

The impact of athletics basic education on students' motor skills and attitude toward athletics

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Abstract

Background and Study Aim The aim of the study is to investigate the effects of basic athletics education on students' anthropometric measurements, motor skills and attitudes towards athletics.

Material and Methods 17 female and 17 male students from the faculty of sports sciences participated in the research, totally 34 students participated. Basic athletics education was given to the students for 14 weeks. Anthropometric measurements (body fat percentage, fat weight, muscle weight), motor skill tests (vertical jump, standing long jump, acceleration, sprint and change of direction) and Athletics Attitude Scale were applied as pre-test and post-test. Paired-Samples T-test and ANOVA test were used for in-group comparisons regarding the effect of education.

Results The analysis determined significant differences in the use of tools and fields. These differences were in favor of students who played team sports. In comparison, students who played individual sports or did not participate in any sports branch did not exhibit the same level of differences. When evaluated before and after the training, it was seen that there were significant differences in the sub-dimension of tool and field use in all students. When examining motoric and anthropometric values, several changes were observed in male students. These changes included positive shifts in fat percentage, fat weight, long jump, 10 m acceleration, 30 m sprint, and change of direction values. It was found that muscle weights and vertical jump performance values of female students changed significantly in a positive direction.

Conclusions As a result, it can be said that basic athletics training practices have a significant impact on students' attitudes towards athletics. This impact is particularly noticeable in the areas of tool and field utilization. Additionally, these training practices show positive effects, particularly for male students. These effects are observed in terms of improvements in motor skills and anthropometric measurements.

Keywords: anthropometry, athletics, attitude, physical education, speed

Introduction

Athletics, as one of the three main sports branches, holds significant importance in the development of basic movement skills [1]. This branch focuses on pushing the boundaries of movement and achieving high performance, which not only enhances athletic abilities but also improves motor skills [2]. The success in athletics relies heavily on the development of fundamental motor characteristics such as strength, endurance, and flexibility. In this sport, parameters like time, distance, and height are vital factors that determine the level of achievement [3].

The athletics branch incorporates practices that foster an environment conducive to the development of basic movement skills [4]. These training methods aim to enhance the functioning of the body, and they should be tailored to align with age and gender considerations. While the extent of performance improvement may vary across different sports branches, it is evident that all motor attributes have

an impact on performance within the framework of fundamental training [5]. Additionally, in order to integrate the athletics branch into educational curricula, it is crucial to cultivate positive attitudes towards education among students.

Morgan [6] suggests that attitudes formed during the critical period of 12-30 years old are unlikely to change significantly later on. The influence of attitudes on participation manifests in an increase in the number and quality of individuals engaged in athletics. This observation underscores the significance of the athletics branch, as the outcomes of its implementation have implications not only for performance but also for the psychosocial aspects [1].

When examining the literature, it becomes apparent that studies on basic education in athletics primarily focus on performance outcomes. Furthermore, the practices associated with children's athletics predominantly target younger age groups [5, 7, 8, 9]. Studies involving university students, on the other hand, cover various topics such as attitude towards sports [10, 11, 12], leisure time evaluation

[13], the impact of regular training [14], and exercise addiction [15]. In the sports sciences field, there is a lack of research that simultaneously evaluates attitudes towards athletics and performance parameters. The exception to this is studies that specifically choose university students as the sample group for assessing training.

The outputs of athletics should be evaluated not only in terms of performance athletes, but also in terms of social outputs, as it appeals to every individual. In addition, in order to ensure a lifelong sustainable participation in sports, physical activity in the age range in which the attitude is shaped is of great importance [16]. Conducting studies on university students in this age group is believed to contribute to their motor activity.

Furthermore, it is important to assess the influence of athletics practices on students studying in the field of sport sciences. These practices have positive effects on individuals during their developmental period or in the young age group. This assessment is important regardless of the specific sports branch they belong to or whether they actively participate in sports or not. It can help determine the content and functioning of the mandatory athletics course in the university curriculum. Based on this information, the objective of the study was to examine the alterations in university students' attitudes towards athletics and their performance characteristics in relation to athletics training.

Materials and Methods

The study was also presented as an oral presentation at the 5th International Health Sciences Congress of the Union of Thrace Universities.

Participants

The study involved 34 students who participated voluntarily. This group consisted of 17 females and 17 males. The female participants had a mean age of 19.94 ± 1.110 years, a mean body weight of 58.29 ± 11.601 kg, a mean body height of 166.33 ± 4.982 cm, and a mean BMI of 21.04 ± 4.034 . The male participants had a mean age of 20.38 ± 2.52 years, a mean body weight of 73.02 ± 9.38 kg, a mean body height of 178 ± 5.62 cm, and a mean BMI of 21.88 ± 2.18 .

Research Design

The study focused on implementing Athletics Basic Education. This program is a part of the 1st-year curriculum for Physical Education and Sports Teaching in the 2021-2022 academic year. The duration of the program was 14 weeks, following the academic calendar. The course covered specific disciplines including shot put, 100 m run, 800 m run, high jump, and long jump. On the first day of the autumn term, pre-test measurements and an attitude questionnaire were administered for the

14-week training program. The final measurements of the motor skill tests were conducted at the end of the 14th week (Table 1).

Table 1. Athletics Basic Training Course Content Applications by Weeks

Weeks	Athletics Basic Training Course Content Applications
1	Pre-test measurements of motor skills tests and application of attitude towards athletics scale questionnaire
2	Giving theoretical information about athletics branch
3	Technical teaching of shot put
4	Technical application of shot put
5	Technical teaching of long jump branch
6	Technical application of long jump branch
7	Midterm exams consisting of shot put, long jump and theoretical knowledge assessment
8	Teaching and practice of running drills
9	Exit wedge technical demonstration, 100 metres running times
10	High jump technical demonstration
11	High jump technique practice
12	Technical demonstration for corner runs, 800 metres running times
13	Repetition of the branches shown
14	Final exams consisting of 800 metres run, 100 metres run and high jump (Motor skills tests post-test measurements were taken on another day in the same week).

Data Collection Tools.

Body Fat Percentage - Fat and Muscle Weigh.

Measurements were obtained using the TANITA device. The TANITA device utilizes the technique called BIA (Bioelectrical Impedance Analysis) to analyze body composition.

Vertical Jump Test

The athlete follows a specific sequence of actions:

- The athlete begins by standing with their feet together on the ground.
- They extend their arms straight, reaching as high as possible with their fingertips.
- A mark is made to indicate the highest point reached by the athlete's fingertips.
- The athlete then turns 90° sideways, facing the board.
- Starting from a distance of 20 cm away from the board, the athlete assumes a squatting position.
- On the command, the athlete jumps vertically upwards.
- The distance between the initial mark and the

landing position is measured in centimeters.

- This process is repeated for three trials.
- The best score achieved among the three trials is recorded as the final score.

Standing Long Jump Test

The athlete follows a specific sequence of actions:

- The athlete begins by standing with their toes positioned behind a designated line.
- From this fixed position, the athlete assumes a squatting position.
- With maximal effort, the athlete performs a forward leap.
- The researcher records the distance between the last point of contact and mark left by the athlete's heel and the designated line.
- This process is repeated for three trials.
- The best score achieved among the three trials is recorded as the final score, representing the athlete's performance in the Standing Long Jump Test.

10 m Acceleration - 30 m Speed Test

A Newtest Powertimer photocell with a sensitivity of 0.01s was utilized for the test. Within the test area, exit lines were marked for the 10 and 30-meter distances, as well as arrival lines where the run concludes. Photocells were installed at these marked points to record the participants' times. Each participant was allowed two attempts in the tests, and the best times were considered as the final result. A suitable rest interval was provided between each test to ensure optimal performance.

Change of Direction (COD)

The test was conducted from the starting point of the track, with participants assuming a prone position, where their hands were aligned with their shoulders and in contact with the ground. The test employed a Newtest Powertimer photocell, which has a sensitivity of 0.01 seconds. The test consists of a 20-meter slalom run and a 40-meter straight run, with 180° rotation movements occurring every 10 meters. The central section of the test features three cones placed in a straight line, spaced 3.3 meters apart, with a width of 5 meters and a length of 10 meters. Each participant had two attempts in the test, and the best times in seconds were recorded and accepted as the final result.

Attitude towards Athletics Scale

The "Attitude Towards Athletics Scale," developed by Türksever Güngör, comprises two sub-dimensions [18]. When examining the reliability coefficient of the scale, the α coefficient for the total scale is .794. Specifically, the α coefficient is calculated as .761 for the factor of tendency to cover distance and .722 for the factor of willingness to use tools and fields. In the scale, items 2 and 14 were reverse coded. In our study, the reliability coefficient of the scale was calculated as Cronbach's Alpha .845.

Ethical Dimension of Research

Before measurements, all participants were provided with detailed information about the study, and they signed "Voluntary Consent Forms". After obtaining voluntary consent forms from the study participants, information about the scales used in the study was provided. To conduct the study, the necessary permissions were obtained from the Istanbul Esenyurt University Ethics Committee with decision number E-12483425-299-21670 dated September 12, 2022.

Statistical Analysis.

The data used in the study were analyzed using the IBM SPSS 23 software package. Descriptive information of the participants was presented in tabular form (Table 2). In order to assess the normal distribution of all variables, descriptive statistics were analyzed, including kurtosis and skewness coefficients. The results indicated that all variables exhibited a normal distribution, as observed in Figure 1a and Figure 1b. Paired-Samples T test and ANOVA test were employed for within-group pre-test and post-test comparisons to assess the impact of the training. The significance level was set at $p < 0.05$.

Table 2. Frequency and percentage distributions of demographic characteristics of students

Features	Categories	f	%
Gender	Female	17	50
	Male	17	50
Age Group	18-19	12	35.3
	20-21	22	64.7
Licensed Athlete	Yes	9	26.5
	No	25	73.5
Graduated School	Anatolian High School	26	76.5
	Other High Schools	8	23.5
Branch	Individual Sports	9	26.5
	Team Sports	14	41.2
	No Branch	11	32.4
Total		34	100

Results

The anthropometric characteristics and motor performance of male and female students before and after training are shown in Table 3 and Table 4.

The anthropometric and motor performance values of male students before and after athletics basic training are presented in Table 3. The findings indicate that athletics basic training resulted in a significant increase in fat percentage, fat weight, standing long jump, 10 m acceleration, 30 m sprint, and change of direction values. While there was

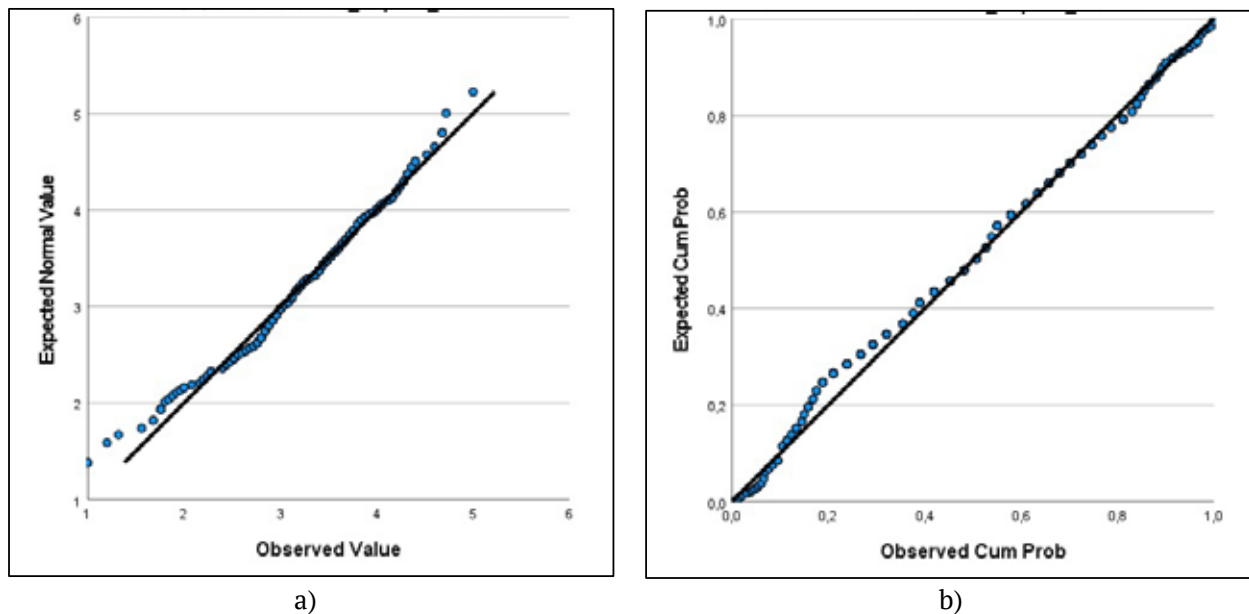


Figure 1. Normal Distribution Graphs of Variables (a) P-P Plot Graph; (b) Q-Q Plot Graph.

Table 3. Comparison of anthropometric characteristics and motor performance of male students before and after training

Parameters	N	Pre- Test, M $\pm$ SD	Post- Test, M $\pm$ SD	t	p
Fat Percentage (%)	17	13.90 $\pm$ 4.624	11.43 $\pm$ 3.997	4.035	.001*
Fat Weight (kg)		10.53 $\pm$ 4.350	8.37 $\pm$ 3.696	3.899	.001*
Muscle Weight (kg)		59.03 $\pm$ 6.280	59.59 $\pm$ 6.219	1.118	.281
Vertical Jump (cm)		42.75 $\pm$ 5.994	45.56 $\pm$ 4.016	-1.921	.074
Standing Long Jump (cm)		209.88 $\pm$ 21.525	216.75 $\pm$ 16.197	-2.666	.018*
10 m (s)		2.04 $\pm$.105	1.96 $\pm$.130	2.190	.045*
30 m (s)		4.72 $\pm$.201	4.58 $\pm$.197	3.403	.004*
COD (s)		17.90 $\pm$.862	17.47 $\pm$.770	-3.250	.005*

*p<0.05

Table 4. Comparison of anthropometric characteristics and motor performance of female students before and after training

Parameters	N	Pre- Test, M $\pm$ SD	Post- Test, M $\pm$ SD	t	p
Fat Percentage (%)	17	24.38 $\pm$ 4.687	23.32 $\pm$ 7.982	-.686	.502
Fat Weight (kg)		15.81 $\pm$ 5.783	14.53 $\pm$ 8.280	-.910	.375
Muscle Weight (kg)		41.56 $\pm$ 3.815	43.99 $\pm$ 2.705	-3.280	.004*
Vertical Jump (cm)		32.61 $\pm$ 3.852	35.28 $\pm$ 6.115	-3.266	.005*
Standing Long Jump (cm)		148.72 $\pm$ 19.754	154.78 $\pm$ 22.712	-1.997	.062
10 m (s)		2.38 $\pm$.190	2.36 $\pm$.227	.566	.579
30 m (s)		5.92 $\pm$.626	5.76 $\pm$.584	-1.722	.103
COD (s)		19.56 $\pm$ 1.306	19.13 $\pm$ 1.694	1.603	.127

*p<0.05

improvement in muscle weight and vertical jump values, the changes were not statistically significant ($p>0.05$).

The anthropometric and motor performance values of female students before and after athletics basic training are presented in Table 4. The results revealed that athletics basic training led to a significant increase in muscle weight and vertical jump values. However, while there was improvement in fat percentage, fat weight, standing long jump, 10 m acceleration, 30 m sprint, and change of direction values, the changes were not statistically significant ($p>0.05$).

According to the analyses, the attitudes of university students towards athletics are shown in Table 5.

The scores of the university students on the sub-factors of the Attitude Towards Athletics Scale are presented in Table 5.

Table 6 displays the analysis results, illustrating the differentiation of university students' attitudes towards athletics in both general and sub-dimensions based on gender.

When examining Table 6, it is observed that there is no significant difference in the sub-factor of covering distance based on the gender variable within the overall scale dimension. The analysis of the pre-test and post-test data also reveals

no difference. Based on these findings, it can be concluded that university students' attitudes towards athletics, both in general and across sub-dimensions, do not vary based on gender.

Table 7 presents the analysis results, demonstrating the differentiation of university students' attitudes towards athletics, in both general and sub-dimensions, based on the age variable.

When examining Table 7, it becomes evident that there is no significant difference in the sub-factor of covering distance based on the age variable within the overall scale dimension. Moreover, upon analyzing the pre-test and post-test data, no difference is observed. Therefore, based on the findings, it can be concluded that university students' attitudes towards athletics, both in general and across sub-dimensions, do not vary according to age.

Table 8 presents the analysis results. The table illustrates the changes in university students' attitudes towards athletics, considering both the general dimension and sub-dimensions. These changes are based on whether the students are licensed athletes or not.

When analyzing Table 8, it is observed that there is no significant difference in the sub-factor of distance covering between students who are licensed athletes and those who are not. This finding applies to both the sub-dimension of the use

Table 5. Descriptive statistics of university students' attitudes towards athletics

Parameters	N	Minimum	Maximum	$\bar{x}$	SD
Covering Distance	34	3.00	5.00	3.93	.51
Tool and Field Use	34	1.80	5.00	3.76	.73
Total Scale Score	34	2.79	5.00	3.87	.50
Total	34	7.59	15.00	11.56	17.4

Table 6. The results of university students' attitudes towards athletics according to their gender

Tests	Attitudes	Gender	N	$\bar{x}$	SD	t	sd	p
Pre-Test	Covering Distance	Female	17	4.04	.48	1.194	32	.241
		Male	17	3.83	.54			
	Tool and Field Use	Female	17	3.86	.71	.794	32	.433
		Male	17	3.66	.76			
	Total Scale Score	Female	17	3.97	.51	1.206	32	.237
		Male	17	3.76	.49			
Post-Test	Covering Distance	Female	17	3.81	.51	.927	32	.361
		Male	17	3.95	.39			
	Tool and Field Use	Female	17	3.39	.55	.448	32	.657
		Male	17	3.46	.34			
	Total Scale Score	Female	17	3.66	.45	.870	32	.391
		Male	17	3.78	.33			

$\bar{x}$ - mean; SD - standard deviation; sd - standard error

Table 7. Results of the difference between university students' attitudes towards athletics according to age variable

Tests	Attitudes	Age	N	$\bar{x}$	SD	t	sd	p
Pre-Test	Covering Distance	18-19	12	3.91	.47	-.225	32	.824
		20-21	22	3.95	.55			
	Tool and Field Use	18-19	12	3.48	.82	-1.669	32	.105
		20-21	22	3.91	.65			
	Total Scale Score	18-19	12	3.76	.45	-.995	32	.327
		20-21	22	3.94	.53			
Post-Test	Covering Distance	18-19	12	3.81	.52	-.728	32	.472
		20-21	22	3.92	.42			
	Tool and Field Use	18-19	12	3.32	.67	-1.016	32	.317
		20-21	22	3.48	.28			
	Total Scale Score	18-19	12	3.63	.51	-.959	32	.345
		20-21	22	3.77	.31			

$\bar{x}$ - mean; SD - standard deviation; sd - standard error

Table 8. The results of the difference between university students' attitudes towards athletics according to being a licensed athlete

Tests	Attitudes	Licensed Athlete	N	$\bar{x}$	SD	t	sd	P
Pre-Test	Covering Distance	Yes	9	4.09	.53	1.034	32	.309
		No	25	3.88	.51			
	Tool and Field Use	Yes	9	3.79	.53	.089	32	.929
		No	25	3.75	.80			
	Total Scale Score	Yes	9	3.97	.40	.723	32	.475
		No	25	3.83	.54			
Post-Test	Covering Distance	Yes	9	3.81	.41	-.518	32	.608
		No	25	3.91	.47			
	Tool and Field Use	Yes	9	3.58	.39	1.198	32	.240
		No	25	3.37	.47			
	Total Scale Score	Yes	9	3.73	.36	.850	32	.919
		No	25	3.71	.41			

$\bar{x}$ - mean; SD - standard deviation; sd - standard error

of tools and field, as well as the overall score of the scale. Additionally, when analyzing the pre-test and post-test data, no differences are found. Based on these findings, it can be concluded that university students' attitudes towards athletics, both in general and across sub-dimensions, do not vary depending on their status as licensed athletes.

Table 9 presents the analysis results, demonstrating the differentiation of university students' attitudes towards athletics, in both general and sub-dimensions, based on the type of high school they graduated from.

When analyzing Table 9, it is observed that there is no significant difference in the sub-factor of distance covering based on the type of high school from which the students graduated. This finding applies to both the sub-dimension of the use of

tools and field, as well as the total score of the scale within the overall scale dimension. Additionally, when analyzing the pre-test and post-test data, no differences are found. Based on these findings, it can be concluded that university students' attitudes towards athletics, both in general and across sub-dimensions, do not vary according to the type of high school they graduated from.

Table 10 displays the analysis results, which illustrate the differentiation of university students' attitudes towards athletics. The differentiation is observed in both the general dimension and sub-dimensions, and it is based on the sport category.

Upon examining Table 10, it is observed that there is no significant difference in the total score of the scale. In contrast, the analysis revealed that students involved in team sports had higher mean

Table 9. Results of the difference between university students' attitudes towards athletics according to the type of high school graduated

Tests	Attitudes	High School Type	N	$\bar{x}$	SD	t	sd	p
Pre-Test	Covering Distance	Anatolian High School	26	3.91	.51	-.406	32	.687
		Other High Schools	8	4.00	.57			
	Tool and Field Use	Anatolian High School	26	3.73	.74	-.399	32	.693
		Other High Schools	8	3.85	.72			
	Total Scale Score	Anatolian High School	26	3.85	.48	-.475	32	.638
		Other High Schools	8	3.95	.58			
Post-Test	Covering Distance	Anatolian High School	26	3.85	.47	-.406	32	-.639
		Other High Schools	8	3.97	.38			
	Tool and Field Use	Anatolian High School	26	3.41	.49	-.399	32	-.362
		Other High Schools	8	3.48	.30			
	Total Scale Score	Anatolian High School	26	3.70	.43	-.475	32	-.621
		Other High Schools	8	3.79	.23			

$\bar{x}$ - mean; SD - standard deviation; sd - standard error

Table 10. Results of the difference between university students' attitudes towards athletics according to sport category

Tests	Attitudes	Sport Category	N	$\bar{x}$	SD	Squares Total	Squares Mean	F (33/2)	p
Pre-Test	Covering Distance	Individual Sports	9	3.91	.51	.236	.118 .274	.431	.654
		Team Sports	14	3.86	.53	8.483			
		No Branch	11	4.05	.53	8.719			
	Tool and Field Use	Individual Sports	9	3.67	.66	3.672	1.836 .449	4.091	.026*
		Team Sports	14	3.46	.73	13.911			
		No Branch	11	4.22	.59	17.582			
	Total Scale Score	Individual Sports	9	3.83	.46	.993	.496 .236	2.108	.139
		Team Sports	14	3.71	.47	7.301			
		No Branch	11	4.11	.52	8.294			
Post-Test	Covering Distance	Individual Sports	9	4.04	.41	.296	.148 .207	.714	.498
		Team Sports	14	3.82	.49	6.419			
		No Branch	11	3.84	.43	6.715			
	Tool and Field Use	Individual Sports	9	3.49	.25	.987	.494 .187	2.641	.087
		Team Sports	14	3.57	.40	5.794			
		No Branch	11	3.18	.57	6.781			
	Total Scale Score	Individual Sports	9	3.84	.30	.282	.141 .155	.908	.414
		Team Sports	14	3.73	.41	4.809			
		No Branch	11	3.60	.44	5.091			

* $p < 0.05$; $\bar{x}$ - mean; SD - standard deviation; sd - standard error

scores compared to students involved in individual sports or those who did not participate in any sports. This difference was particularly evident in the sub-dimension of tool and field use.

When analyzing the post-test data, no differences are observed. Based on the findings, it was determined that the attitudes of university students towards athletics, both in general and in

the sub-dimension of distance covering, did not differ according to the category of sports branches. However, there was a difference observed in the sub-dimension of tool and field use.

When the pre-test and post-test mean attitude scores of the university students participating in the study are compared in Table 11, it is seen that the mean pre-test scores are statistically higher than

Table 11. Pre-test and post-test paired samples t test statistical analysis of university students' attitudes towards athletics

Attitudes	N	$\bar{x}$	SD	t	p
Covering Distance	34	3.93	.51	.524	.604
		3.88	.45		
Tool and Field Use		3.76	.73	2.217	.034*
		3.42	.45		
Total Score Scale		3.87	.50	1.587	.122
		3.72	.39		

*p<0.05

the mean post-test scores in the sub-dimension of tool and field use.

Discussion

In the anthropometric and motor skill tests, the impact of the 14-week athletics basic training was observed. It was found that the training had a significant effect on various parameters, such as fat percentage, fat weight, standing long jump, 10 m sprint, 30 m sprint, and change of direction (COD) values for male students. Similarly, for female students, there were significant changes in muscle weight and vertical jump values ($p<0.05$). In terms of the attitudes of the students towards athletics, it was found that the use of tool and field from the sub-dimensions varied significantly in all of the students. The parameter of the use of tool and field differs among students engaged in individual sports, team sports, and non-sports. It is observed that the values of students involved in team sports show significant differences ($p<0.05$).

In our study, no statistically significant difference was found when analyzing the attitudes of students from the Faculty of Sport Sciences towards athletics, considering the gender parameter. However, it is worth noting that Ulukan et al. [19], in contrast to the findings of our study, examined the attitudes of athletes towards sports and found that women had higher scores than men.

In other studies on attitudes, various findings were reported by different researchers in the attitudes of secondary school students towards physical education and sport. Türkmen et al. [11] found higher mean scores among university students. Yıldırım et al. [20] found higher mean scores among high school students. Varol et al. [12] found higher mean scores among Bartın University students. Tomik et al. [21] found higher mean scores among young people's attitudes towards physical activity and sport. On the other hand, Kaya-Sarıdede [22] and Singh and Devi [23] found that boys had higher mean scores than girls. The reason for the difference between the results of our study and the results of this research in the literature may be the difference in sampling. It can be thought that the

fact that our research group consisted of students from the faculty of sport sciences and that most of the group had an active branch may be the reason why there was no gender difference in the attitude towards athletics.

A similar result was found when the attitude towards athletics was examined according to the age parameter. In parallel with the result of our study, Kalfa [10] concluded that there was no difference according to the age variable in his research on the examination of the attitudes of dentistry faculty students towards sports.

In a study with different results, Ulukan et al. [19] reported that the attitude towards sport scores of 15-year-old athletes were higher than those of athletes in the 17 and over age category. This difference may be due to the fact that individuals have the same opinion at the point of attitude with the effect of maturation with increasing age. The fact that there is no difference in the results of such studies conducted on university students with individuals of almost the same age group, and that there is a difference in studies conducted on team or individual athletes with different age groups can be explained by this idea.

As a result of our study, it was revealed that the variable of being a licensed athlete did not create a statistically significant difference on the attitude towards athletics. In contrast to our study, Dereceli [17] discovered that the attitudes of students towards physical education differed based on their status as licensed athletes or not. Dereceli's research specifically focused on female students studying at İmam-Hatip high school and Hazar [24] examined students in secondary education. In both studies, it was observed that the mean attitudes of licensed athletes were higher than those of unlicensed athletes. It can be said that the reason for this difference is due to the sample group. In addition, when we look at the attitude scales applied, it is known that there is a difference between the scales even though the main theme is sport. On the other hand, the fact that physical education courses are not compulsory in high school and secondary education, as well as the compulsory athletics course

at the university may have caused these differences.

In our study, we examined the attitudes of students from the faculty of sport sciences towards athletics based on the type of high school they graduated from. The results showed no statistically significant difference in attitudes among different high school types. This finding is consistent with the results reported by Çelik and Pular [25], who also found no difference in attitudes based on high school type. However, in contrast to these findings, Duman et al. [26] concluded that attitudes of Anatolian and sports high school students towards physical education and sports varied based on the school type variable. They found that sports high school students had higher attitude scores compared to Anatolian high school students.

The significant difference observed in this study is likely due to the composition of one of the two types of high schools compared. This particular high school consists of students from a sports high school, who receive extensive training and education in sports-related subjects. Moreover, the students in this high school lead an active sports life and participate in a greater number of practice and theory courses related to sports.

When the attitudes of our sample group towards athletics were analyzed according to the sport branch variable, it was determined that students engaged in team sports had higher attitude scores. Specifically, they scored higher in the sub-dimension of equipment and field use compared to students engaged in individual sports and those who did not have a specific sports branch. This finding aligns with a study conducted by Atasoy and Şahinler [27] in the literature, where they reported that boxing athletes had higher attitude scores compared to karate and wrestling athletes.

In addition to attitude, the effects of training on performance were also evaluated in our study. Studies investigating the effects of athletics basic training on the motor performance of sport sciences faculty students were not found in the literature. Generally, people in this sample group were subjected to comparisons according to their sporting and non-sporting status [14]. However, a similar study to ours, which involved providing basic athletics training to different sample groups categorized by age, branch, etc., reported significant improvements in the learning of movement skills among children who received regular basic athletics training [28]. In another study, Bayazıt et al. [29] studied children with educable intellectual disabilities and examined the effect of fun athletics exercises on motor characteristics by using "Observation Form for Motor Behaviour Change" and "Fun Athletics Skill Test". At the end of 8 weeks of training, statistically significant improvements were observed in both paired and unmatched groups, while no improvement was observed in

the control group. On the other hand, they found a significant increase in motor skill behaviour change in the paired group.

Demir and Yüksel [8] applied a children's athletics programme to children aged 10-12 years for 12 weeks and found significant changes in flexibility, single leg balance, push-ups, and sit-ups. In a study examining the effect of fun athletics activities on psychomotor development in children aged 11-14 years, an athletics track was set up with exercises such as forward somersault, jumping over the obstacle, passing under the obstacle, and double foot jumping. In this track, the participants worked on the track for 8 weeks and at the end of the study, significant differences were obtained between the pre-test and post-test scores of the participants [9].

Çalık et al. [5] applied IAAF children's athletics training to secondary school students for 14 weeks. As a result of the training, they found that it contributed positively to the physical fitness parameters of middle school children. Petros et al. [30], who applied the same training to 11-12-year-old children, found that at the end of 12 weeks, students in the IAAF Kids Athletics group improved perceived effort and desire to continue doing athletics more than students in the other group. It also occurred for most of the physical fitness and activity performance variables. As a result, they concluded that the IAAF Child Athletics programme can motivate primary school students to learn athletics by helping them to realise the importance of this sport and also help them to improve their physical fitness and athletics performance.

Abhaydev et al. [7] aimed to investigate the effects of a 12-week IAAF Kids Athletics programme on the psychological and motor conditioning skills of sedentary school-going children. In line with their aim, they applied the programme to 40 children aged between 10 and 14 years and reported that this training can be considered as an effective programme to improve psychological skills as well as motor skills in sedentary children attending school.

Seyrek et al. [31] found that 8-week kidsathletic practices positively affected 1000m running performance in children. The researchers also suggested that aerobic endurance can be improved by continuous loading, fartlek, and interval type training as well as play-style training such as children's athletics.

In many similar studies, it has been reported that child athletics training or practices cause improvement in physical performance or fitness parameters [32, 33, 34, 35]. Although the sample group of these studies is predominantly children, the exercises included in the applied trainings overlap with the training content we used in our study. From this point of view, it can be said that training with athletics content on different age groups has a positive effect on performance.

Although there are no other studies on the results of athletics basic training in the literature, there are studies examining the effects on some performance parameters as a result of basic training practices of different branches in different sample groups. Eskiyecek et al. [36] applied a training programme including 5 basic components (passing, shooting, penalty, lay-up, V-fold shooting) to a total of 32 students aged 14-16 years for 2 days a week (60 min/day) for 8 weeks to develop basic motor skills in korfbal. At the end of the study, it was determined that the training programme had positive effects on these 5 basic skills of the students. Polat [37] applied badminton basic training for 12 weeks to 9-12 age group athletes who were new to badminton sport, and at the end of the study, it was determined that the motor performances of the athletes who were subjected to the training programme were positively affected. Güneş et al. [38] revealed that the balance, flexibility, endurance, and quickness performances of 8-10 years old children who received 8-week (3 days/week) alpine discipline basic ski training changed positively at the end of the training. Aladağ [39] conducted a study on children aged 8-10 years who participated in the basic training applied in individual and team sports and provided a training including gymnastics, volleyball, and basketball branches for 8 weeks. At the end of the program, flexibility, strength, balance, and coordination characteristics of children engaged in individual sports improved more than children engaged in team sports and this improvement was found to be statistically significant. Ertetik [40] applied basic basketball training to children aged 9-10 years for 12 weeks and at the end of the study, significant improvements and differences were found in the parameters of flexibility, standing long jump, 30m sprint, 30sec shuttle, agility, and anaerobic power as well as height and body weight.

According to Haslofça [41], the regular repetition and application of programs that include multi-

directional movement training such as running, jumping, throwing, jumping, etc. in different ways and regularly repeated and applied in the game make significant contributions to the psychomotor development of children. On the other hand, movement training practices including balance, agility and coordination play an important role in teaching branch-specific techniques in all sports branches and in gaining and developing movement skills [42]. The content of the athletics training applied in our study also includes such exercises. When the results obtained are examined, it is seen that they partially support the literature.

Conclusions

As a result, since staying physically active primarily depends on physical activity and attitude towards sports, it is thought that encouraging the branches that individuals enjoy in athletics will be effective. Considering the development of parameters related to motor skills, it is thought that the athletics branches that young people will practice during the university period are of great importance for lifelong participation in sports. In addition, it is believed that incorporating athletics basic education, which contributes to both physical and psychomotor development, into the curriculum should not be limited to sports science faculties. If it is taught in various departments, it can have a positive impact on the multidimensional development of students.

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Conflict of interest

The authors declare no conflict of interest.

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