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Proactive personality and positional competition: exploring the impact on soccer players' performance and gender differences

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Abstract

Aim The study aims to explore the relationship between proactive personality and positional competition in soccer players, considering factors like gender, age, position, and years of active participation in the sport.

Method Quantitative data collection methods were employed, including the Proactive Personality Scale and Positional Competition in Sports Scale, along with a custom personal information form. The study involved 242 soccer players (average age: 20.60 years, 39% female) from semi-amateur soccer clubs in Ankara province, surveyed during the 2022–2023 season.

Results The study found no significant differences in proactive personality and positional competition among soccer players based on their age and position ($p > .05$). However, gender differences were significant, with male players scoring higher than females in receiving and providing teammate support, communication, and overall positional competition in sports.

Conclusion Proactive personality can be a determinant of positional competition in sports. Moreover, these findings may provide important contributions to the development of talent identification, athlete development programs and coaching strategies that aim to increase competitiveness and success in positional contexts. In addition, in the present study, it can be concluded that following athletes over time is an important phenomenon for proactive personality and athletic development.

Keywords Proactive personality, Positional competition, Soccer, Performance, Gender

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Introduction

Defined as the individual's characteristic tendency to take initiative and act in advance of future situations or opportunities [1], proactive personality is assumed to be a behavioural tendency to activate or change one's environment [2]. The proactive personality structure is grounded in social cognitive theory [3], which posits continuous interaction between the individual, environment, and behavior. It also acknowledges that bidirectional influence between the situation and the person's behavior [4]. Across the lifespan, people with a proactive personality show a consistent tendency to identify opportunities that will help them achieve their goals and overcome problems that might prevent their achievement, pursuing a better quality of life [5–8]. Indeed, they tend to take consistent action by continuously formulating plans and then acting in alignment with those plans [9, 10], as well as exemplified in academic settings [11].

In addition to academic environments, an initiative-taking personality creates a personality structure that can be found in every field where human life is affected, that makes a difference in mental structures and fulfils the risks that may occur [12]. Thanks to proactive personality, individuals develop self-confident characteristics, are at peace with life and solve problems by internalizing them. Proactive personality has an important position in sports as well as in social life [13]. With a proactive personality, athletes go beyond expectations, participate in different activities and become more successful in competitions [14]. In addition, by developing proactive personality traits, athletes take more responsibility, create new conditions, learn from their mistakes and do not repeat them [2]. For this reason, if we look at the reasons why the proactive personality traits of athletes are stronger than other individuals, they are always faced with a competitor, compete with time, have the ability to take initiative in the face of unexpected events, and in case of any problem, they must act as soon as possible to produce a solution to the problem [2]. Due to their proactive personality traits [12], athletes contribute to long-term perspectives [15], are willing to go further in the distribution of tasks to achieve the set goals [16], set challenging goals, are self-motivated, change-oriented and future-oriented [17]. Since the essence of sports is competition, the desire to win, to be defeated and to gain superiority over the opponent, which are among the characteristics of proactive personality, "identifying opportunities, taking action, taking initiative among existing conditions and producing solutions with the simplest method in case of any problem [14–16]", proactive personality traits in sports also contribute positively to competition in sports.

In the field of sports, the phenomenon of competition takes on multiple forms [18–23]. Chelladurai (2012)

categorized competition into two different ways: i) pleasure-seeking mostly used for recreational activities; and ii) pursuit of excellence, which is explained by comparison [24]. Seen as a way of evaluating one's abilities by comparing them with others [25], the concept of positional competition is considered within the framework of the pursuit of excellence. In fact, positional competition is a type of contest between teammates for a certain position [18]. For example, in professional soccer teams with an average of thirty athletes, the fact that there is more than one athlete for each position further increases this competitive process. Players in general tend to play for both pleasure and to earn more economic income; however, coaches are more inclined to improve the performance of their athletes in order to win both for themselves and the team. Also, to gain prestige they must only field players who have a high probability of winning the match. To stay at a certain level throughout the season, a positional competition arises between soccer players who struggle to be in the team that takes the field [26].

In a good team, multiple players compete to play in the same position, leading to constant competition until one player succeeds [27]. The existence of scientific studies showing that individuals with proactive personality are more successful in their careers [1, 6, 28] and its relationship with innovativeness, entrepreneurship, organisational commitment and job satisfaction [13, 15, 16] have led to the idea that the same result may occur in sports with both performance and health outcomes [29]. Actually, competition in sport is measured according to whether one athlete is more skilful than another [25]. Thus, the cooperation with teammates can turn into positional competition not only because of the time spent in the game, but also for external factors such as being an influential athlete in the team (e.g. captain) or being selected as the best player of the year at the end of the season (e.g. receiving an award) causing competition among athletes [30]. Although positional rivalry has a significant impact on team functioning, there are currently insufficient studies [18].

As more studies have envisaged the need to explore the connection between various aspects of sports competition and sports-related proactive personality [31, 32], our study becomes the first to address this expectation. In this context, our study aims to investigate the unexplored link between proactive personality and positional competition within the domain of sports. This research aims to shed light on athletes' awareness of these concepts by linking the personal dispositions and traits that elicit innovative behaviour, which is vital for athletes, with the proactive personality traits required in sport and positional competitive characteristics in sport. The first contribution of our study is to suggest how proactive

personality can contribute to the characteristics that will be newly formed as a result of the differences and contradictions that arise between individuals in terms of interests, beliefs, values or relationships. Second, this study adopts a contingency approach that investigates the role of soccer players' proactive personality and sport positional competition traits in order to determine how proactive personality and sport positional competition practices have an impact on soccer players. The main objectives of our study are to determine the link between proactive personality and positional competition, to reveal the contribution of proactive personality to the formation of new traits and to examine the role of proactive personality and positional competition traits of football players. To this end, the hypotheses of the study are as follows: i) athletes' positional competition and proactive personality traits differ according to gender, age, position and years of active sport; and ii) there is a relationship between proactive personality and positional competition in sport.

Materials and methods

Widely used in social sciences and as mixed methods research, the survey model has been adopted in the present study to reveal existing situations by describing the subjects and analysing the basic coverage areas of the sample group, including gender, age, position, years of active sports [33].

Participants and study design

We performed a power analysis using a significance level (α) of 0.05, power ($1-\beta$) of 0.80, an effect size of 0.33, and actual power=80. The analysis indicated that a minimum of 230 subjects would be needed in our study. In this study, 242 soccer players (female=95; 39%) who played soccer in semi-nationally amateur soccer clubs in Ankara province in the 2022–2023 season participated in the study. Demographic characteristics of the participants included in the study are given in Table 1. According to these results, 147 participants (60.7%) were male, and 95 participants (39.3%) were female. The participants were grouped according to age categories during the analysis. Accordingly, 150 of the participants (61.9%) were between 18–20 years old, 45 (18.6%) were between 21–23 years old, and 47 (19.5%) were 24 years and older. Additionally, among these participants, 17 (7%) were goalkeepers, 76 (31.4%) were defenders, 111 (45.8%) were midfielders, and 38 (15.8%) were forwards. When participants were analyzed based on their years of active sport age, 115 (47.5%) had active sport age between 1–5 years, 73 (30.1%) had active sport age between 6–10 years, and 54 (22.4%) had been actively involved in sports for more than 11 years.

Table 1 Demographic characteristics of the participants

Features	Categories	f	%
Gender	Male	147	60.7
	Female	95	39.3
Age (Year)	18–20 years	150	61.9
	21–23 years	45	18.6
	24 years and over	47	19.5
Role	Goalkeeper	17	7.00
	Defense	76	31.4
	Midfield	111	45.8
	Striker	38	15.8
Sport career (years)	1–5 years	115	47.5
	6–10 years	73	30.1
	11 years and over	54	22.4
Total		242	100.0

Ethical consent

Soccer players who were active in the 2022–2023 season, trained at least three days a week volunteered to be included in the study. Persons who did not play soccer under license and played soccer for less than one year were not included in the study. After participants' recruitment and selection, scales were prepared for the individuals. Google Forms application was used to collect the data, and the application was designed to allow online response to personal information, positional competition and proactive personality scales. Afterwards, in order to collect data from the athletes of men's and women's soccer teams in Ankara province, the clubs were contacted via e-mail to obtain the necessary permissions. After obtaining the necessary permissions from the clubs, the forms were sent to the competitive soccer players via the link address. The athletes were informed that participation in the study was voluntary. After 60 days, statistical analyses were performed on the correctly completed questionnaire data. The Bandirma Onyedi Eylül University Social and Human Sciences Ethics Committee approved this study (code: 2022–10; 05/12/2022). This research was conducted in accordance with the principles of the Declaration of Helsinki and ethical rules [34].

Data collection tools

For the purposes of this study, positional competition scale, proactive personality scale and personal information form created by the researchers were used. As a result of the statistical analyses conducted in our study, Cronbach alpha value of positional competition scale was calculated as 0.95 and Cronbach alpha value of proactive personality scale was calculated as 0.93.

According to Cronbach alpha, in order for a scale to be considered reliable, the alpha value should be at least 0.70.

Positional competition scale

The "Positional Competition Scale" developed by Akgül and Karanfil (2021) deals with the comparison of athletes playing in the same position in the team with other athletes [25]. As a result of the confirmatory factor analysis regarding the validity of the scale, $C_{min}/Df=2.026$, $RMSEA=0.066$, $CFI=0.921$, $GFI=0.858$, $IFI=0.923$ and $TLI=0.904$. The scale is a 7-point Likert-type scale (1=Never disagree, 7=Fully agree) consisting of 25 questions with 7 sub-factors. The Cronbach alpha coefficient of the scale ranged between 0.81 and 0.87 and the combined reliability (CR) ranged between 0.75 and 0.90. The current scale is a new scale developed to assess positional competition in team sport [30]. As a result of the analyzes conducted in our study, the Cronbach alpha value was 0.95.

Proactive personality scale

Bateman and Crant (1993) performed validity and reliability analyses for the Proactive Personality Scale. The scale was revised by Claes, Beheydt and Lemmens (2005). The revised scale was adapted into Turkish culture by Akın, Abacı et al. (2011), as the "Abridged Proactive Personality Scale". The original form of the Proactive Personality Scale includes 17 items and one sub-dimension. A 7-point Likert-type rating (1 strongly disagree—7 strongly agree) was used to score the scale statements. In the conducted Discriminant Function Analysis (DFA) on proactive personality, the fit indices of the obtained model were examined, and it was found that the Chi-square is significant ($\chi^2=47.91$, $N=332$, $df=29$, $p=0.01502$). The fit index values are as follows: $RMSEA=0.044$, $NFI=0.99$, $CFI=0.99$, $IFI=0.99$, $RFI=0.97$, $GFI=0.97$, $AGFI=0.95$, and $SRMR=0.033$. The internal consistency reliability coefficients of the 17-item form of the scale range between 0.87 and 0.89; the internal consistency reliability coefficients of the shortened form range between 0.76 and 0.86. In our study, the Cronbach's alpha value was 0.93 as a result of the analysis [35].

Statistical analysis

All data collected from male and female soccer players were examined by means of SPSS package program (version: 25), while visual figures were applied with GraphPad Prism 8. After removing erroneous and outlier values of 257 soccer players, data from 242 players were analyzed. The normality analyzes of the data were tested with the Kolmogorov Smirnov Test and it was found that

the sub-dimensions of the scales were not normally distributed. Therefore, Mann–Whitney U and Kruskal Wallis H tests were used for pairwise group comparisons and for comparisons of more than two groups, respectively. Spearman correlation test was applied to determine the relationship between the proactive personality scores of the participants and their positional competitiveness scores in sports. The level of significance in the study was determined as $p < 0.05$ and $p < 0.001$.

Results

Tables 2, 3, 4 and 5 present the relationships between the variables of gender, age, position and years of active sport according to positional competition and proactive personality traits of soccer players.

According to Table 2, male soccer players scored higher than female soccer players in receiving teammate support ($Z=-3.068$, $ES=-160$, $p=0.036$), providing teammate support ($Z=-0.466$, $ES=-0.196$, $p=0.009$), communication ($Z=-0.913$, $ES=-0.277$, $p < 0.001$) and total score averages of positional competition in sport ($Z=-0.876$, $ES=-0.238$, $p=0.002$), which are sub-factors of positional competition in sport, and caused a significant difference (Fig. 1). No gender-based significant differences emerged in other sub-dimensions of positional competition in sport scale and proactive personality scale ($p > 0.05$).

Table 3 presents a comparison of positional competition and proactive personality traits in soccer players based on the age variable. The table is organized into different scales related to specific aspects of their performance, and it provides data for three age groups: 18–20 years, 21–23 years, and 24 years and above. Accordingly, the participant's development effort, teammate support, supporting a teammate, contact, coach recognition, coach preference, positional competition in sport (total score), and proactive personality values did not differ according to the age variable ($p > 0.05$).

Table 4 presents a comparison of positional competition and proactive personality traits in soccer players based on their role within the team. The table is organized into different scales related to specific aspects of their performance. The roles considered are Goalkeeper, Defense, Midfield, and Forward. Accordingly, no significant difference emerged in the proactive personality scale, positional competition in sport scale and sub-factors according to the role variable ($p > 0.05$).

According to Table 5, in the proactive personality scale, positional competition in sport scale and its sub-factors, soccer players with 6–10 years and 11 years or more of active sport age had higher mean scores than soccer players with 1–5 years of active sport age ($p < 0.05$) (Fig. 2). When the other sub-dimensions of the positional competition scale in sport and the proactive personality

Table 2 Mann Whitney U Test results of positional competitiveness and proactive personality traits of soccer players by gender

Scale	Gender	N	Mean Rank	Mean	S.D	Z	E.S	p
Development Effort	Female	95	120.73	6.26	1.23	-610	-.04	.959
	Male	147	121.18	6.13	1.41			
Receiving Teammate Support	Female	95	109.33	4.97	1.39	-3.068	-.160	.036*
	Male	147	128.59	5.29	1.43			
Providing Teammate Support	Female	95	107.13	5.46	1.42	-466	-.196	.009*
	Male	147	130.79	5.81	1.43			
Communication	Female	95	101.13	5.22	1.59	-913	-.277	<.001**
	Male	147	134.67	5.90	1.34			
Self Awareness	Female	95	111.47	5.53	1.48	-759	-.136	.069
	Male	147	127.98	5.85	1.34			
Coach Recognition	Female	95	112.53	5.39	1.47	-497	-.122	.106
	Male	147	127.30	5.65	1.38			
Coach Preference	Female	95	116.15	4.87	1.29	-861	-.073	.337
	Male	147	124.96	4.99	1.30			
Positional Competition in Sport Total Score	Female	95	103.23	5.40	1.14	-876	-.238	.002*
	Male	147	131.82	5.70	1.13			
Proactive Personality	Female	95	127.56	5.88	1.06	-1.395	.090	.237
	Male	147	116.73	5.69	1.12			

** $p < .001$, * $p < .05$

scale were examined, no significant difference emerged according to the sport career ($p > 0.05$).

In Fig. 3, the relationship between the participants' positional competitiveness scores in sports and their proactive personality scores was examined. Accordingly, the high level of correlation was found between the participants' sport positional competitiveness scores and their proactive personality scores ($r = 0.492$, $p < 0.001$).

Discussion

Athletes tend to overtake their rivals and spend a number of efforts to prove it. Athletes want to belong to a team, to realize themselves with the successful athletes around them and to be different from other athletes [36]. The athlete's desire to be different and special and to get ahead of their teammates leads to proactive personality traits and competition in sports [35]. This study was designed to determine positional competition and proactive personality traits in soccer players. Statistically significant differences were found in positional competition values of soccer players based on gender and sport career. It was determined that male soccer players had higher values in both active and passive teammate support, communication, and positional competition values in sport total score. When the active sport age of soccer players were examined, it was concluded that soccer players with 6–10 years and ≥ 11 years of sport career had higher values in teammate support, communication, self-awareness and positional competition values in

sport total score compared to less experienced players. In addition, significant positive relationships were found between proactive personality and positional competition levels in all sub-dimensions and proactive personality emerged as an important predictor of positional competition level in sport.

In the sport field, the maturation of proactive personalities is catalyzed by several executive functions and soft skills including decision making in competition, focus on positions during the match, taking initiative [36], and emotional control in specific situations such as winning and losing [7, 9, 37]. These positive aspects of sport practice can be seen also in adults and later in life [5, 38, 39].

In the literature, similar studies with different sample groups show comparable results to our research, with high levels of proactive personality emerging in sports sciences faculty students [40], university administrative staff [41], university students [42]. Effective communication skills, the ability to evaluate opportunities, and to take responsibility and risk in specific position and professional roles could explain these positive outcomes [6, 7]. Some recent studies have argued that demographics influence proactive personality and positional competition. In the study conducted on university students, it was determined that there was a situational and positional difference between male and female players in intra-team competition in sports [30], while another study found that the positional competition of university students revealed that those who were regularly active in sports

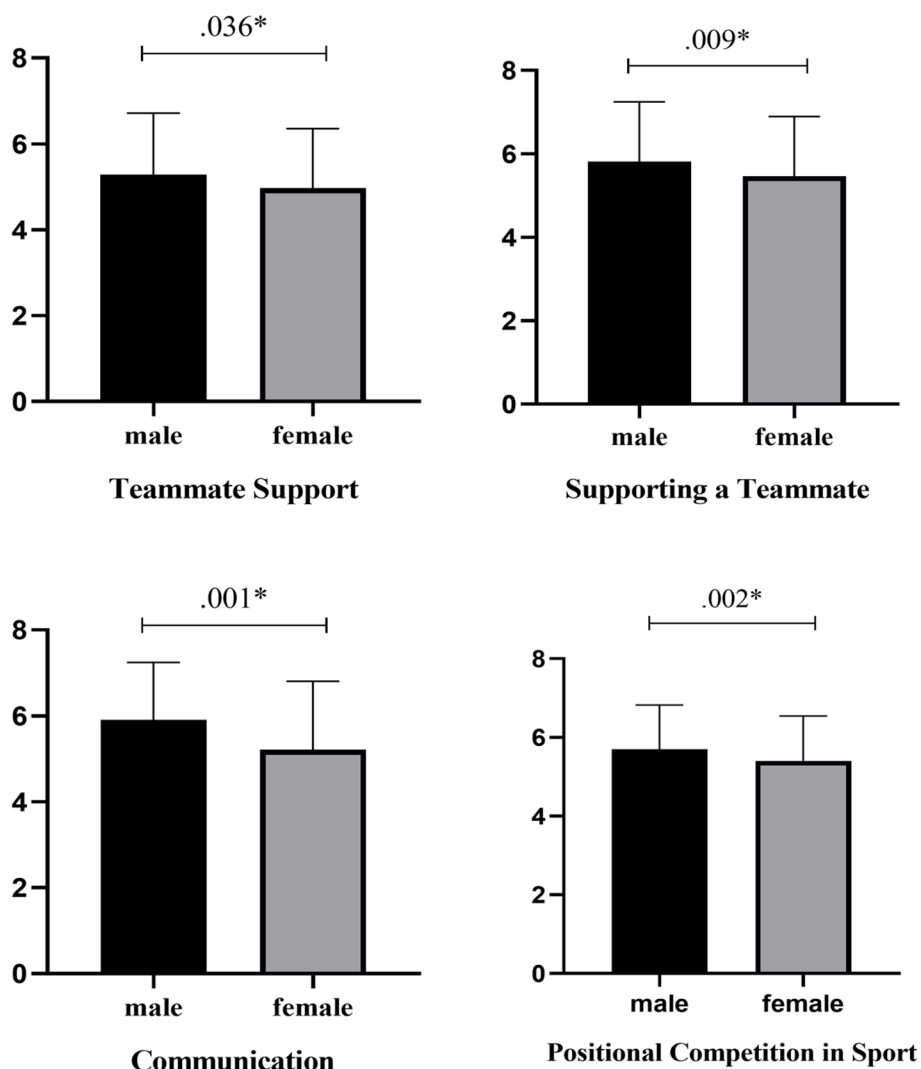


Fig. 1 Positional competitiveness and proactive personality traits of soccer players by gender

exhibited more social behaviors [43]. In another study, it was reported that the total score of proactive personality was higher in those who practiced sports than those who did not, and there was no difference between genders in terms of proactive personality traits [40]. Conversely, in a study on the effect of sports on the proactive personality traits of university students, the total proactive personality scores of women were higher, increased significantly as age increased, and were higher in athletes competing in individual branches [44]. In addition, in another study conducted only on women, it was reported that women with high proactive personality levels showed more entrepreneurial characteristics [45]. The fact that the soccer branch is more popular among men and the fact that women’s soccer leagues are still played as amateurs can be seen as the most important problems in the development of proactive personality in women. When

the literature is examined, it has been concluded that proactive personality traits are high in those who do sports [40]. On the other hand, results related to proactive personality traits according to gender are controversial, arguably also because of sample group differences. The different results in individual and team sports in the results of the research conducted with the students of the faculty of sport sciences may explain this situation [46]. When athletes take initiative in competitions, they may see themselves as different from their teammates. In such cases, the proactive personality traits of the individuals who will lead the team should be strong and their competitiveness in sports should be high [47].

In fact, in being effective communicators and potential leaders individuals with high levels of proactive personality are not only more emotionally stable, but also cope better with the stress and are more likely to create

Table 3 Kruskal Wallis H Test results of positional competition and proactive personality traits in sports according to age variable

Scale	Age (year)	N	Mean Rank	Mean	S.D	H	p
Development Effort	18–20	150	120.29	6.24	1.26	.722	.697
	21–23	45	128.16	6.23	1.28		
	24+	47	116.55	5.95	1.61		
Receiving Teammate Support	18–20	150	115.09	5.09	1.36	2.871	.238
	21–23	45	130.69	5.40	1.24		
	24+	47	130.79	5.16	1.75		
Providing Teammate Support	18–20	150	115.22	5.56	1.48	3.730	.155
	21–23	45	126.59	5.88	1.12		
	24+	47	136.67	5.86	1.56		
Contact	18–20	150	117.35	5.57	1.49	1.480	.477
	21–23	45	130.20	5.83	1.33		
	24+	47	126.41	5.66	1.60		
Self Awareness	18–20	150	114.52	5.64	1.37	5.012	.082
	21–23	45	125.62	5.82	1.30		
	24+	47	139.83	5.91	1.59		
Coach Recognition	18–20	150	119.81	5.52	1.43	1.994	.396
	21–23	45	114.44	5.53	1.20		
	24+	47	133.65	5.67	1.58		
Coach Preference	18–20	150	118.31	4.88	1.27	.930	.628
	21–23	45	124.33	5.00	1.22		
	24+	47	128.97	5.09	1.45		
Positional Competition in Sport Total Score	18–20	150	113.00	5.52	1.10	5.438	.066
	21–23	45	126.42	5.69	1.03		
	24+	47	139.28	5.67	1.35		
Proactive Personality	18–20	150	120.85	5.78	1.08	1.375	.503
	21–23	45	112.41	5.72	1.00		
	24+	47	129.51	5.74	1.27		

opportunities to increase their work performance [36, 48, 49]. Moreover, highly proactive people not only look for opportunities, take responsibility, and act persistently until change occurs, but they also contribute actively to change and innovation [42].

According to the gender variable, 69.2% of the soccer players were male and 30.2% were female. Considering the proactive personality structure, no statistical difference was found between genders. In a study conducted to determine the proactive personality traits of sport sciences faculty students, they found that female students had higher proactive personality scores than male students [46]. Differences between athletes and sport sciences students could explain these divergences. Although they hold a sports background, sport sciences students mostly do not continue their active sports life at the time of education. However, because they constantly have a goal in mind and have change-oriented personality qualities, athletes might be said to differ [50]. When the proactive personality in sports is examined, it is expected that proactive characteristics should be at similar levels

regardless gender differences [50], as it should consist of individuals who should be able to cope with stress, have effective communication skills, take responsibility and risk, evaluate opportunities and have similar qualities to these characteristics [51]. Individuals are expected to have common proactive personality traits such as career success, being innovative, taking collective action to influence their environment, taking initiative under challenging conditions [52].

As a result of the analyses on proactive personality traits according to age variable, there is no significant difference. When the literature is examined, there are studies that have a difference between age and proactive personality. Certain authors concluded that there is a significant difference between the proactive personality traits of athletes and the age variable [50].

The variance between our study's findings and those of other research can be attributed to distinctions in occupational groups. Our study's sample comprises individuals from the sports sector, characterized by a foundation in teamwork and discipline inherent to their

Table 4 Kruskal Wallis H Test results according to the role variable of positional competition and proactive personality traits in sports

Scale	Position	N	Mean Rank	Mean	S	H	p
Development Effort	Goalkeeper	17	128.41	6.43	1.02	1.274	.735
	Defense	76	124.72	6.22	1.37		
	Midfield	111	115.76	6.16	1.25		
	Forward	38	125.41	6.05	1.63		
Receiving Teammate Support	Goalkeeper	17	136.21	5.46	1.31	2.636	.451
	Defense	76	118.99	5.13	1.41		
	Midfield	111	124.72	5.22	1.43		
	Forward	38	107.45	4.93	1.46		
Providing Teammate Support	Goalkeeper	17	111.97	5.53	1.49	.686	.876
	Defense	76	124.75	5.77	1.38		
	Midfield	111	122.36	5.67	1.46		
	Forward	38	116.74	5.57	1.51		
Contact	Goalkeeper	17	132.94	5.97	1.25	.975	.807
	Defense	76	120.92	5.62	1.47		
	Midfield	111	122.78	5.65	1.48		
	Forward	38	113.79	5.47	1.64		
Self Awareness	Goalkeeper	17	139.76	6.02	1.34	2.980	.395
	Defense	76	122.37	5.79	1.33		
	Midfield	111	123.13	5.75	1.37		
	Forward	38	106.84	5.40	1.65		
Coach Recognition	Goalkeeper	17	112.12	5.59	.93	1.297	.730
	Defense	76	118.85	5.45	1.57		
	Midfield	111	126.69	5.68	1.25		
	Forward	38	115.83	5.32	1.71		
Coach Preference	Goalkeeper	17	150.09	5.49	.89	6.589	.086
	Defense	76	113.74	4.82	1.26		
	Midfield	111	127.75	5.07	1.22		
	Forward	38	105.97	4.58	1.59		
Positional Competition in Sport Total Score	Goalkeeper	17	127.97	5.79	.85	.973	.808
	Defense	76	120.76	5.57	1.20		
	Midfield	111	122.42	5.63	1.03		
	Forward	38	111.13	5.36	1.43		
Proactive Personality	Goalkeeper	17	132.75	5.96	.85	.536	.911
	Defense	76	121.43	5.77	1.16		
	Midfield	111	119.19	5.80	.92		
	Forward	38	120.49	5.56	1.49		

chosen field. This suggests that the observed differences may stem from the enduring influence of these inherent traits, irrespective of age or gender. The examination of soccer players' proactive personality structure revealed no statistically significant differences based on sport career, and role variables. However, our findings differ from some studies in the literature. The study on teachers found that classroom teachers with the highest level of proactive personality had a medium level of experience between 11–35 years [53]. They attributed this to increased autonomy and self-confidence during

this period. In our study, the sample group consisted of team sports participants, which may explain the results in the age variable. Although the proactive personality scores tend to be higher in those with longer sports history, the lack of significant difference could be attributed to the influence of sports culture. This culture's impact begins early and fosters discipline, potentially influencing personality traits throughout an individual's sports involvement [37]. The study revealed significant positive relationships between proactive personality and positional competition levels, including all sub-dimensions.

Table 5 Kruskal Wallis H Test results of positional competition and proactive personality traits in sports according to active sports year

Scale	Sport Career (Year)	N	Mean Rank	Mean	S.D	H	p	Post-Hoc
Development Effort	1–5	115	113.59	6.12	1.35	5.223	.073	
	6–10	73	135.90	6.40	1.15			
	11+	54	116.57	6.02	1.51			
Receiving Teammate Support	1–5	115	113.37	5.05	1.37	3.099	.212	
	6–10	73	131.50	5.39	1.32			
	11+	54	123.09	5.09	1.62			
Providing Teammate Support	1–5	115	105.49	5.39	1.50	12.406	.002*	1–2
	6–10	73	140.40	6.02	1.26			1–3
	11+	54	130.05	5.82	1.44			
Communication	1–5	115	104.27	5.32	1.51	14.602	<.001*	1–2
	6–10	73	142.64	6.01	1.37			1–3
	11+	54	129.62	5.79	1.44			
Self Awareness	1–5	115	106.28	5.47	1.44	10.680	.005*	1–2
	6–10	73	134.51	5.97	1.29			1–3
	11+	54	136.31	5.94	1.40			
Coach Recognition	1–5	115	112.25	5.42	1.37	4.327	.115	
	6–10	73	133.36	5.72	1.42			
	11+	54	125.17	5.59	1.50			
Coach Preference	1–5	115	118.13	4.90	1.29	.616	.735	
	6–10	73	126.26	5.00	1.29			
	11+	54	122.23	4.96	1.32			
Positional Competition in Sport Total Score	1–5	115	104.07	5.40	1.13	12.594	.002*	1–2
	6–10	73	138.12	5.81	1.06			1–3
	11+	54	132.10	5.66	1.20			
Proactive Personality Total	1–5	115	116.55	5.73	1.09	.914	.633	
	6–10	73	124.07	5.82	1.04			
	11+	54	126.24	5.76	1.21			

** $p < .001$, * $p < .05$

Proactive personality emerged as a vital predictor of positional competition in sports, impacting athletes' efforts to improve, support teammates, communicate effectively, and enhance self-awareness. These outcomes can be largely attributed to the fact that the study's sample group comprised athletes, particularly those engaged in team sports. Regardless of gender, this group's involvement in team sports likely amplified the influence of proactive personality on the aforementioned characteristics. However, when the literature is examined, there is no study examining the relationship between proactive personality and positional competition as well as positional competition level. In the literature, it is known that there are positive relationships between proactive personality and organizational effectiveness, job performance, organizational innovation, leadership, entrepreneurship, starting a business and being successful at work [53], career satisfaction [1], mental resilience [36], self-efficacy [48], proactive work behavior, attitude towards profession and

career development desire levels [46], organizational commitment, organizational citizenship [54] and it is known that there are positive relationships at different levels, and that proactive personality in the field of sports has positive effects on the psychology of the athlete and gives self-confidence to the athlete [2].

Actually, a recent study on the influence of athlete's personality traits and psychological performance on their physical performance found a correlation between psychological performance strategies, decision-making, and personality traits among American soccer players [55]. As described by several researchers [56–58], proactive individuals are those who adapt to their environment based on their needs and abilities. Indeed, they actively shape their working conditions and challenge the status quo.

It can be said that the main idea behind the tendency of individuals towards sports is that they should have a healthy, dynamic, active, and resilient personality, be

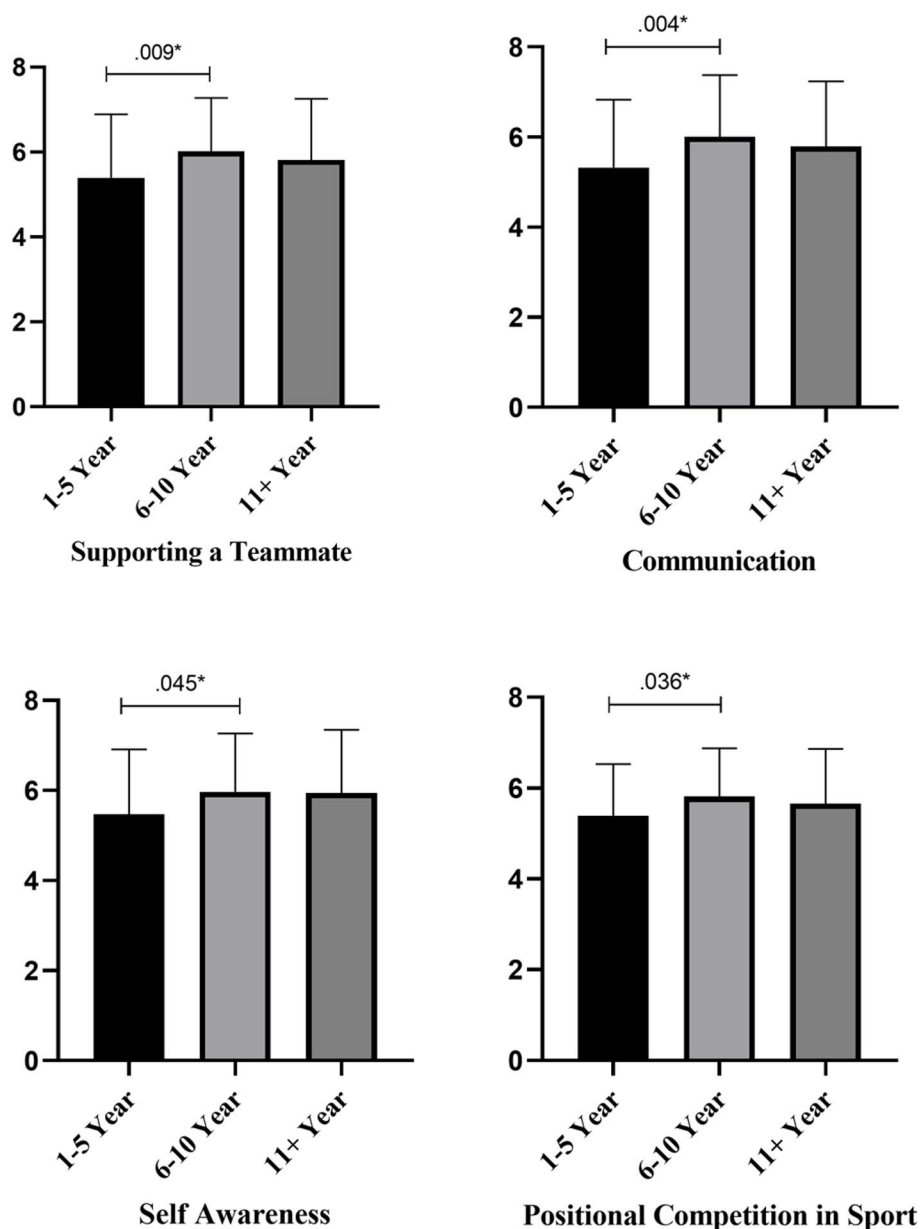


Fig. 2 Positional competition and proactive personality traits in sports according to active sports year. * $p \leq .005$

self-confident, be open to competition, empathize and develop themselves within the framework of fair play, apart from their physical and mental well-being. Individuals with a proactive personality actively seek to create positive changes in their environment and community. In the ever-changing and competitive sports landscape, athletes aiming for success must dedicate sufficient effort to their psychological and physical development, both on a personal level and within the competitive setting [4, 24]. The universal increase in competitive environments demands individuals who can succeed in sports

organizations, adapt to change, lead transformations, take calculated risks, and demonstrate a strong sense of responsibility [36], exert high effort in their tasks, assume active roles, demonstrate mental resilience, maintain their fighting spirit [58], and achieve high performance in line with their goals and objectives [29].

Strengths, limitations and future directions

Finally, some limitations of the study should be mentioned. Since only semi-amateur level soccer players in Ankara province have been recruited, the present results

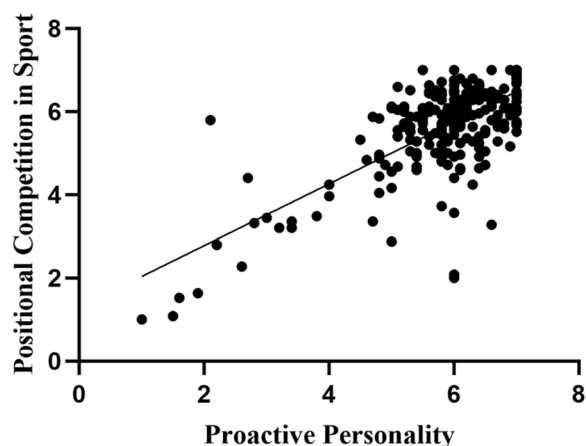


Fig. 3 Relationship between the participants' positional competitiveness scores in sports and their proactive personality scores

should be carefully generalized to other sport levels. To confirm these results, professional and amateur soccer players playing in different leagues should be determined as a sample in future studies. Other type of quali-quantitative research designs should also be considered such as systematic literature reviews, meta-analysis and focus groups with experts, coaches and athletes [7, 8, 38]. In particular, longitudinal studies would offer a comprehensive understanding of the long-term implications of proactive personality on athletic development and sustained success in competitive sports, in several ways: 1. Identification of long-term developmental trajectories; 2. Impact on athletic performance across phases; 3. Influence on adaptability and resilience; 4. Leadership and team sport dynamics; 5. Transition phases (e.g., retirement) and career longevity; 6. Psychosocial well-being; 7. External factors and contextual influences; 8. Practical applications for coaching and development: insights gained from a longitudinal study can inform the development of targeted coaching strategies [58]. Coaches and sports organizations can use this knowledge to identify and nurture proactive traits in athletes, potentially optimizing their development and performance.

Including variables that have mediating or moderating effects on the relationship between proactive personality and positional competition level in sport will contribute more to the literature [59]. The sample group in the study is soccer players, and the study can be applied to athletes in other sports branches to examine the proactive personality and positional competition characteristics of athletes in different sports branches and special groups (e.g., individual sports and Paralympic athletes). It can be said that proactive personality traits have differentiated in a certain way

due to the renewal of the rules of sports every day, the desire of individuals to show their talents, and changing conditions. Proactive Personality and Positional Competitiveness in Sports Scales were used in our research and applied to our research sample. To prevent random errors semi-structured interview can be administered to the same sample group. In the same way, the positional position of the athletes in the team in sports causes them to perform more comfortably or to be below their performance due to psychological pressure.

Conclusions

According to the findings of this study, there is a positive relationship between proactive personality and positional competition in sports. It is thought that individuals with high proactive personality traits have a positive effect on individual development, communication skills, career development, and self-confidence skills. For this reason, it is thought that there is a need for future research examining the proactive skills of athletes who compete in individual and team sports in different sports branches. In addition, the determination of proactive personality traits in athletes competing at the professional level can also enable athletes to reach their multidimensional development and career goals. In this context, it is thought that studies comparing the proactive personalities of amateur and professional athletes are also needed.

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s13102-025-01086-6>.

Supplementary Material 1.

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Authors' contributions

Conceptualization, A.K., Ö.E., B.Ç., S.C.; methodology, A.K., Ö.E., S.C., B.Ç., E.A.P. and C.I.A.; software, Ö.E., B.Ç., and L.D.; validation A.K., Ö.E., B.Ç., S.C. and C.I.A.; formal analysis, A.K., Ö.E.; investigation, A.K., B.Ç., Ö.E., S.C.; resources, C.I.A., A.K., Ö.E., C.Ş., B.Ç., C.O.B. and S.C.; data curation, A.K., Ö.E., B.Ç. and L.D.; writing—original draft preparation, A.K., Ö.E., B.Ç. and C.I.A.; writing—review and editing, A.K., S.C., Ö.E., B.Ç., E.A.P., C.O.B., C.I.A. and G.B.; visualization, C.I.A., A.K., Ö.E., L.D. and C.Ş.; supervision, A.K., Ö.E., B.Ç. and C.I.A.; project administration, A.K., Ö.E. and C.I.A.; funding acquisition: C.O.B., C.I.A., L.D., C.Ş. and E.A.P.; All authors have read and agreed to the published version of the manuscript.

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Data availability

The data presented in this study are available on request from the corresponding author.

Declarations

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Review Board (or Ethics Committee) of Bandırma Onyedü Eylül University Social and Human Sciences Ethics Committee (2022–10; 05/12/2022). Informed consent was obtained from all subjects and/or their legal guardian(s), ensuring voluntary participation and understanding of the study's purpose and procedures.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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