percentage distributions of students

Group	Gender	Frequency	%
Service Course Taking	Male	53	54,6
	Female	44	45,4
Service Course Taking	Male	16	39
	Female	25	61

As seen in Table 1, the students included in the study were 53 (54.6%) male students, 44 (45.4%) female students and 16 (39%) male and female 25 (39%) who did not participate in sports lessons. 61%).

Table 2. Demographic Characteristics of the Subjects (Men-Women)

Variable	Min.	Max.	Mean ± sd
Male (n = 69)			
Age	17	26	19,67±1,59
Body Weight	50	86	63,71±9,54

Height	164	189	174,42±5,51
Female (n = 69)			
Age	18	21	19,16±0,81
Body Weight	42	78	54,12±6,21
Height	150	178	162,22±6,56

The average age of male students was 19.67 ± 1.59, their average body weight was 63.71±9.54, and their height average was 174.42±5.51. On the other hand, female students have a mean of 19.16±0.81, their average body weight as 54.12±6.21, and their height average of 162.22±6.56.

Table 3. Environmental Measurement Values of Female Students Taking Service Course and Health Report

Variable	Group	n	Avg. Rank	Total Rank	Mean ± sd	Z	P
Shoulder cir.	Service Course Taking	44	37,51	1650,50	96,32±4,84	-1,380	,16
	Health Reporting	25	30,58	764,50	93,77±9,13		
Biceps cir.	Service Course Taking	44	38,55	1696,00	27,411±9,53	-1,948	,05
	Health Reporting	25	28,76	719,00	25,084±2,36		
Waist cir.	Service Course Taking	44	37,58	1653,50	76,355±6,53	-1,417	,15
	Health Reporting	25	30,46	761,50	74,496±9,82		
Hip cir.	Service Course Taking	44	34,55	1520,00	91,691±5,14	-,250	,80
	Health Reporting	25	35,80	895,00	92,060±5,75		
Chest cir.	Service Course Taking	44	34,94	1502,50	82,15±5,51	-,242	,80
	Health Reporting	25	33,74	843,50	79,70±13,80		
Thigh cir.	Service Course Taking	44	34,78	1495,50	49,65±4,39	-,153	,87
	Health Reporting	25	34,02	850,50	49,44±4,35		

p <0.05, Cir;Circumference

None of the body circumference measurements of the students who took physical education and sports lessons within the scope of the university curriculum and the female students who took the private lesson status were statistically significant between the two groups. There was no difference in the level (p <0.05).

Table 4. Environmental Measurement Values of Male Students Taking Service Course and Health Report

Variable	Group	n	Avg. Rank	Total Rank	Mean ± sd	Z	P
Shoulder cir.	Service Course Taking	53	34,20	1778,50	106,51±6,49	-,224	,82
	Health Reporting	16	35,47	567,50	107,14±4,64		
Biceps cir.	Service Course Taking	53	35,28	1870,00	28,16±2,77	-,213	,83
	Health Reporting	16	34,06	545,00	27,86±1,69		
Waist cir.	Service Course Taking	53	34,72	1840,00	76,66±7,04	-,213	,83
	Health Reporting	16	35,94	575,00	76,87±5,12		
Hip cir.	Service Course Taking	53	33,61	1781,50	87,28±10,81	-1,045	,29
	Health Reporting	16	39,59	633,50	90,04±3,72		
Chest cir.	Service Course Taking	53	34,80	1844,50	87,01±7,29	-,149	,88
	Health Reporting	16	35,66	570,50	87,14±4,75		
Thigh cir.	Service Course Taking	53	34,88	1848,50	49,76±6,72	-,092	,92
	Health Reporting	16	35,41	566,50	48,88±2,74		

p <0.05, Cir;Circumference

University courses in physical education and sports lesson, the students covered by the curriculum, reporting is tutoring status in the course, the male student body circumference measurements from a statistical point similar averages reflected (p <0.05).

Table 5: BMI and VYO Values of Female Students Taking Service Lessons and with Health Reports

BMI (kg /m^2)	Group	n	Avg. Rank	Tot. Rank	Mean±sd	Z	p
Male	Service Course Taking	53	36,02	1909,00	21,32±2,46	-,768	,442
	Health Reporting	16	31,63	506,00	20,61±1,38		
Women	Service Course Taking	44	38,33	1686,50	21,00±2,24	-1,830	,067
	Health Reporting	25	29,14	728,50	19,87±2,09		
Body Fat%							
Male	Service Course Taking	53	30,56	489,00	9,03±2,09	-1,010	,313
	Health Reporting	16	36,34	1926,00	10,32±3,80		
Women	Service Course Taking	44	26,10	652,50	12,34±4,99	-2,778	,005
	Health Reporting	25	40,06	1762,50	16,65±6,42		

p <0.05

Comparing the BMI values of the students taking physical education and sports lessons, while the BMI values of male and female students did not differ (p>0.05). Body fat percentages of male students were similar (p>0.05), body fat percentages of female students reflected significantly lower averages in physical education sports classes (p<0.05).

Discussion and Conclusion

In the study, it was aimed to examine the physical profiles of the students who participated in physical education and sports lessons with the students who participated in the physical education and sports lessons in order to ensure the mobility of the students with specially planned exercises without risking their health according to the report status.

Regular exercise must have certain standards in order to improve physical fitness. The American College of Sports Medicine (ACSM) stated that the exercise program must have certain qualities and quantities in order to improve physical fitness (Pollock, et all., 1988). In this context, planning personalized exercises is important in terms of being more effective.

Within the scope of the university curriculum, students who took physical education and sports lessons were reported and included in physical education and sports lessons with specially planned exercises, protecting their health according to their report status. Body circumference measurements (Shoulder, Biceps, Abdomen, Hip, Chest, Thigh) of female (table 3) and male (table 4) students included in these special exercise programs were found to be statistically similar in terms of circumference measurements of the students who actively participated in the lesson (p <0.05).

According to these results, the special (individual) exercise programs applied were interpreted as positive reflections of male and female students' body circumference measurements. As a matter of fact, they reflected similar results with students who attended regular classes. These results can be said to be an effective application method as well as the positive effects that occur in students included in the exercise program within the curriculum. Many studies have revealed the positive effects of regular exercises on body composition (Kafkas et all., 2009; Kurt, et all., 2010; Özenoğlu, et all., 2016)

While BMI values of male and female students did not differ in the comparison of BMI values of students taking physical education and sports lessons (p> 0.05). Body fat percentages of male students were similar (p> 0.05), body fat percentages of female students reflected low averages in those who participated in physical education sports lessons (p <0.05), (Table 3).

As can be understood from our findings, the averages of both groups were found to be at similar levels. These results suggest that special (individually) planned exercises for students with reports reflect positive effects like other exercise programs. As a matter of fact, positive reflections of regular exercises on body fat are reported in the literature (Kyle et al. 2006; Randsdell et al., 2004: Akbulut & Rakıcıoğlu, 2010; Uritani et al., 2013). There are many studies and studies indicating the positive harmony of BMI values with regular exercise (Askarabadi, Valizadeh & Daraei, 2012).
According to the results of the research data; There may be students reporting from the problems they experience in sports classes at universities. Kyrgyzstan Turkey Manas University has concluded that the reporting of the health status of students in special courses in curriculum taken into account participation in the planned compulsory treatment goal of zero defects exercise classes students may have a positive effect on physical wellbeing.

**This research manufactured from Kyrgyzstan Turkey Manas University, Physical Education and Sports School undergraduate graduation project (2016).*

References

Akbulut G, Rakıcıoğlu N, 2010, Evaluation of Anthropometric Measurements and Blood Lipids of Individuals Who Applied Diet Together with Physical Activity. J Nutr and Diet, 38 (1-2), 21-28.

Amano M, Kanda T, Ue H, Moritani T, 2001, Exercise training and autonomic nervous system activity in obese individuals. Med Sci Sports Exerc, 33 (8): 1287-91.

Askarabadi SH, Valizadeh R, Daraei F, 2012, The effects aerobic exercise on some pulmonary indexes, body composition, body fat distribution and VO2 max in normal and fat men of personal and members of faculty of Azad university Bebahan branch. Procedia - Social and Behavioral Sciences, 46: 3041-3045.

Chyu MC, Zhang Y, Brismée JM, Dagda R.,Y., Chaung, E., Von Bergen, V., et al., 2013, Effects of martial arts exercise on body composition, serum biomarkers and quality of life in overweight / obese premenopausal women: a pilot study. Clin Med Insights Womens Health, 11 (6): 55-65.

Cox, L.,C,, Burke, V., Morton, A.,R., 2001, Long-Term Effects of Exercise on Blood Pressure and Lipids in Healthy Woman Aged 40-65 Years: The Sedentary Women Exercise Adherence Trial (Sweat)", Journal of Hypertension,; 19 (10): 1733-1743.

Engelson ES, Agin D, Kenya S, Werber-Zion G, Luty, B., Albu, J.,B., Kotler, D.,P., 2006, Body composition and metabolic effects of a diet and exercise weight loss regimen on obese, HIV-infected women. Metabolism, 55 (10): 1327-36.

Gilliat-Wimberly M, Manore MM, Woolf K, Swan PD, Carroll SS, 2001, Effects of habitual physical activity on the resting metabolic rates and body compositions of women aged 35 to 50 years. J Am Diet Assoc., 101 (10): 1181-8.

Gunay M, Kara E, Cicioğlu İ, 2006, Endochronological Adaptations to Exercise and Training. Ankara: Gazi Publishing House.

Guo SS, Zeller C, Chumlea WC, 1999, Aging, Body Composition and Lifestyle: The Fels Longitudinal Study, Am. J. Clin. Nutr., 70 (3): 405-411,

Heyward VH, 1991, Advanced Fitness Assessment and Exercise Prescription, 2nd Ed., Champaign, IL, Human Kinetics Books, 1991: 142-183.

Kafkas ME, Karademir T, Açak M, 2009, The Effects of 12-Week Regular Aerobic And Resistance Exercises n The Body Composition of Middle-Aged Men And Women, Journal of Physical Education and Sport Sciences, 3 (3) 178-183

Kaplan DÖ, 2016, Evaluating The Effects of Aerobic Exercises To Body Composition Components And Anthropometric Measurements in Middle Age Women. Journal of Physical Education and Sport, 18 (3), 9-20.

Klaperski S, von Dawans B, Heinrichs M, Fuchs R, 2014, Effects of a 12-week endurance training program on the physiological response to psychosocial stress in men: a randomized controlled trial, J Behav Med, 37 (6) 1118-33.

Kurt S, Hazar S, İbiş S, Colonay B, Kurt Y, 2010, Evaluation of the effects of eight-week step-aerobic exercise program on some fitness parameters at middle aged sedentary women. International Journal of Human Sciences, 2010; 7(1): 665-674.

Kyle UG, Melzer K, Kayser B, Picard-Kossousky, M, Gremion G, Pichard C, 2006, Eight-year longitudinal changes in body composition in healthy swiss adults. J Am Coll Nurt., 25 (6): 493-501.

Morrow JR, Jackson AW, Disch JG, Mood DP, 1995, Measurement and Evaluation in Human Performance, Champaign, IL, Human Kinetics.

Özenoğlu A, Uzdil Z, Yüce S, 2016, The Effect of Exclusively Planned Exercise Program on Anthropometric Measurements and Body Composition in Women. Samsun Journal of Health Sciences, 1 (1); 1-10.

Pollock ML, Gaesser G, Butcher JD, Després, JP, Dishman RK, Franklin BA, Garber CE, 1998., The recommended quantity and quality of exercise for developing and maintaining cardiorespiratory and muscular fitness, and flexibility in healthy adults Medicine and science in sports and exercise, 30 (6); 975-991.

Raglin JS, Wilson M, 1996, State anxiety following 20 minutes of bicycle ergometer exercise at selected intensities. International Journal of Sports Medicine, 17 ; 467-471.

Ransdell LB, Robertson L, Ornes L, & Moyer-Mileur L, 2004, Generations exercising together to improve fitness (GET FIT): a pilot study designed to increase phsical activity and improve health- realeted fitness inthree generations of women. Women Health, 40 (3), 77-94.

Uritani D, Matsumoto D, Asano Y, Yoshizaki K, Nishida K, Shima M, 2013, Effects of regular exercise and nutritional guidance on body composition, blood pressure, muscle strength and health-related quality of life in community-dwelling Japanese women. Obesity Research & Clinical Practice, 7 (2);155-163.

Warburton D, Nicol C, Bredin S, 2006, Health benefits of physical activity: The evidence, Canadian Medical Association Journal, 174 (6); 801-809.

World Health Organization (WHO) 2021, Frequently asked questions (who.int) https://www.who.int/ / about / who-we-are / frequently-asked-questions (date: 11.04.2021 / time: 21: 00)