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Investigation of the Perceived Coaching Behaviors by the Karate Athletes in Turkey

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ABSTRACT
The purpose this study is to analyses the behavior styles of the coaches' effect on athletes who participated in Turkish cadet, junior and U21 Karate Championship in 2019. The sample of the study was 49.8 % male (n: 103) and 50.2 % female (n: 104) participants who are randomly selected among national players at the Championship. In the research, "Coaching Behavior Scale for Sport" is used as a data collection tool. The relations between the coaching behavior and socio-demographic characteristics are tested with exploratory factor analysis ANOVA and Independent Sample t-test. The results of this study have shown that there is significant relation with gender, age, competition group, engaged sports year and engaged coach, while there is no significant relation between coaching behavior and competition category. While age, competition groups, engaged sports year, engaged club year, engaged coach year variables have a positive and significant effect on positive coach behavior, and gender has a positive and significant effect on technical skills. In conclusion, trainers should improve their knowledge and skills in areas such as physical training, technical skills, mental preparation, target setting and competition strategy. Athletes may develop positive behaviors towards coaches who develop their skills in these areas.

1. Introduction

Nowadays, coach behaviors and competence are important factors affecting sport pleasure and performance development. Athletes and coaches are highly dependent on each other and the interaction between them has always been a determining factor in performance (Toros and Duvan, 2011). The basis of sports is the relationship between athletes and coaches. Behavioral dimensions between both sides are very complex and need to be controlled. For this reason, it is very important to analyses and evaluate whether the coaches that can cause different social and psychological effects on the athlete have the necessary knowledge and behavioral sufficiency in this field.

Coaching is a complex and interactive process involving many factors. This interaction process occurs by showing the coach's behaviors such as training, supporting and rewarding The training behaviors of a coach describe how to improve the athlete's performance, to master a skill or technique, to learn the tactics of a particular branch, to structure and coordinate the activities. Supportive behaviors of the coach mean that the coach is ready to provide social support to the athlete. On the other hand, rewarding behaviors mean that the coach recognizes and rewards the athlete's effort, development and good performance (Chelladurai, 1990). Coaches are role models for every level of athletes, and they have great potential to influence them (Bailey, 2002). The tough competition in the elite level requires the athletes to train for a longer time and to spend more time with their coaches. Regardless of the

competition categories and levels, coaches are both role models among athletes with their words, actions, attitudes and behaviors, and main figures revealing the potential of athletes (Mesquita, Sobrinho and Rosado, 2008). Therefore, coaches affect not only the athletic performance of athletes but also their social and emotional well-being. Coaches must have knowledge of the technical, tactical and educational processes of sport for that reason. This enables athletes to advance their desires, wishes and expectations in a good direction and contribute to the realization of their dreams (Duda and Ballaguer, 2007).

Coaches need to undertake various tasks such as annual periodization training, planning of unit training, managerial tasks, learning skills of athletes and carrying out the mentoring process of athletes (Lyle and Cushion, 2013). The senior management of clubs expects their coaches to demonstrate these skills effectively and. The ability of coaches to meet these important expectations is one of the most important factors that directly affect the success of the athletes and the team both in the evaluation of their coaching performance (Mallett and Cote, 2006). Therefore, no matter how talented an athlete or a team's athletes are, if they are not properly guided and their sportive aspects such as technical and tactical are not developed, success cannot be achieved. For a long-term success, all athletes need a coach. A trainer is a person who guides the athletes according to their abilities by combining their theoretical knowledge and experiences and leads them (Dogan, 2004).

2. Literature Review

The first studies with coach behaviors started with Tharp and Gallimore (1976), who emphasized the teaching roles of coaching, by examining the training activities of the teacher and basketball coach John Wooden. The studies where they observed that the researchers gave the instructions to the athletes. They coded their behaviors using "Coaching Behavior Recording Form" most about what they needed to do and how to do it (50.3%), and secondly, the motivational instructions to play aggressive play (12.7%) were accepted as a turning point for the research of coach behaviors (Cote, Yardley, Hay, Sedgwick and Baker, 1999).

There are many studies related to coach behaviour in the existing literature. Studies have shown that coaching has positive effects on individual learning (Graßmann, Schölmerich and Schermuly, 2019; Athanasopoulou and Dopson, 2018; Bozer and Jones, 2018; Blackman, Moscardo and Gray, 2016). Also terms like athlete burnout (Cho, Choi and Kim, 2019; Chyi, Lu, Wang, Hsu, Chang 2018), basic psychological needs (Cropley, Thelwell, Mallett and Dieffenbach, 2019), athlete satisfaction (Jowett and Arthur, 2019), goal orientation (Kavussanu and Al-Yaaribi, 2019), self-efficacy (Atkinson, Short and Martin, 2018), competition anxiety (Cho, Choi and Kim, 2019), group competence (Konter, Beckmann and Loughead, 2019) have taken their place in the literature. Many studies in the literature showed that the most important factor in the success of athletes is hidden in coaching (Vargas-Tonsing, Warners and Feltz, 2003). Assessment of coaching behaviour is important in terms of assessing the athlete-coach relationship and guiding this relationship in a positive way(Cote, Yardley, Hay, Sedgwick and Baker, 1999). Thus, coaching behaviour styles are very important for the success of athletes in karate which needs strong psychological improvements and requires high level of performance. Therefore, the purpose of this study is to analyse the behaviour styles of the coaches' effect on athletes who participated in Turkish cadet, junior and U21 Karate Championship in 2019.

3. Method

Coaching Behaviors stay at the center of the research model. This study aims to investigate whether coaching behavior is affected by socio-demographic characteristics. Seven different socio-demographic characteristic variables were used in the study.

The following hypothesis is proposed:

H_1 Gender has a positive and significant effect on Coaching Behavior.
H_2 Age has a positive and significant effect on Coaching Behavior.
H_3 Competition group has a positive and significant effect on Coaching Behavior.
H_4 Competition category has a positive and significant effect on Coaching Behavior.
H_5 Engaged sports year has a positive and significant effect on Coaching Behavior.
H_6 Engaged club year has a positive and significant effect on Coaching Behavior.
H_7 Engaged coach year has a positive and significant effect on Coaching Behavior.

3.1. Participants

The research universe was determined as only karate athletes and coaches. Hence, the improbable sampling method was chosen as the favourable method. The sample of this study consisted of 207 players selected by random selection method among 800 cadets, junior and U21 karate players who are competing at the Turkish cadet, junior and U21 Karate Championship in 2019. 49.8% (n = 103) of the participants were male, 50.2% (n = 104) were female. The largest age group was 16-17 years with 37.2% (n = 77); and 36,7% (n=76) of participants competed in the Kata and 63.3% (n=131) of participants competed in the Kumite. Among participants, 50.7 (n=105) the group of juniors were the most dominant in terms of tournament categories. Moreover, when we focus on the sports career in karate players, 5-6 years is the largest group with 40.6% (n=84), 31,9% (n=66) of the players have been competed as the same club player and 31.9% (n=66) of the players have been worked with some trainers.

3.2. Materials

The survey is consisting of 47 items and demographic variables to karate players in cadet, junior and U21 participating in the Turkish Championship. Descriptive survey method is preferred to analyses the behavior styles of the coaches of athletes.

After Turkish Karate Federation approval, karate players were informed about the objectives and use of the information. Thanks to the players who voluntarily participated questionnaire, a total of 207 responses were preserved for analysis.

3.3. Measurement

In the research, “Turkish version of Coaching Behavior Scale for Sport (CBS-S)” which is adopted by Yapar and Ince (2014); “is used as data collection tool in the research. The original version of the scale consists of 47 items and 7 sub-dimensions. Six sub-dimensions of the scale consisted of positive personal understanding dimensions and one sub-dimension consisted of negative personal understanding dimensions. Positive personal understanding includes 1) physical training and planning, 2) technical skills, 3) mental preparation, 4) target setting, 5) competition strategy”, 6) positive coach behavior; while 7) negative coach behavior dimension includes coach leave negative impression on athlete. The scale is evaluated on a 7-point Likert scale ranging from 1 (never) to 7 (always).

3.4. Data Analysis

In this study, Coaching Behavior Scale for Sport consists of 47 items in 7 dimensions. The measurement model was designed with the Coaching Behavior Scale for Sports analysis of variables such as gender, age, competition

group, competition category, engaged sports year, engaged club year, engaged coach year. Testing the measurement model consists of two basic phases.

The first one is exploratory factor analysis and it is aimed to determine whether the variables are related to the model. The second consisted of ANOVA and Independent Sample t-test, which were conducted to determine the relatively important factors affecting some of the demographic variables on Coaching Behavior Scale for Sport.

4. Results

In Table 1, the combined reliability of all indicators was found to be above the recommended threshold of 0.70 (from 0.706 to 0.841), indicating that the measures in this research are valid and reliable.

Table 1. Factor Analysis for Eligibility of Scale Sub-dimensions for Evaluating Coach Behaviour for Athletes

Physical Training and Planning	Kaiser-Mayer-Olkin Measure of Sampling Adequacy		,736
	Barlett Test	Approx. Chi-Square	185,199
		Sd	10
		Sig	,000
Technical Skills	Kaiser-Mayer-Olkin Measure of Sampling Adequacy		,804
	Barlett Test	Approx. Chi-Square	212,191
		Sd	15
		Sig	,000
Mental Preparation	Kaiser-Mayer-Olkin Measure of Sampling Adequacy		,807
	Barlett Test	Approx. Chi-Square	269,687
		Sd	10
		Sig	,000
Target Setting	Kaiser-Mayer-Olkin Measure of Sampling Adequacy		,838
	Barlett Test	Approx. Chi-Square	337,609
		Sd	15
		Sig	,000
Competition Strategy	Kaiser-Mayer-Olkin Measure of Sampling Adequacy		,841
	Barlett Test	Approx. Chi-Square	336,603
		Sd	15
		Sig	,000
Positive Coach Behaviour	Kaiser-Mayer-Olkin Measure of Sampling Adequacy		,706
	Barlett Test	Approx. Chi-Square	184,592
		Sd	6
		Sig	,000
Negative Coach Behaviour	Kaiser-Mayer-Olkin Measure of Sampling Adequacy		,821
	Barlett Test	Approx. Chi-Square	418,386
		Sd	10
		Sig	,000

The validity and reliability of the scale were examined by exploratory factor analysis. Reflective scales were used for all variables as Kleijnen, Ruyter and Wetzels [23] studies. To evaluate the psychometric properties of the measurement instruments by SPSS; a null model without any structural relationship was calculated. The results suggest that the factor loadings of variables were greater than 0.564 and significant ($p < 0.05$). For all measurements, Cronbach's alpha values are above the threshold value of 0,70.

Table 2. Factor Loads, Variance and Cronbach Alpha Values of Scale Sub-dimensions for Assessment Coach

Behaviour for Athletes

Factor	Variable	Variable Loads	Variance explanation %	Cronbach Alpha (α)
Physical Training and Planning (PTP)	PTP-1	,739	46,818	0,714
	PTP-2	,791		
	PTP-3	,626		
	PTP-4	,641		
	PTP-5	,606		
Technical Skills (TS)	TS-1	,569	43,262	0,735
	TS-2	,746		
	TS-3	,701		
	TS-4	,677		
	TS-5	,620		
	TS-6	,617		
Mental Preparation (MP)	MP -1	,693	54,255	0,787
	MP -2	,761		
	MP -3	,791		
	MP -4	,783		
	MP -5	,644		
Target Setting (TS)	TS-1	,697	51,088	0,808
	TS-2	,731		
	TS-3	,729		
	TS-4	,748		
	TS-5	,689		
	TS-6	,692		
Competition Strategy (CS)	CS-1	,729	51,103	0,806
	CS-2	,748		
	CS-3	,772		
	CS-4	,718		
	CS-5	,628		
	CS-6	,686		
Positive Coach Behaviour (PCB)	PCB -1	,564	55,474	0,725
	PCB -2	,809		
	PCB -3	,822		
	PCB-4	,755		
Negative Coach Behaviour (NCB)	NCB-1	,766	60,938	0,836
	NCB-2	,853		
	NCB-3	,862		
	NCB-4	,812		
	NCB-5	,575		

*4.1. Hypothesis **Tests***

The data obtained as a result of testing the hypothesis "Gender has a positive and significant effect on Coaching Behaviour" is summarized in Table 3.

Table 3: Independent Sample T-Test according to the gender of the Athletes

	Gender	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Physical Training/	Male	103	5,6660	1,00757	-1,351	205	0,178

Planning	Female	104	5,8322	,74322	-	187,601	
Technical Skills	Male	103	5,6414	,82218	-1,964	**205**	**0,049**
	Female	104	5,8558	,75473		203,164	
Mental Preparation	Male	103	5,7684	1,85953	-0,028	205	0,978
	Female	104	5,7740	,89822		146,823	
Target Setting	Male	103	5,5623	,93874	-1,243	205	0,215
	Female	104	5,7212	,90021		204,456	
Competition	Male	103	5,6922	,94404	-0,552	205	0,582
Strategy	Female	104	5,7612	,85261		202,498	
Positive Coach	Male	103	4,8835	1,23660	-1,355	205	0,177
Behaviour	Female	104	5,1186	1,25947		204,985	
Negative Coach	Male	103	2,8816	1,58657	0,162	205	0,871
Behaviour	Female	104	2,8462	1,54825		204,761	

As shown in Table 3, significant differences were observed between gender and technical skills among 7 sub-dimensions. There are significant differences in male-only in terms of technical skills. Statistically, the factors related to the technical skills sub-dimension of male athletes were higher than women.

The data obtained as a result of testing the hypothesis "age has a positive and significant effect on Coaching Behaviour" is summarized in Table 4.

Table 4. One-way ANOVA analysis according to the age of the Athletes

	Age	**N**	**Mean**	**Std. Deviation**	**F**	**Sig**
Physical Training/ Planning	14-15	40	5,4900	1,22784	**2,885**	**,047**
	16-17	77	5,6831	,92756		
	18-19	62	5,9347	,52850		
	20-21	28	5,8929	,74333		
	Total	207	5,7495	,88645		
Technical Skills	14-15	40	5,7292	,99549	,357	,784
	16-17	77	5,7229	,81003		
	18-19	62	5,8317	,57765		
	20-21	28	5,6667	,87017		
	Total	207	5,7491	,79439		
Mental Preparation	14-15	40	5,7787	2,89679	,377	,769
	16-17	77	5,6571	,95082		
	18-19	62	5,9210	,52577		
	20-21	28	5,7429	,87239		
	Total	207	5,7713	1,45449		

Target Setting	14-15	40	5,4708	1,27315	1,001	,393
	16-17	77	5,6039	,91728		
	18-19	62	5,7823	,70037		
	20-21	28	5,6815	,74606		
	Total	207	5,6421	,92080		
Competition Strategy	14-15	40	5,6875	1,21786	1,083	,357
	16-17	77	5,6199	,89002		
	18-19	62	5,8909	,58338		
	20-21	28	5,7143	,95458		
	Total	207	5,7269	,89774		
Positive Coach Behaviour	14-15	40	4,7875	1,52915	1,466	,225
	16-17	77	4,9643	1,28357		
	18-19	62	4,9973	1,06141		
	20-21	28	5,4196	1,05859		
	Total	207	5,0016	1,25067		
Negative Coach Behaviour	14-15	40	3,0800	1,48897	1,108	,347
	16-17	77	3,0130	1,65826		
	18-19	62	2,6516	1,36799		
	20-21	28	2,6143	1,78465		
	Total	207	2,8638	1,56372		

As shown in Table 4, significant differences were observed between age and physical training and planning among 7 sub-dimensions. There are significant differences in the 16-17 age group only in terms of physical training and planning. Statistically, the factors related to the physical training and planning sub-dimension of athletes who were in the 16-17 age group were higher than with any other age groups.

The data obtained as a result of testing the hypothesis "competition group has a positive and significant effect on Coaching Behaviour" is summarized in Table 5.

Table 5. Independent Sample T-Test according to the competition group of the Athletes

	Group	**N**	**Mean**	**Std. Deviation**	**t**	**df**	**Sig. (2-tailed)**
Physical Training/ Planning	Kata	76	5,8204	,76290	,876	205	,382
	Kumite	131	5,7084	,95120		184,641	
Technical Skills	Kata	76	5,7421	,62331	-,096	205	,923
	Kumite	131	5,7532	,88079		196,940	
Mental Preparation	Kata	76	5,8487	,70380	,582	205	,561
	Kumite	131	5,7263	1,74957		187,368	
Target Setting	Kata	76	5,6798	,82855	,448	205	,655

	Kumite	131	5,6202	,97271		177,441	
Competition	Kata	76	5,7522	,65177	,308	205	,758
Strategy	Kumite	131	5,7122	1,01560		202,873	
Positive Coach	Kata	76	4,8059	1,17728	1,996	**205**	**,048**
Behaviour	Kumite	131	5,1151	1,28204		167,860	
Negative Coach	Kata	76	2,7763	1,38216	-,612	205	,541
Behaviour	Kumite	131	2,9145	1,66300		180,449	

Only the positive behaviours of the participants differ statistically significantly according to the competition group. Positive coach behaviour is higher in Kumite than Kata.

The data obtained as a result of testing the hypothesis "competition category has a positive and significant effect on Coaching Behaviour" is summarized in Table 6.

Table 6. One-way ANOVA analysis according to the competition category of the Athletes

	Category	**N**	**Mean**	**Std. Deviation**	**F**	**sign**
Physical Training/ Planning	Cadet	40	5,6876	,86644	1,163	,315
	Junior	77	5,6842	1,16399		
	U21	62	5,8898	,71098		
	Total	207	5,7495	,88645		
Technical Skills	Cadet	40	5,6873	,68512	,843	,432
	Junior	77	5,8772	1,08959		
	U21	28	5,7745	,75790		
	Total	207	5,7491	,79439		
Mental Preparation	Cadet	40	5,6314	,87611	1,319	,270
	Junior	77	6,0671	2,88918		
	U21	28	5,8250	,81221		
	Total	207	5,7713	1,45449		
Target Setting	Cadet	40	5,6429	,83795	,023	,977
	Junior	77	5,6667	1,27048		
	U21	28	5,6263	,81528		
	Total	207	5,6421	,92080		
Competition Strategy	Cadet	40	5,6863	,79089	,248	,780
	Junior	77	5,7982	1,21808		
	U21	28	5,7510	,85143		
	Total	207	5,7269	,89774		
Positive Coach	Cadet	40	4,9381	1,13710		

Behaviour	Junior	77	5,0329	1,64314	,295	
	U21	28	5,0872	1,17462		,745
	Total	207	5,0016	1,25067		
	Cadet	40	2,8914	1,58625	,674	
Negative Coach	Junior	77	3,0632	1,58104		,511
Behaviour	U21	28	2,7000	1,52357		
	Total	207	2,8638	1,56372		

According to the table above, there is no significant difference between the sub-dimensions of Coaching Behaviour Assessment and the competition category.

The data obtained as a result of testing the hypothesis "engaged sports year of the athletes has a positive and significant effect on Coaching Behaviour" is summarized in Table 7.

Table 7. One-way ANOVA analysis according to the engaged sport year of the Athletes

	Engaged Sport Year/s		Mean	Std. Deviation	F	sign
Physical Training/ Planning	1-2	6	5,0750	1,33068	1,726	,146
	3-4		5,5769	,98521		
	5-6	4	5,8214	,77740		
	7-8	5	5,7445	,88311		
	9+	4	5,8706	,91437		
	Total	07	5,7495	,88645		
Technical Skills	1-2	6	5,2083	1,05315	1,601	,175
	3-4		5,7436	,79335		
	5-6	4	5,7706	,75470		
	7-8	5	5,6758	,81424		
	9+	4	5,9461	,76730		
	Total	07	5,7491	,79439		
Mental Preparation	1-2	6	5,6500	,50990	,533	,712
	3-4		5,4000	1,14961		
	5-6	4	5,8208	2,00291		
	7-8	5	5,8091	,81338		
	9+	4	5,9000	,91618		
	Total	07	5,7713	1,45449		

Target Setting	1-2	6	5,2292	1,03102	,632	,640
	3-4	4	5,5385	1,11286		
	5-6	5	5,6349	,94652		
	7-8	4	5,7288	,74935		
	9+	07	5,6961	,94412		
	Total		5,6421	,92080		
Competition Strategy	1-2	6	5,4375	,71235	1,909	,110
	3-4	4	5,5192	1,34025		
	5-6	5	5,7004	,80443		
	7-8	4	5,6921	,72196		
	9+	207	6,0755	,94806		
	Total		5,7269	,89774		
Positive Coach Behaviour	1-2	8	4,4062	1,65798	**3,758**	**,006**
	3-4	26	4,3910	1,45101		
	5-6	84	4,9702	1,22438		
	7-8	55	5,1045	1,08086		
	9+	34	5,5196	1,10802		
	Total	207	5,0016	1,25067		
Negative Coach Behaviour	1-2	8	3,2750	1,13106	1,398	,236
	3-4	26	3,0923	1,65334		
	5-6	84	2,8738	1,48495		
	7-8	55	2,4909	1,47915		
	9+	34	3,1706	1,83972		
	Total	207	2,8638	1,56372		

Only positive coach behaviour differs statistically according to the engaged sport year of the Athletes. According to this output, positive behaviours increase as time increases.

The data obtained as a result of testing the hypothesis "the engaged club year of the athletes has a positive and significant effect on Coaching Behaviour" is summarized in Table 8.

Table 8. One-way ANOVA analysis according to the engaged club year of the Athletes

	Engaged Club Year/s	N	Mean	Std. Deviation	F	sign
Physical Training/ Planning	1-2	26	5,6077	1,13769	,937	,443
	3-4	66	5,7091	,84575		
	5-6	61	5,7008	,88584		
	7-8	32	5,8375	,84919		
	9+	22	6,0455	,71162		
	Total	207	5,7495	,88645		
Technical Skills	1-2	26	5,7051	,93012	1,417	,230
	3-4	66	5,7535	,69141		
	5-6	61	5,6339	,86432		
	7-8	32	5,7552	,76550		
	9+	22	6,0985	,71577		
	Total	207	5,7491	,79439		
Mental Preparation	1-2	26	5,6462	,86590	,970	,425
	3-4	66	5,5394	,96011		
	5-6	61	5,8566	2,30990		
	7-8	32	5,9375	,65930		
	9+	22	6,1364	,85387		
	Total	207	5,7713	1,45449		
Target Setting	1-2	26	5,7308	,91661	1,105	,356
	3-4	66	5,6338	,89549		
	5-6	61	5,4672	1,00269		
	7-8	32	5,8568	,78837		
	9+	22	5,7348	,93103		
	Total	207	5,6421	,92080		
Competition Strategy	1-2	26	5,7372	,92637	1,164	,328
	3-4	66	5,6035	1,00416		
	5-6	61	5,7115	,69793		
	7-8	32	5,7625	,71013		
	9+	22	6,0758	1,20375		
	Total	207	5,7269	,89774		
Positive Coach Behaviour	1-2	26	4,8237	1,43398	**4,131**	**,003**
	3-4	66	4,7311	1,23359		
	5-6	61	4,8975	1,26769		

	7-8	32	5,3516	1,06229		
	9+	22	5,8030	,87648		
	Total	207	5,0016	1,25067		
Negative Coach Behaviour	1-2	26	3,0231	1,28166	,731	,572
	3-4	66	2,6515	1,45298		
	5-6	61	2,9508	1,57339		
	7-8	32	2,7625	1,74832		
	9+	22	3,2182	1,88923		
	Total	207	2,8638	1,56372		

Only positive coach behaviour differs statistically according to the engaged club year of the Athletes. According to this result, positive behaviours increase as associated with the engaged club year of the Athletes increase.

The data obtained as a result of testing the hypothesis "the engaged coach year of the athletes has a positive and significant effect on Coaching Behaviour Assessment" is summarized in Table 9.

Table 9. One-way ANOVA analysis according to the engaged coach year of the Athletes

	Engaged Coach Year/s	**N**	**Mean**	**Std. Deviation**	**F**	**sign**
Physical Training/ Planning	1-2	27	5,7704	,95708	1,499	,204
	3-4	66	5,7667	,77148		
	5-6	57	5,5921	,94622		
	7-8	37	5,7297	1,02980		
	9+	20	6,1500	,57993		
	Total	207	5,7495	,88645		
Technical Skills	1-2	27	5,8889	,72501	1,689	,154
	3-4	66	5,6980	,72684		
	5-6	57	5,6023	,88290		
	7-8	37	5,7838	,83321		
	9+	20	6,0833	,69354		
	Total	207	5,7491	,79439		
Mental Preparation	1-2	27	5,7185	,70658	,928	,449
	3-4	66	5,6303	,83776		
	5-6	57	5,7588	2,41585		
	7-8	37	5,7730	1,00572		
	9+	20	6,3400	,56606		
	Total	207	5,7713	1,45449		

Target Setting	1-2	27	5,7284	,85878	,849	,496
	3-4	66	5,6086	,87730		
	5-6	57	5,4971	1,02426		
	7-8	37	5,7365	,87213		
	9+	20	5,8750	,93012		
	Total	207	5,6421	,92080		
Competition Strategy	1-2	27	5,8148	,71512	1,881	,115
	3-4	66	5,6465	,96632		
	5-6	57	5,6678	,81240		
	7-8	37	5,6324	,91952		
	9+	20	6,2167	,99134		
	Total	207	5,7269	,89774		
Positive Coach Behaviour	1-2	27	4,6667	1,36931	**5,145**	**,001**
	3-4	66	4,7828	1,15469		
	5-6	57	4,8728	1,35136		
	7-8	37	5,3041	1,09629		
	9+	20	5,9833	,77733		
	Total	207	5,0016	1,25067		
Negative Coach Behaviour	1-2	27	3,0074	1,16154	,934	,445
	3-4	66	2,5758	1,47701		
	5-6	57	3,0947	1,59064		
	7-8	37	2,9081	1,78487		
	9+	20	2,8800	1,79637		
	Total	207	2,8638	1,56372		

Only positive coach behaviour differs statistically according to the coach year of the Athletes. According to this result, positive behaviours increase as associated with the engaged coach year of the athletes increase.

5. Discussion and Conclusion

This study examined whether coaching behavior is affected by socio-demographic characteristics. Seven different socio-demographic characteristic variables were used in the study. The research model in this study provides new intuitions into how karate players perceive of their coaches. Applied constructs are used adapted from past researches in basketball, badminton and swimming players to understand whether similar dynamics affect in Karate players.

According to the results of the analysis related to the first subject of the research shown that gender has a positive and significant effect on technical skills. Statistically, the factors related to the technical skills sub-dimension of male athletes were higher than women. In the literature, some studies have significant differences in gender variable on coach behaviors. On the contrary, these studies in the literature have found that women are more

significant than men [24, 25].

In age, the significant differences were observed between age and physical training and planning among 7 sub-dimensions. There are significant differences in the 16-17 age group only in terms of physical training and planning. Statistically, the factors related to the physical training and planning sub-dimension of athletes who were 16-17 age group were higher than with any other age groups. This finding is consistent with many studies in the literature [26]. The study shows that the behaviors of the coaches were evaluated differently depending on the age of the athlete. The reason for this difference is thought to be related to coaches' approach among the athletes.

In competition groups, only positive behaviors of the participants differ statistically significantly according to the competition group. Positive coach behavior is higher in Kumite than Kata. The literature review showed that the number of scientific studies on coach behavior in the context of competition category is very limited and further research is needed on this subject.

In engaged sports year, only positive coaching behavior differs statistically according to the engaged sports year of the Athletes. According to this output, positive coaching behaviors increase as time increases. This finding is consistent with many studies in the literature [26, 27].

In engaged club year, only positive coach behavior differs statistically according to the engaged club year of the Athletes. According to this result, positive behaviors increase as associated with the engaged club year of the Athletes increase. The literature review showed that the number of scientific studies on coach behavior in the context of competition category is also very limited and further research is needed on this subject.

In engaged coach year, only positive coach behavior differs statistically according to the coach sports year of the Athletes. According to this result, positive behaviors increase as associated with the engaged coach year of the Athletes increase. This finding is consistent with Abakay and Kuru [28], Seleagzi and Cepikkurt [29], Vernadakis, Zetou, Avgerinos, Giannousi and Kioumourtzoglou [30], while contradicts the findings of Cik and Kucuk [27]. This result shows that karate athletes do not change coaches very often and this positively affects the positive coach behaviour perceived by athletes.

On the other hand, there is no significant relation between sub-dimension of coaching behaviour and competition category including junior, cadet and U-21 in Karate. This finding is contradicting with Eskiyecek, Bayazıt and Sarı [31].

In conclusion, there is a significant relation with gender, age, competition group, engaged sports year and engaged coach, while there is no significant relation between coaching behavior and competition category. Thus, the fourth hypothesis of the study was rejected, and the other six hypotheses were supported. While age, competition groups, engaged sports year, engaged club year, engaged coach year variables have positive and significant effect on positive coach behavior, gender has a positive and significant effect on technical skills.

According to the results of this research, the following suggestions can be made to athletes, coaches and managers:

Based on the finding that long-term planning of the period in which the coaches are with the group of athletes they work with is required. Clubs should also adopt policies to prevent coach turnovers.

Trainers should improve their knowledge and skills in areas such as physical training, technical skills, mental preparation, target setting and competition strategy. Athletes may develop positive behaviors towards coaches who develop their skills in these areas.

Coaches need to work on not only the performance of athletes but also their career planning, as well as the

correct goal-setting strategies, and club managers should support them these processes.

In addition to physical and technical training, mental training is recommended to be included in the season program.

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