

# Exploring playfulness levels of young athletes doing individual and team sports

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Accepted 7 September, 2021

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## ABSTRACT

The present research aimed to identify and compare playfulness levels of individuals aged 10-14 years engaging in individual and team sports. The sample consisted of 356 participants. We employed a correlational design and used the "Playfulness Scale for 10-14-years-old Children" developed by Hazar as the data collection tool. In data analysis, we utilized descriptive statistics, Independent Samples T-test, One-Way Analysis of Variance (ANOVA), and Tukey HSD and LSD tests for within-group comparisons. We computed the internal consistency coefficient of the scale to be .84. The results suggested that all participants showed high playfulness levels ( $97.26 \pm 16.02$ ) and got the highest scores on the "Social Adaptation" sub-scale ( $40.50 \pm 6.67$ ) while obtaining the lowest scores on the "Game Passion" sub-scale ( $21.02 \pm 7.00$ ). Overall, we determined that the participants significantly differed in playfulness by age and branch, but it was not the case by gender.

**Keywords:** Individual and team sports, playfulness, sedentary, awareness.

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## INTRODUCTION

The term play has been the subject of many social disciplines, although there have been many different views about its meaning since the beginning of history. Play is defined as a purposeful or non-purposeful, intrinsically motivated, freely chosen, pleasure-seeking, and meaning-creating activity with or without a purpose or rule and as the most effective learning process that is the basis of physical, cognitive, linguistic, emotional, and social development of children (Johnson et al., 2005; Isbell and Raines, 2007).

Play addresses the whole development of children from physical to intellectual and personal to emotional (Göncü and Gaskins, 2012) and is associated with all development areas (Sutton-Smith, 1979). Manipulating objects is one of the primary ways for children to learn about and control their environment and develop positive social skills (Sutton-Smith, 2003). In addition to the developmental impacts of play, it also has psychological benefits. It helps children cope with all kinds of pressure

and allows them to avoid stressful situations (Johnson et al., 2005). Young children often have poor verbal skills; therefore, they cannot easily express their feelings and opinions (Hall et al., 2002). In this regard, play can be considered a commonly used verbal expression tool and offers a safe option for children to cope with psychological problems such as trauma and stress (Porter et al., 2009).

Not all activities of children are defined as plays; for an activity to be considered a play, it must bear some characteristics (Skard and Bundy, 2008). The most wanted aspect characterizing play is intrinsic motivation, in which the child's play is motivated not by the rewards but by the play itself since a reward is an extrinsic motivation source (Rubin et al., 1983). Another criterion is free choice. Players should freely choose the play they will engage in and not be forced by adults into unwanted plays (Johnson et al., 1999). Pleasure or pleasure-seeking is related to the positive impact of play. Besides,

players may develop fear and anxiety from time to time while playing. Hence, a positive impact is not always seen as one of the criteria of play (Clark and Miller, 1998; Sutton-Smith, 2003; Burghardt, 2005). Another important factor in play is active participation, distinguishing play and passive states (Skard and Bundy, 2008). Also, the child's playfulness is always needed for an activity to be considered play since playfulness is defined as the basis and spirit of play itself (Bundy, 1993; Chandler and Giles, 1997; Lieberman, 1966).

Playfulness is defined as an intrinsic motivation of play and includes three fundamental elements: intrinsic motivation, internal control, and freedom (Bundy, 1993; Kooij, 1989). Intrinsic motivation refers to situations where players play simply because they want to play, not because of extrinsic motivating factors. The process is more important than the outcome (Rubin et al., 1983). Skard and Bundy (2008) argue that a player can have fun if they win a game, but winning a game should not be the primary goal. Another element, internal control, corresponds to situations where players get a response from their actions. For example, children can decide who to play with, what to play, and how to play. Sometimes a player can change the game rules. Finally, the freedom to suspend reality is for children to decide how to use an object. The object can be attached to a different role than the player, and children act out roles that do not exist in real life (Skard and Bundy, 2008). Scholars empathize that playing influences the development of plays and the productive results of these plays (Garvey, 1977; Sutton-Smith, 1979; Vygotsky, 1978).

Some individual characteristics are associated with playfulness. Playfulness also has substantial impacts on personality traits. Therefore, playfulness is affected by individual characteristics. The literature suggests that playfulness is related to children's family characteristics, such as personality traits, creativity, gender, age, and birth order, family size, and family environment (Barnett, 1991; Cooper, 2000; Sanderson, 2010; Zachopoulou, Trevlas and Tsikriki, 2004). Even differences in playfulness manipulate playfulness (Trevlas, Grammatikopoulos, Tsigilis and Zachopoulou, 2003). Barnett (1991) carried out a study to describe the differences between the playing scores of girls and boys and concluded that boys scored higher on the physical spontaneity and manifesting joy sub-scales, while girls scored higher on the cognitive spontaneity sub-scale. Another study revealed that younger children got higher playfulness scores in the Test of Playfulness than those of older children (Saunders, Sayer and Goodale, 1999).

Playing also has developmental impacts on children. Accordingly, children's capacity for full and free participation in play is deemed crucial to support their healthy development (Sanderson, 2010). Jenkinson (2001) stated that playful children communicate with other children and adults more frequently, contributing to their individual skills. Playfulness is also associated with

creativity. World-renowned composers, artists, and scientists have gained a reputation for their creativity and are also known for their exceptional playfulness characteristics. Wolfgang Amadeus Mozart is among the most famous examples to describe a person who is both creative and entertaining (Bateson, 2015). In connection with creativity, playful children are good at finding new solutions and, therefore, develop creative problem-solving skills. Creative problem-solving skills may not develop without the capacity to play (Meador, 1992). Moreover, divergent thinking and playfulness are interrelated. Lieberman (1995) conducted research on preschool children to reveal the relationship between playing and divergent thinking. Children's playfulness was measured with a playfulness instrument developed by the researcher, and the "Divergent Thinking Tasks" were used for uncovering divergent thinking data. The results revealed a significant relationship between playfulness and divergent thinking of the children (Lieberman, 1995).

The innate drive to play and playfulness of children, adults, individuals, families, and communities, which are the central components of human sociability, can be regarded as human-specific abilities (Stenros et al., 2009). When we allow ourselves to connect to something bigger, such as family, community, or planet, most of what we call fun, happiness, and joy come into us (DeKoven, 2017).

Although the concept of play is identified with children, it is a phenomenon that people of all ages can participate in depending on their own interests and preferences. Play seems a familiar concept, but the perspectives of individuals towards play may differ. Play is complex and challenging to define due to its various activities and contexts (Lockwood and O'Connor, 2016). Defining play highly relies on a player's experiences or the characteristics of play itself (Whitaker and Tonkin., 2019). The value of play is increasingly recognized for both adults and children, and it is associated with fun, challenge, flexibility, and uncertainty. The reason for the multitude of concepts is to allow definitions by highlighting different aspects of the concept. Play, with the most general definition, is an activity with or without purposes and rules and which is involved by children and affects children's physical, cognitive, emotional, language, and social development.

While playfulness is as old as play, scientific inquiry about it is relatively new. Most scholars agree that playfulness (like the happiness set point) is a personality predisposition that makes the individual more likely to engage in a situation or environment to make it more enjoyable or entertaining (Gwen, 2014; Barnett, 2007; Glynn and Webster, 1992; Schaefer, 1993; Trevlas et al. 2003). Ultimately, there has emerged an idea that playfulness levels of athletes can be different from each other since both team and individual sports are also considered plays. Based on such a hypothesis, we aimed

to compare playfulness levels of young athletes aged 10-14 years who engage in team and individual sports and evaluate differences in their playfulness levels by some variables. The literature hosts limited research on this subject; hence, it is expected that the data in the present research will contribute to the relevant literature and be a source for further research.

## METHODS

### Sample

The universe of the research consisted of individuals engaging in team and individual sports in Ankara, while the sample was composed of a total of 356 athletes aged 10-14 years who do team (basketball and soccer) and individual (taekwondo and swimming) sports. Table 1 presents the demographic characteristics of the participants.

As shown in Table 1, the majority of the participants were males, and 23.9% were aged 13. Nearly one-third (30.3%) engaged in taekwondo.

### Data collection

In the research, We used the "Playfulness Scale for 10-14-years-old Children" developed by Hazar (Hazar and Hazar, 2017) as the data collection tool. The instrument consists of 27 questions within 5 sub-subscales: Game Passion, Social Adaptation, Desire to Play, Desire to Win, and Risk-Taking. The items are rated on a 5-point Likert-type scale (1 = Strongly Disagree, 5 = Strongly Agree), and items 9, 22 and 30 are scored inversely. Norm values for the playfulness levels of 10-14-year-olds are "Very Poor = 1.00-1.79," "Weak = 1.80-2.59," "Moderate = 2.60-3.39," "Good = 3.40-4.19," and "Very Good = 4.20-5.00."

**Table 1.** Demographic characteristics of the participants.

Parameter	Variable	f	%
Gender	Male	239	67.1
	Female	117	32.9
Age	10	62	17.4
	11	64	18.0
	12	78	21.9
	13	85	23.9
	14	67	18.8
Branch	Basketball	84	23.6
	Soccer	94	26.4
	Taekwondo	108	30.3
	Swimming	70	19.7

N = 356.

### Data analysis

We considered Kolmogorov-Smirnov and Shapiro-Wilk tests and Skewness-Kurtosis values to identify whether the data were distributed normally. Parametric tests were performed on the homogeneously distributed data. In data analysis, we utilized descriptive statistics, Independent Samples T-test, One-Way Analysis of Variance (ANOVA), and Tukey HSD and LSD tests for within-group comparisons. We computed the internal consistency coefficient of the scale to be .84.

## FINDINGS

The results suggested that all participants showed high

playfulness levels ( $97.26 \pm 16.02$ ) and got the highest scores on the "Social Adaptation" sub-scale ( $40.50 \pm 6.67$ ) while obtaining the lowest scores on the "Game Passion" sub-scale ( $21.02 \pm 7.00$ ) (Table 2).

We could not find any significant differences in playfulness levels by gender. In addition, male participants achieved higher scores on the total scale and sub-scales Game Passion and Risk-taking, while female participants got higher scores on the sub-scales Social Adaptation, Desire to Play, and Desire to Win (Table 3).

The ANOVA results revealed that there were significant differences between age and the scores of the participants on the total scale, Social Adaptation, and Desire to Play. Accordingly, the athletes aged 11 years got higher scores on the total scale and Desire to Play

**Table 2.** Mean and standard deviations of the scores.

	Min.	Max.	$\bar{x}$	ss
Playfulness	42.00	135.00	97.26	16.02
Game passion	7.00	35.00	21.02	7.00
Social adaptation	10.00	56.00	40.50	6.67
Desire to play	3.00	15.00	11.30	2.61
Desire to win	3.00	18.00	11.33	2.88
Risk-taking	4.00	20.00	13.09	4.05

N = 356.

**Table 3.** T-test results between the scale and its sub-scales by gender.

	Gender	n	$\bar{x}$	ss	t	p
Playfulness	Male	239	97.42	16.74	0.257	0.797
	Female	117	96.95	14.51		
Game passion	Male	239	21.33	6.84	1.175	0.241
	Female	117	20.40	7.31		
Social adaptation	Male	239	40.32	7.05	-0.729	0.467
	Female	117	40.87	5.83		
Desire to play	Male	239	11.28	2.66	-0.295	0.768
	Female	117	11.36	2.53		
Desire to win	Male	239	11.19	3.02	-1.287	0.199
	Female	117	11.61	2.56		
Risk-taking	Male	239	13.29	4.07	1.296	0.196
	Female	117	12.70	3.99		

\*p &lt; 0.05.

than those of athletes aged 12 and 14 years. Similarly, 11-year-old athletes exhibited higher levels of social adaptation than their counterparts aged 10 and 14 years (Table 4).

We found that the participants significantly differed in Game Passion, Desire to Win, and Risk-taking by their branches. Findings revealed that soccer players showed higher levels of game passion than the taekwondo doers

and swimmers, while swimmers had higher levels of desire to win than basketball players and taekwondo doers. Finally, soccer players showed higher levels of risk-taking when compared to taekwondo doers (Table 5).

Significant findings on the total playfulness scores and Risk-taking sub-scale suggested that the participants engaged in team sports were more playful and took more risks than their counterparts in individual sports (Table 6).

**Table 4.** ANOVA results between the scale and its sub-scales by age.

	Age	n	$\bar{x}$	ss	F	p
Playfulness	10	62	98.00	14.96	3.764	0.005*
	11	64	102.90 <sup>a</sup>	14.16		
	12	78	94.69 <sup>b</sup>	16.79		
	13	85	98.07	14.10		
	14	67	93.19 <sup>c</sup>	18.54		
	Total	356	97.26	16.02		

Table 4. Continues.

	10	62	20.53	7.07		
	11	64	22.75	7.09		
Game passion	12	78	19.64	6.74	2.219	0.067
	13	85	21.81	6.74		
	14	67	20.44	7.23		
	Total	356	21.02	7.00		
	10	62	42.06 <sup>b</sup>	5.85		
	11	64	42.62 <sup>a</sup>	4.36		
Social adaptation	12	78	40.33	6.72	6.042	0.000*
	13	85	40.22	5.66		
	14	67	37.58 <sup>c</sup>	8.99		
	Total	356	40.50	6.67		
	10	62	11.56	2.56		
	11	64	11.92 <sup>a</sup>	1.97		
Desire to play	12	78	11.30 <sup>b</sup>	2.66	2.442	0.047*
	13	85	11.05	2.56		
	14	67	10.94 <sup>c</sup>	3.05		
	Total	356	11.30	2.61		
	10	62	11.56	2.65		
	11	64	11.92	2.98		
Desire to win	12	78	11.30	3.09	1.274	0.280
	13	85	11.05	2.63		
	14	67	10.94	3.00		
	Total	356	11.33	2.88		
	10	62	12.19	3.94		
	11	64	13.57	4.01		
Risk-taking	12	78	12.41	4.11	1.274	0.280
	13	85	13.77	3.84		
	14	67	13.41	4.21		
	Total	356	13.09	4.05		

\*p &lt; 0.05.

## DISCUSSION AND CONCLUSION

In this study, it was found that the playfulness levels of volleyball and soccer players in the 10-14 age group were higher than those of sedentary children. Within the scope of the research, it was shown that all participants exhibited high levels of playfulness and received the highest scores on the "Social Cohesion" subscale, while the lowest scores on the "Passion for Gaming" subscale. Overall, we found that participants differed significantly by age and major in terms of playfulness, but this was not the case by gender.

Many researchers previously reached a high correlation between playfulness and creativity, as well as divergent

thinking in children (Cleland, 1994; Berretta and Privette, 1990; Cristie and Johnson, 1983; Barnett and Kleiber, 1982). Trevlas et al. (2003) found significant relationships between playfulness and motor fluency and motor flexibility. Boyer (1997) stated that it is essential to support a teaching and learning model that includes enhancing playing. Barnett and Fiscella (1985) reported that gifted children exhibit higher degrees of physical, social, and cognitive play styles, but they are equivalent to the non-gifted group in terms of sense of humor and manifesting joy. Proyer (2011) found a positive association between playing and academic achievement in adults.

The results suggested that all participants showed high

**Table 5.** ANOVA results between the scale and its sub-scales by branch.

	Branch	n	$\bar{x}$	ss	F	p
Playfulness	Basketball	84	99.32	17.58	2.087	0.102
	Soccer	94	99.43	15.44		
	Taekwondo	108	95.28	15.80		
	Swimming	70	94.95	14.74		
	Total	356	97.26	16.02		
Game passion	Basketball	84	20.96	7.32	5.151	0.002*
	Soccer	94	22.40 <sup>a</sup>	6.51		
	Taekwondo	108	21.62 <sup>b</sup>	6.95		
	Swimming	70	18.31 <sup>c</sup>	6.72		
	Total	356	21.02	7.00		
Social adaptation	Basketball	84	41.13	7.18	0.619	0.603
	Soccer	94	40.71	6.98		
	Taekwondo	108	39.85	6.18		
	Swimming	70	40.47	6.40		
	Total	356	40.50	6.67		
Desire to play	Basketball	84	11.44	2.66	0.291	0.832
	Soccer	94	11.41	2.72		
	Taekwondo	108	11.12	2.44		
	Swimming	70	11.28	2.70		
	Total	356	11.30	2.61		
Desire to win	Basketball	84	12.14 <sup>b</sup>	2.72	9.127	0.000*
	Soccer	94	11.09	3.37		
	Taekwondo	108	10.36 <sup>c</sup>	2.50		
	Swimming	70	12.18 <sup>a</sup>	2.39		
	Total	356	11.33	2.88		
Risk-taking	Basketball	84	13.64	4.21	3.093	0.027*
	Soccer	94	13.80 <sup>a</sup>	3.91		
	Taekwondo	108	12.31 <sup>b</sup>	3.82		
	Swimming	70	12.70	4.20		
	Total	356	13.09	4.05		

\*p &lt; 0.05

a &gt; b &gt; c.

playfulness levels ( $97.26 \pm 16.02$ ) and got the highest scores on the “Social Adaptation” sub-scale ( $40.50 \pm 6.67$ ) while obtaining the lowest scores on the “Game Passion” sub-scale ( $21.02 \pm 7.00$ ). In addition, we found significant differences in playfulness levels by age and branch, but it was not the case by gender. At the same time, we determined that team sports athletes aged 10-14 years exhibited higher playfulness levels, and certain variables manipulated playfulness levels. Sports environments, where individuals frequently feel togetherness, provide individuals with significant achievements. These achievements reinforce social adaptation, integration, and cooperation. Individuals catching the opportunity to experience the dynamics of

life thanks to plays also have the chance to be a group with sportive activities. Therefore, play and sports, which are two intertwined concepts and generally cannot be considered independent from each other, posing substantial impacts on the lives of individuals.

Overall, the finding that individuals doing team sports showed higher playfulness levels than those engaging in individual sports can be considered to confirm the interaction between sports and social adaptation, integration, and cooperation. As a result, we may conclude that the characteristics of being a team athlete overlap with those of playfulness. We expect future research on playfulness with different branches and groups will contribute to the field.

**Table 6.** T-test results between the scale and its sub-scales by branch category.

	Branch category	n	$\bar{x}$	ss	t	p
Playfulness	Individual sports	178	95.15	15.35	-2.505	0.013*
	Team sports	178	99.38	16.44		
Game passion	Individual sports	178	20.32	7.03	-1.890	0.060
	Team sports	178	21.72	6.92		
Social adaptation	Individual sports	178	40.09	6.26	-1.151	0.250
	Team sports	178	40.91	7.06		
Desire to play	Individual sports	178	11.19	2.54	-0.850	0.396
	Team sports	178	11.42	2.69		
Desire to win	Individual sports	178	11.07	2.60	-1.676	0.095
	Team sports	178	11.58	3.12		
Risk-taking	Individual sports	178	12.46	3.97	-2.975	0.003*
	Team sports	178	13.73	4.04		

\*p &lt; 0.05.

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**Citation:** Uca, M., Yılmaz, B. H., Durhan, T. A., and Çakıroğlu, T. (2021). Exploring playfulness levels of young athletes doing individual and team sports. *African Educational Research Journal*, 9(3): 817-824.

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