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Analysis of Individual Sports Athletes' Self Effectiveness and Levels of Competence between 13- 18 Years According to Some Variables

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Abstract: This study aims to analyze individual sports athletes' self-effectiveness and levels of competence according to some variables such as age, educational status, sports age and branch. The study is conducted in Ankara and İzmir provinces. 80 box, 75 wrestling, 45 weight lifting athletes participated in the study, 200 athletes in total. As data collection tools, "Personal Information Form" and "Self-Efficacy Scale" adapted into Turkish by Gözüm and Aksayan in 1999, which had been developed by Sherer and his friends in 1982. Data set has been analyzed with SPSS 20.0 packaged program and in the statistical analysis; t test for paired comparison, and for multiple comparisons Anova (One-way Variance Analysis) have been used. According to branches, it is determined that box, wrestling and weight lifters' "Start of Act, Maintaining the Act and Completing the Act" subgroup score averages are extremely close and the difference between them is insignificant ($p>0,05$); but it is stated that there is a significant difference in terms of "Struggling with Obstacles". When it is analyzed according to the educational status, it is seen that primary education and secondary school graduated athletes' self-effectiveness and competence levels' score averages' difference is insignificant ($p<0,05$). Only in subgroup of the scale was found to have a significant difference between the two age groups in the subscale of Act Completion ($p<0,05$). It is determined that there is a significant difference in completing the act in countenance of primary education learners. When the results about athletes' sports age and total scores analyzed, it is determined that there is not a significant difference ($p>0,05$). According to age, self-effectiveness and competence levels' score averages of athletes between 13-15 years old has no significant difference between those who are older than 15 years old ($p>0,05$). It is stated that there is a significant difference between two age groups in the subgroups of the scale. These subgroups are Completing the Act ($p<0,05$) and Struggle with Obstacles ($p<0,05$). These differences are seen to be in countenance of 13-15 years old group. It is seen that age is not effective in athletes' self-effectiveness and competence. In other words, it can be said that sports age's being more or less is not important. Apart from that, it has been found that there is significant difference in sub-dimensions of Struggle with Obstacles according to branch; completing the Act according to educational status; both Completing the Act and Struggle with Obstacles according to age. It is determined that primary education learners and 13-15 years old individuals are more effective in struggling with obstacles and completing the act.
Keywords: Athlete, Self-Effectiveness-Competence, Individual Sports, Act.

INTRODUCTION

The concept of Self-Effectiveness-Competence (ÖEY) was first introduced by the famous psychologist Albert Bandura in 1977 within the scope of "Cognitive Behavioral Change". A strong sense of individual competence was considered to be associated with better health, higher success and more social integration [1]. Competence means having the necessary knowledge, skills, and attitudes to play a role, having the expected role in the expected quantity and quality of the worker, and having the necessary knowledge and skills to make an action [2]. Self-effectiveness has the consequences

of choosing a workplace voluntarily, feeling a great deal of motivation to achieve it, making efforts and spending time on it. Self-effectiveness refers only to a specific area or group of behaviors. In other words, for example, an individual may have developed a low self-effectiveness belief in another area, for example playing soccer, while learning any language, such as second language, has a high self-effectiveness belief [3].

One of the factors that affect the athletes' winning sports achievements is their belief in competence [4]. Since self-effectiveness is a strong determinant of the performance and achievement level of the athlete, it is crucial against their rivals to the competitions that are the most important process for the athletes due to the fact that the terminal behaviors of the athletes are realized through the acquired skills [5]. The way to develop a self-effectiveness perception of the individual is to provide physical development, reduce the stress level, reduce the negative emotional tendency, and correct misinterpretations of the body condition [6]. In this sense, it can be said that it is an important variable affecting their thoughts, motivations, and performances in the competition process [4]. According to Korkmaz [12], the self-effectiveness perception is influential in the individual's expectation of success or failure in a particular task. It may be said that it is effective in the winnings of athletes with high self-effectiveness. Another factor influencing the competency expectancy is the positive and negative feedbacks (messages) that the individual receives from the interaction. For example, there is an increase in self-effectiveness expectancies when one is persuasively defended to have the skills required by the task [8].

Self-Effectiveness-Competence is not the same with unrealistic optimism and dreams. On the contrary, it is based on empiricism, does not lead to unreasonable risk taking, and leads to aggressive behavior by improving the individual's abilities. It allows the individual to assess their own abilities and capacity in a more objective way[1]. Individuals with high self-effectiveness expectations are willing to approach their learning activities, make more effort and using more effective strategies for a long time against difficulties. These individuals perform better than those with low expectations [9]. In the light of this information, the aim of this study is to examine the self-effectiveness perceptions of the athletes who perform individual sports between ages 13-18.

From this point of view, the purpose of this research is to examine the self-effectiveness-competence levels of the individual athletes aged 13- 18 according to some variables and determine the relation between them.

METHOD

Sample Group

The sample group consists of 200 male athletes doing sports in individual branches (weightlifting, wrestling and boxing) between 2016-2017 in Ankara and İzmir provinces. The athletes have voluntarily participated.

Data Collection Tool

Self-effectiveness scale form was used as data collection inventory in the study. The scale consists of 2 parts. In the primary personal information form, there are questions about athletes (age, education level, branch and sports age). In the secondary, there are questions of Self-Effectiveness-Competence. The gathered data was obtained by the Self-Effectiveness Scale developed by Sherer et al. in 1982 and adapted to Turkish by Gözüm and Aksayan in 1999 [10].

Self-Effectiveness-Competence Scale

The reliability and validity of the Turkish version of the Self-Effectiveness-Competence Inventory, developed by Sherer et al. in 1982 and adapted to Turkish by Gözüm and Aksayan in 1999, were found to be Cronbach's alpha internal consistency coefficient of .81 and test-retest reliability of .92 for the same sample. Self-effectiveness-competence scale (SECS) is a 5-item Likert type self-assessment scale. On a 23-item scale, it is expected to be marked one of the options given for each item; 1- "does not define me at all", 2- "defines me a bit", 3- "undecided", 4- "defines me well", 5- "defines me very well". The score given for each item is taken as basis. However, 2,4,5,6,7,10,11,12,14,16,17,18,20,22. The materials take points in the opposite direction. Thus, at least 23, 115 points can be taken from the scale. The high score on the scale indicates that the individual's SEC perception is at a good level. Your scale has four sub-factors. These are: 1. Starting behavior: 2,11,12,14,17,18,20,22. 2. Continuing the behavior: 4,5,6,7,10,16,19. 3. Completion of the behavior: 3,8,9,15,23. 4. The struggle with obstacles: 1,13,21. [10].

ANALYSİS OF DATA

The obtained data were analyzed in the SPSS 20.0 package program. In the context of the analysis, t test was used in binary comparisons and Anova (One-way variance analysis) test was used for multiple comparisons.

FINDINGS

In this section, the answers given by the athletes and the scores they got are explained and interpreted statistically.

Demographic Features

Table-1: Athletes' Ages According to Demographic Features

Ages of the Participants	n	%
15 and less than 15 years old	77	38,5
Over 15 years old	123	61,5
Total	200	100,0

Figure 1. %38,5 of the athletes is 15 and less than 15 years old, %61,5 of them is over 15 years old.

Table-2. Athletes' Gender According to Demographic Features

Gender of the Participants	**Frequency**	**Percent**
Male	200	100,0
Female	0	0

Figure 2. %100,0 of the participants is male.

Table-3: Athletes' Level of Education According to Demographic Features

	N	**%**
Primary Education	52	26,0
Secondary Education	148	74,0
Total	200	100,0

Figure 3. %26,0 of the athletes has primary education, %74,0 of the athletes has secondary education.

Table-4. Athletes' Branches According to Demographic Features

	N	%
Box	80	40,0
Wrestling	75	37,5
Weightlifting	45	22,5
Total	200	100,0

Figure 4. %40,0 of the athletes does box, %37 does wrestling, %22,5 of them do weightlifting.

Table 5. Athletes' Sports Age According to Demographic Features

Sports Age	**N**	**%**
1-2 years	83	41,5
3-4 years	70	35,0
5 years and over	47	23,5
Total	200	100,0

Figure 5. %76,5 of the athletes do sports for less than 5 years, %23,5 of them does sports for 5 years and over.

Table-6: Athletes' Total and Subgroup Score Averages from Self-Effectiveness-Competence Scale

	Minimum	Maximum	Range	x	SD
Starting Behavior (SB)	21,00	40,00	19,00	30,4100	4,02154
Continuing Behavior (CB)	13,00	35,00	22,00	26,8650	4,57509
Completion of Behavior (COB)	8,00	25,00	17,00	18,9750	3,65254
Struggle with Obstacles (SO)	3,00	15,00	12,00	10,1950	2,68945
TOTAL	63,00	111,00	48,00	86,4450	10,28230

(N=200)

In table 6, it is seen that the athletes' SEC scale total score average is X=86,44, starting behavior (SB) is X=30,41, continuing behavior (CB) is X=28,86, completion of the behavior (COB) is X=18,97, and struggle with obstacles (SO) is X=10,19 in subgroups.

One-way variance analysis results (Table 8) about the athletes' Self-Effectiveness-Competence Scale (SECS) total scores (Table 7) and subgroup score averages according to branches is given below.

Table-7: **Athletes' ANOVA Results about SEC Scale Total Scores According to Branches**

	Sum of Squares	SD	Average of Squares	F	p
Inter Group	231,876	2	115,938	1,098	,336
Intra Group	20807,519	197	105,622		
Total	21039,395	199			

When one-way ANOVA results about sports branches and total scores were analyzed, it was found that there was no significant differentiation (F (2, 199) = ,296 p > .05).

Table-8. Athletes' SEC Scale Total and Subgroup Score Averages According to Branches

	Box N=80	Wrestling N=75	Weightlifting N=45	F	p
Starting Behavior (DB)	30,44±3,80	30,70±4,36	29,89±3,84	,563	,570
Continuing Behavior (DS)	27,56±4,64	26,53±4,91	26,18±3,73	1,645	,196
Completion of Behavior (DT)	19,00±3,92	18,64±3,75	19,49±2,94	,761	,469
Struggle with Obstacles (EM)	10,76±2,77	9,75±2,81	9,9±2,15	3,100	,047
TOTAL (SEC)	87,76±11,44	85,61±10,22	85,49±7,88	1,098	,336

(N: 200)

In table 8, it is determined that box, wrestling, and weightlifting groups' SEC scale and Starting Behavior (SB), Continuing Behavior (CB), Completion of Behavior (COB) subgroups score averages are too close and the difference between them is insignificant (p>0,05); but in terms of struggle with obstacles scores, it is determined that there is a significant difference.

T-test results (Table 12) about the athletes' Self-Effectiveness-Competence Scale (SECS) Total (Table 9) and Subgroup Score Averages according to level of education are given below.

Table-9:**Participants' SEC Scale Total Score T-test Results According to the Level of Education**

Level of Education	N	Average	SD	t	SD	p
Primary Education	52	87,33	10,89	,718	198	,474
Secondary Education	148	86,14	10,080			

Table-10: **Participants' SEC Scale Scores According to Level of Education**

	Primary Education N=52	Secondary Education N=148	t	p
	X±SD	X±SD		
Starting Behavior (DB)	30,60±4,55	30,34±3,83	,387	,69
Continuing Behavior (DS)	26,46±5,61	27,00±4,16	-,738	,461
Completion of Behavior (DT)	19,85±2,45	19,67±3,95	2,015	,045
Struggle with Obstacles (EM)	10,42±2,71	10,11±2,68	,710	,479
TOTAL (SEC)	87,33±10,89	86,14±10,08	,718	,474

In table 10, athletes' who have primary education SEC score average is 87,33, the ones' who have secondary education is 85,14 but it is seen that the difference is insignificant (t (198) = ,718, p > 0,05). A significant difference between these two age groups was found only in Completion of Behavior (COB) subgroup in subgroups of the scale (t (198) = 2,015, p<0,05).

One-way variance analysis results (Table 12) about the athletes' Self-Effectiveness-Competence Scale (SECS) total scores (Table 11) and subgroup score averages according to sports age is given below.

Table-11: **Athletes' ANOVA Results about SEC Scale Total Scores According to Sports Age**

	Sum of Squares	SD	Average of Squares	F	p
Inter Group	62,944	2	31,472	,296	,744
Intra Group	20976,451	197	106,479		
Total	21039,395	199			

Table-12: **Athletes' Total and Subgroup Score Averages from SEC Scale According to Sports Age**

	1-2 years N=83	3-4 years N=70	5 years and over N=47	F	p
Starting Behavior (SB)	30,08±4,18	30,59±4,22	30,72±3,44	,479	,620
Continuing Behavior (CB)	26,84±5,35	27,04±3,94	26,64±4,03	,111	,895
Completion of Behavior (COB)	18,53±3,78	18,90±3,36	19,87±3,74	2,071	,129
Struggle with Obstacles (SO)	10,42±2,29	10,00±2,82	10,09±3,13	,516	,598
TOTAL (SEC)	85,88±12,03	86,53±7,93	87,32±10,19	,296	,744

(N: 200)

When one-way ANOVA results about sports age and total scores were analyzed, it was found that there was no significant differentiation (F (2, 199) = ,296 p > .05).

T-test results about athletes' Self-Effectiveness-Competence Scale Total (Table 13) and Subgroup Score Averages (Table 14) are given below.

Table-13: **Participants' SEC Scale Total Score T-test Results According to Age**

Level of Education	N	Average	SD	t	SD	p
13-15 years	77	88,09	10,90	1,801	198	,073
15 years and over	123	85,41	9,77			

Table-14: **Participants' SEC Scale Score According to Age**

	13-15 years N=77	15 Years and over N=123	t	p
	X±SD	X±SD		
Starting Behavior (SB)	30,71±4,39	30,22±3,78	,846	,399
Continuing Behavior (CB)	26,81±5,35	26,90±4,04	-,146	,884
Completion of Behavior (COB)	19,89±2,78	18,40±4,01	2,87	,005
Struggle with Obstacles (SO)	10,67±2,74	9,89±2,62	2,01	,045
TOTAL (SEC)	88,09±10,90	85,41±9,78	,718	,073

In Table 14, the athletes' between aged 13-15 SEC score average is 87,33, and the athletes' who are 15 years old is 85,14; but it is seen that the difference is insignificant (t (198) = 1,801, p > 0,05). It is determined that in subgroups of the scale, there is a significant difference between these two age groups. These subgroups are the sub factors; Completion of Behavior (COB) (t (198) = 2,87, p<0,05), and Struggle with Obstacles (SO) (t (198) = 2,01, p<0,05).

DISCUSSION AND RESULT

Based on the findings obtained in this study, comparisons and debates about results of some studies related to the subject of the research were given.

When statistically examined between sports branches and self-efficacy, it was found that there was no significant difference (p> 0.05). When the literature is examined, there are some studies that argue that there is no significant difference between self-efficacy and sports branches [11, 12]. It overlaps with our work. In this study, it was determined that the branches which participants were engaged in had no effect on the self-efficacy levels. From the point of view of the obtained findings, self-efficacy is thought to be of no great importance in terms of branches.

It was determined that boxing, wrestlers and weightlifter groups' SEC scale and Starting Behavior (SB), Continuing Behavior (CB), and Completion of Behavior (COB) subgroup score averages was too close to each other but there was a significant difference in terms of Struggle with Obstacles. In terms of the findings obtained by Hutz et al., [11], the self-efficacy was not very important in terms of branches and in a study conducted on police academy students, Şanlı [13] reported that sports branch had no effect on self-efficacy level. It overlaps with our study, and it is determined that there is a significant difference in terms of Struggle with Obstacles (SO) scores in self-efficacy

subgroups. These studies are in parallel with our study. In this presented study, although it was established that participants' branches had no effect on self-efficacy level, it was seen that candidates dealing with individual sports in Struggle with Obstacles were denser. It can be argued that candidates dealing with individual sports have only their own skills and abilities in order to be successful in the sporting struggle.

When the self-efficacy scale of primary school graduates and secondary school graduates were analyzed statistically, it was found that there was no significant difference($p> 0,05$). The only Completion of Behavior (COB) was found to have a significant difference between the two age groups in terms of subscales of the scale ($p <0,05$). When Yiğitbaş and Yetkin [1]'s the mean scores of the self-efficacy-competence level of the health college students with the scores of ÖEY scale and sub-groups were compared according to their self-efficacy-competence levels; it was determined that the difference between SB, CB and SO and total SEC scores was not significant ($p> 0.05$), but there was significant difference in Completion of Behavior (COB) ($P <0.01$) This conducted study supports our study. Even if the candidates dealing with individual sports' level of education is different, continuing the struggle and being successful may originate this situation.

When the one-way ANOVA results of the sports age and total scores were examined, it was found that there was no significant difference ($p> .05$). When literature is examined, no studies examining the self-efficacy levels of the athletes according to the sports year have been found. Since self-efficacy is an important factor in sports, we think that each individual should have high self-competence in order to be able to succeed even if they are doing sports for how many years.

It is seen that the difference between the athletes in the ages of 13-15 and the ones over the age of 15 self-efficacies is insignificant ($p> 0.05$). In the subgroups of the scale, it was found that there was a significant difference between these two age groups. These subgroups are of Completion of Behavior (COB), ($p <0,05$) and Struggle with Obstacles (SO) ($p <0,05$). In a similar study conducted by Yılmaz *et al*. [14], there was no significant relationship between the age and self-efficacy level. In different studies, the result is that the level of general self-efficacy does not differ significantly according to age [12]. Although it supports our study, this is in contrast to the findings we have made in some of the studies that have made a meaningful difference in the Completion of Behavior and the Struggle with Obstacles in the subgroups of the Scale [14]. However, when the literature is examined, it is not found that there are too many studies examining the self-efficacy subscale of the athletes according to age range. In this study, while it is seen that there is no significant difference according to age variable, it is significant in the subscale group. It can be said that it is related to life experiences of athletes in different age groups.

According to the results of the study, the results of self-efficacy-competence levels of the athletes performing sports between the ages of 13 and 18 show that there is no significant difference between the self-efficacy levels of the athletes and that there is a significant level of self-efficacy-competence between the sub-dimensions.

SUGGESTIONS

- This research was conducted on individual athletes. In subsequent studies, the population and the sample can be expanded. The results of the investigations can be compared by conducting similar studies.
- It is recommended that researchers go around a broader and more comprehensive way with similar studies.
- As studies on gender, age, experience and education level, marital status, sports branch etc are insufficient and necessary studies should be done.
- Studies about sports and self-efficacy-competence should be done, studies conducted in this subject should be easy to access and all segments should reach.
- Self-efficacy in sport and other studies should be made with coaches and specialists in order to have a high competence score**.**

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