

Original Article

The relative age effect: coaches' choices as evidence of social influence on youth handball

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Abstract:

The Relative Age Effect (RAE) is the object of study in the sports environment with results that relate this effect to the maintenance or withdrawal of athletes in sports practice. However, this effect is seen from a biological perspective and little is observed about the social effects resulting from the initial advantages that may be precursors of future benefits. Purpose: The aim of this study was to verify the participation time, the coach's perception about the athletes' performance, the game position and their relationship with the age of under-14 female and male handball players in a state competition in Brazil. Methods: Where participated in this study 88 under-14 handball athletes from four women's teams and four men's teams and eight coaches from these respective teams, in a total of 16 matches analyzed. For this, it were collected the birthdates, average time played and the offensive positions that each athlete participated in the matches. Also, each coach ranked their team's players based on himself subjective perceived performance. Players were divided by gender, and each gender was divided into four quartiles by age, with Q4 being the youngest and Q1 the oldest. Results: Older athletes play more time than younger athletes, coaches perceive older players as better players, older players in the position of point guard and younger players performs more in extreme positions. Conclusion: It was verified that the coach's perception about the athletes' performance is directly related to the player time participation and the player's position in the game. Thus, the RAE is determined by the people involved in the sport context, in this case, the coach and his perception about the athletes' development, which influences the opportunities for the practice, potentiating social phenomena such as Pygmalion and Galatea effects.

Keywords: Youth Sports; Self-fulfilling prophecy; Competition; Mathew's Effect.

Introduction

The Relative Age Effect (RAE) is a widely studied subject regarding factors that contribute to the career success of an elite athlete. Relative age, that is, the age of an athlete when relativized with his peers, has emerged as a consistent and determining secondary factor that interferes with an athlete's likelihood of achieving their highest level of sports performance (Baker, Schorer, and Copley, 2010; Gastin, Allan, Bellesini, & Spittle, 2017; Gómez-López, Granero-Gallegos, Molina, & Ríos, 2017; Mujika, Vaeyens, Matthys, Santisteban, Goiriena, & Philippaerts, 2009; Musch & Grondin, 2001).

This effect is generally associated with what Merton (1995) describes as the Matthew Effect, as a reference to the biblical passage from Matthew 13:12: "Unto every one that hath shall be given, and he shall have abundance: but from him that hath not shall be taken away even that which he hath", showing that the initial advantages can be precursors of future benefits. When transferred to the sporting context, investigations about this phenomenon present their results by distributing the amount of athletes allocated according to the months of birth that are divided into quartiles of three months each (Chittle, Horton, & Dixon, 2016; Delorme, Boiché, & Raspaud, 2010; Mujika et al., 2009; Thompson, Barnsley, & Stebelsky, 1991). From these results, it is postulated that over the years of sports training, because they are older than their teammates, athletes born in the first quartile of the year have advantages over athletes born in the other months of the year.

This same a model of analysis (based on the division of young athletes into quartiles) also verified in studies on the incidence of the RAE on children and youth sports in different practice contexts, both in analyzing performance sport (Delorme & Raspaud, 2009; García, Aguilar, Galatti, & Romero 2015; Matthys, Vaeyens, Coelho-e-Silva, Lenoir, & Philippaerts, 2012) and in studying its developments in the educational environment (Copley, Abraham, & Baker, 2008; Gastin et al., 2017). The same trends are also observed in these contexts of organized sports practice, and the debates usually focus on the relationships established between the RAE and the effects of early maturation, as conditions that are associated with and influence the permanence over time of those young people with physical and performance advantages (Delorme, Chalabaev, & Raspaud, 2011; Musch & Grondin, 2001; Sherar, Baxter-Jones, Faulkner, & Russell., 2007).

The RAE exists in the most diverse sports, but not in all (Musch & Grondin, 2001; Delorme, Boiché, & Raspaud, 2009). Sports with championships with a higher level of competitiveness seem to be more associated with the effect of age (Cobley, Baker, Watie, & McKenna, 2009; Musch & Grondin, 2001). That way, we see modalities as basketball (Delorme et al., 2011; Ibáñez, Mazo, Nascimento, & Garcia-Rubio, 2018), football (Müller, Gehmaier, Gonaus, Raschner, & Müller, 2018; Peña-González, Fernández-Fernández, Moya-Ramón, & Cervelló, 2018) and handball (Gómez-López, Angosto Sánchez, Ruiz Sánchez, & Pérez Turpin, 2017; Leonardo, Lizana, Krahenbühl, & Scaglia, 2018; Fonseca, Figueiredo, Gantois, de Lima-Junior, & Fortes, 2019).

Studies on the RAE performed on youth sports may present notes that allow us to understand its perpetuation during elite sports practice. However, rather than analyzing the distribution of birth dates of young athletes and discussing the phenomenon from biological elements, we consider it fundamental to understand the other information that can be correlated in order to broaden the possibilities for analysis of this phenomenon. Thus, understanding about social phenomena can also be established as sources of explanation for recent findings about the effect of relative age. Hancock, Adler and Côté (2013) presented a theoretical proposal based on phenomena associated with the social interaction established between coach and athletes, highlighting the Pygmalion and Galatea effects. The Pygmalion effect is based on the coaches' higher expectation of the most skilled athlete, resulting in the fact that this athlete receives more instruction and greater attention than other players. Thus, the better performance based on initial maturation perception gives the athletes benefits to improve their practice, making them stand out in their action. Consequently, there is also the Galatea Effect, where the expectations placed on some athletes give them a better perception of their own performance, increasing expectations and self-efficacy (Hancock et al., 2013).

From these concepts, some social variables become important to be analyzed, such as: 1) the opportunities for competitive participation offered to athletes as one of the important factors to understand the young athlete's permanence in competitive practice (Burton, Gillham, & Hammermeister, 2011); 2) the possibility of the protagonism of the athlete in the matches, considering that in collective sports some attack game positions have higher demands, leading to a deeper learning of strategic-tactical-technical aspects and greater opportunity to act effectively in the game (Ibáñez et al., 2018). According to Anton-García (2000), the players of the first offensive line of handball (center and side guards) are primarily responsible for enabling greater or lesser dynamics of play for their team due to their ability to integrate technical-tactical aspects with the necessary frequency, continuity and alternation. Therefore, the position in which the athlete plays can be an indicator of performance due to his greater or lesser strategic-tactical-technical demands that influence his opportunity to act effectively in the game; and 3) understanding how coaches manage the different levels of performance perception of their athletes in the sports setting, as this may be one of the criteria associated with the coach's greater pedagogical dedication to the teaching-learning process (Leonardo et al., 2018).

In handball, as in many sports, competitive participation is organized based on chronological age (typically one or two-year-age categories). These age divisions are ineffective in terms of competitive equity, mainly up to the under-14 category, because there may be significant differences in age and learning experience in this large time interval between members classified by age groups in the same category (Cobley et al., 2009; Sherar et al., 2007; Schorer, Wattie, & Baker, 2013). It is therefore interesting that competitive contexts organized along these lines are researched, taking into consideration how the RAE relates to social aspects related to the coach's choices regarding their group of athletes.

The aim of this study was to analyze how the time of participation in handball matches, the perception of performance of the coaches and the game position of the athletes are related to the chronological variables of the relative age effect. For this, our study was conducted in a state handball competition in the under-14 female and male category.

Material & methods

Study Design

This is a cross-sectional study. Data were collected during a state handball championship, that involving all official categories of handball (under-12, under-14, under-16, under-18, under-20 and adults).

This survey was approved by the ethics committee of the Federal University of Goias, number CAAE: 85700518.1.0000.5083.

Participants

Where participated in this study 88 under-14 handball athletes from four women's teams and four men's teams and eight coaches from these respective teams, in a total of 16 matches analyzed.

Data collection

The birthdates of the players participating in the championship were collected from the registration form. The centesimal age calculation of the athletes was adopted based on the statement by Carraco, Galatti, Massa, Loturco, and Abad (2020, p.330) that “the centesimal age (CA) may be more appropriate than nearly age to explain the chronological effects related to successful performances, as this refers to every single day of the athletes' life”.

In this study we selected the under-14 category, which comprises players born between the years 2005, 2006 and 2007. Only one player born in 2008 was identified and was not included in the study because it is an

age outside the category (first under-12 category) and being a single player, which could compromise data analysis. Players were divided by centesimal age in four groups (Q1 = older, Q2 = above median, Q3 = younger and median, Q4 = younger), this division was performed by age quartiles.

The coaches ranked the players of their team based on their subjective perceptions. Since teams had different numbers of participants, ranging from nine to 15 athletes per team, we developed a Likert scale categorization of one to five points, where the perceived athlete with a strongest performing received five points and the perceived athlete with a weakest performing received one point. Players' participation times in each game were collected. In each match analyzed, two researchers (one for each team) noted the time in and out of each player on the court, using the official match timer (electronic scoreboard) as the basis for the analysis. Each researcher received a table with the name and number of the player and manually noted the time of entry and exit of each player, as many times as it occurred, in each of the analyzed games. From this data, the average participation time of each player was calculated, in which the times played in each game were summed and divided by the number of games in which the player was present. For example, the same player (player A) in game 1 played 10 minutes, in game 2 played 15 minutes, in game 3 played 11 minutes and in game 4 played 18 minutes, the times were added ($10 + 15 + 11 + 18$) and divided by four (number of games that participated), the player A had the total average of 16 minutes. In each match analyzed, the researchers collected the frequency that athletes played in each attack positions, being wings (F and D); side guard (A and C); pivot (E) and central point guard (B), and Goalkeeper, see figure 1.

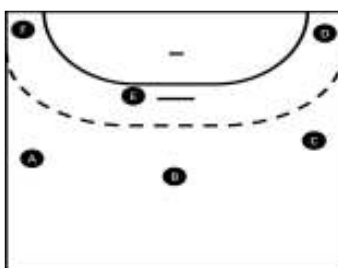


Figure 1. The most frequent positions of handball in attack.

Statistical analysis

The Shapiro-Wilk test was used to verify the normality of the data. The Kruskal Wallis test was used to compare the average time of participation of the games between the age groups (quartiles). We used the chi-square and frequency tests to compare both game position and coach ranking by quartiles. Spearman's correlation was used to verify the relationship between the variables of average time of participation in the game, age groups, game position and ranking of the coach. Analyses were performed separately for females and for males. For the analyzes it was considered $p \leq 0.05$.

Results

Table 1 shows the average participation times per game. It is observed that in girls the older age groups play longer than the younger group, and the average time of participation in the games increases according to the age increase. However, statistical analysis found difference only between the youngest group (Q4) in relation to the Q2 group ($p=0.01$) and also in relation to the Q1 group ($p=0.00$). That is, older girls play more time than younger girls. In males it is also possible to observe the increase in the average time of participation with age, however, the significant difference appears only between groups Q1 and Q4 ($p=0.01$). That is, older boys play longer than younger ones, however, in the nearby groups there is no difference in playing time.

Table 1. Average time of participation in matches by quartiles.

Quartile	Female					Male				
	N	Time (min)	SD	Min.	Max.	N	Time (min)	SD	Min.	Max.
Q1	11	32.41**	8.41	16.16	39.58	8	35.10†	8.91	14.77	40.00
Q2	11	29.49*	8.46	18.94	40.00	10	30.48	6.68	16.58	38.44
Q3	11	25.60	14.23	0.50	40.00	12	28.22	13.29	6.33	39.75
Q4	12	12.95	11.16	2.08	38.86	11	16.09	13.99	0.00	40.00

* Statistical difference from quartile 1, $p=0.01$ (Kruskal-Wallis Test)

** Statistical difference from quartile 1, $p=0.00$ (Kruskal-Wallis Test)

† Statistical difference from quartile 1, $p=0.01$ (Kruskal-Wallis Test)

Min = minutes

Table 2 shows the results regarding the predominant playing position among players according to age group. It is evident that in both feminine and masculine the younger ones act more in the position of the wings,

older girls playing in the position of central point guard. Also, that there are no younger players acting as central point guard. In the male group, statistically, there are fewer side guards than expected. However, in the male group, there are more side guards in Q3, and in the female group there are more central point guards than expected in Q1.

Table 2. Most frequent game position by age quartile.

Quartile	Female						Total	Male						Total
	Position					Position								
	GOL	WG	SG	PV	CG	GOL		WG	SG	PV	CG			
Q1	N	1	2	4	1	3	11	1	2	3	1	1	8	
	Expected N	2	3.9	3.2	1	1	11	1	3.4	2.2	0.8	0.6	8	
	%	9.10%	18.20%	36.40%	9.10%	27.30%	100%	12.50%	25.00%	37.50%	12.50%	12.50%	100%	
	Adj. Res.	-0.9	-1.4	0.6	0	2.5*	0	-1.1	0.7	0.3	0.6			
Q2	N	2	3	3	2	1	11	1	4	2	1	2	10	
	Expected N	2	3.9	3.2	1	1	11	1.3	4.3	2.8	1	0.8	10	
	%	18.20%	27.30%	27.30%	18.20%	9.10%	100%	10.00%	40.00%	20.00%	10.00%	20.00%	100%	
	Adj. Res.	0	-0.7	-0.1	1.2	0		-0.3	-0.2	-0.6	0	1.7		
Q3	N	3	3	4	1	0	11	1	3	6	2	0	12	
	Expected N	2	3.9	3.2	1	1	11	1.5	5.1	3.3	1.2	0.9	12	
	%	27.30%	27.30%	36.40%	9.10%	0.00%	100%	8.30%	25.00%	50.00%	16.70%	0.00%	100%	
	Adj. Res.	0.9	-0.7	0.6	0	-1.2		-0.5	-1.5	2.1*	0.9	-1.2		
Q4	N	2	8	2	0	0	12	2	8	0	0	0	10	
	Expected N	2.1	4.3	3.5	1.1	1.1	12	1.3	4.3	2.8	1	0.8	10	
	%	16.70%	66.70%	16.70%	0.00%	0.00%	100%	20.00%	80.00%	0.00%	0.00%	0.00%	100%	
	Adj. Res.	-0.1	2.6*	-1.1	-1.3	-1.3		0.8	2.8*	-2.2*	-1.2	-1		

* p=0.003; $\chi^2=15.079$

* p=0.018; $\chi^2=16.469$

Game position: Goalkeeper (GOL); Wing (WG); Side Guard (SG); Pivot (PV); Central Point Guard (CG).

Table 3 shows coaches' perceptions of their players' performance. It's possible to see that in females there are more players than expected being recognized with poorer performance in younger group and more female players being considered to perform better in older group. In males, although presenting a slightly more diverse distribution, it is possible to observe that those considered better are found in older group.

Table 3. Ranking of the coach, divided by age quartiles.

Coach Ranking (Likert scale)		Female					Male				
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
1	N	0	1	2	7	10	1	3	1	4	9
	Expected N	2.4	2.4	2.4	2.7	10.0	1.8	2.2	2.6	2.4	9.0
	%	0.0%	10.0%	20.0%	70.0%	100%	11.1%	33.3%	11.1%	44.4%	100%
	Adj. Res.	-2.0*	-1.2	-0.4	3.5*		-0.7	0.7	-1.4	1.4	
2	N	1	3	2	3	9	0	3	2	3	8
	Expected N	2.2	2.2	2.2	2.4	9.0	1.6	2.0	2.3	2.1	8.0
	%	11.1%	33.3%	22.2%	33.3%	100%	0.0%	37.5%	25.0%	37.5%	100%
	Adj. Res.	-1.0	0.7	-0.2	0.5		-1.6	1.0	-0.3	0.8	
3	N	4	1	2	1	8	1	1	3	3	8
	Expected N	2.0	2.0	2.0	2.1	8.0	1.6	2.0	2.3	2.1	8.0
	%	50.0%	12.5%	25.0%	12.5%	100%	12.5%	12.5%	37.5%	37.5%	100%
	Adj. Res.	1.9	-0.9	0.0	-1.0		-0.6	-0.9	0.6	0.8	
4	N	0	5	3	1	9	2	1	4	1	8
	Expected N	2.2	2.2	2.2	2.4	9.0	1.6	2.0	2.3	2.1	8.0
	%	0.0%	55.6%	33.3%	11.1%	100%	25.0%	12.5%	50.0%	12.5%	100%
	Adj. Res.	-1.9	2.4	0.7	-1.2		0.4	-0.9	1.4	-1.0	
5	N	6	1	2	0	9	4	2	2	0	8
	Expected N	2.2	2.2	2.2	2.4	9.0	1.6	2.0	2.3	2.1	8.0
	%	66.7%	11.1%	22.2%	0.0%	100%	50.0%	25.0%	25.0%	0.0%	100%
	Adj. Res.	3.3*	-1.0	-0.2	-2.0*		2.4*	0.0	-0.3	-1.9	

*p=0.000; $\chi^2=31.249$

*p=0.012; $\chi^2=14.762$

Likert Scale: 1=Weakest performing; 2= Below average performance; 3= Median performance; 4 = Above average performance and 5 = Strongest performance.

Table 4 shows the results of the correlation between the variables age (per quartile), average playing time, coach ranking and playing position. It is possible to observe positive correlation between all variables. In females, the playing time variable was strongly correlated with ranking, age and position, respectively. In males,

the time variable also had a higher correlation with the age and ranking, age had a higher correlation with playing time. For males, position had less correlation with the other variables.

Table 4. Correlation between the variables of age (quartile), playing time, position and ranking of the coach.

		Female				Male			
		Age	Ranking	Time	Position	Age	Ranking	Time	Position
Age	Pearson	1	0.558**	0.554**	0.418**	1	0.360*	0.503**	0.346*
	Correlation								
	Sig. (2-tailed)		0.000	0.000	0.004		0.021	0.001	0.029
	N	45	45	45	45	41	41	41	40
Ranking	Pearson	0.558**	1	0.694**	0.404**	0.360*	1	0.574**	0.293
	Correlation								
	Sig. (2-tailed)	0.000		0.000	0.006	0.021		0.000	0.067
	N	45	45	45	45	41	41	41	40
Time	Pearson	0.554**	0.694**	1	0.510**	0.503**	0.574**	1	0.385*
	Correlation								
	Sig. (2-tailed)	.000	.000		.000	.001	.000		.014
	N	45	45	45	45	41	41	41	40
Position	Pearson	0.418**	0.404**	0.510**	1	0.346*	0.293	0.385*	1
	Correlation								
	Sig. (2-tailed)	0.004	0.006	0.000		0.029	0.067	0.014	
	N	45	45	45	45	40	40	40	40

** Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Dicussion

Our data show that older players play more time than younger players, noting that age is a relevant factor for participation in games, thus older is an advantage to being able to play longer in games. The results observed in our study are in agreement with other studies on the RAE and time of competitive participation, such as the research by Leonardo et al. (2018) who analyzed under-13 men's handball competitions and found that even a slight age difference within the same group can reveal greater opportunities for competitive practice for older players on the team. Analyzing the teams and clubs in the Murcia region, the study by Gomez-Lopez et al. (2017) found that in the children's category (under 14) more players born in the first half of the year are selected.

It is possible to verify, especially in the youth categories, that the RAE is quite present and that being older is an advantage. In addition to maturational aspects, this difference may also be related to greater sports experience, which is crucial for their cognitive development and for the perception of competence of these athletes (Haycraft, Kovalchik, Pyne, Larkin, & Robertson, 2018; Musch & Grondin, 2001).

Differences between players make the time to participate in matches reduced, resulting in less experience and sports learning, which leads the players to low self-perception of the ability and consequent withdrawal of sports practice (Cobley et al., 2009; Delorme et al., 2011). As a consequence, we can verify in the study by Fonseca et al. (2019) found that athletes born in the first months of the year are the majority in the U19 handball world championship, demonstrating the RAE on their continuity at the international level. Even though the study by Delorme et al. (2009) found no statistical difference, it was identified a trend was detected in RAE from male handball players in French senior high-level championships. These studies show that there is a tendency to the effect of age in male handball mainly.

Our study shows that coaches' perceptions of athletes' performance are also directly related to age, so that these coaches studied perceive older players as better. Regarding the coaches' perception about the career prediction of soccer players' athletes, the study by Cripps, Hopper and Joyce (2019) observed that when the athletes were early maturers, the coaches had low accuracy when identifying those who later stood out in the sport, however, the accuracy was higher with late maturators. Which leads to judgment errors about athletes' careers, as they are being perceived as more skilled just due to being relatively older.

Regarding these relationships between the perception of experienced observers and the relative age of young athletes, Mann and van Ginneken (2017) show that from 11 years of age the effect of relative age influences the perception of sports performance in soccer, as well as in study by Peña-González et al. (2018), where coaches showed higher expectations of performance over older players.

The perception of the ability of the elders also reflects on the positions of the players in the games. Ibáñez et al. (2018) in a study with basketball show that the RAE is related to the position of the game by observing the predominance of older players in the guard position. In our study we found that older players, who were also considered to be top players in the coach's rank, play longer in the position of point guard (center and side), while younger players perform more in wing position.

These data, when correlated with Table 1, shows that the effective participation on the playing field between older and younger players could be offer different learning opportunities with to older athletes' advantages.

We can understand that coaches associate the peripheral positions of the game (wings) as places of lower performance and importance to the results of the games, while central functions (guards) are understood as spaces of higher performance, therefore, of greater importance. According to Anton-Garcia (2000), first-rate players (that is, point guards) are the most responsible for the mobility of the attack game, which can be more or less dynamic according to the players' ability to play in these positions.

Thus, in addition to older players performing in perceived higher demands, they still perform longer in the game than younger players, who are mostly relegated to court shortly combined with perceived secondary functions.

Based on the idea that the game is an important sports learning environment (Scaglia, 2017), we can infer that by participating more time in matches in competitions of their category and in positions of greater technical-tactical demands, athletes perceived as more talented and who are older at a relative age play more and higher quality and have learning advantages over those who participate less in the competition.

This demonstrates that, although related to biological aspects, such as the athlete's maturation state (Delorme et al., 2011; Johnson, Faroog, & Whiteley, 2017; Musch & Grondin, 2001; Sherar et al., 2007), the solution for RAE is not restricted to the already proven capacity that coaches can accurately identify if the athlete is a late or early maturation (Romann, Javete, & Fuchslocher, 2017), because the RAE is embedded in a social context in which lived experiences are important for the development of these young athletes.

This idea rests on the sociological concept of "self-fulfilling prophecy" (Merton, 1995), in which it is explained as increasing advantages to those who have greater opportunities. In this context, three social agents are important for the athlete's development: the family, the coach and other athletes (Hancock et al., 2013). Specifically in our study, we were able to verify the coaches' actions and their perceptions of the one who is the most skillful and therefore should play longer and in positions of greater responsibility to ensure the positive outcome in the match. This perception directly interferes with the opportunity for participation and sports development of the young athlete. The belief that this player is better creates greater opportunity for their participation, and greater participation gives them more learning opportunities and this learning makes them better than other players who do not have the same opportunities for competitive participation in volume and which leads to the social effects conceptualized as Pygmalion Effect and Galatea Effect (Hancock et al., 2013).

Therefore, in addition to biological agents, social agents have a great influence on the RAE, and in this study, it was observed that the coach is an important agent for promoting this effect by allowing, in handball matches in the championship included in the in this study, older athletes play longer and in positions of greater responsibility. With this it can be seen that there is a serious problem related to the role given to children and youth competitions as a space explicitly oriented to victory and not to participation in the coaches conception. Who is perceived to perform better - and who is also the oldest in the competitive age - is also most used in matches.

Thus, the data presented in this study may indicate a social pathway complementary to findings based on biological aspects that may broaden the debate on the findings often found in high-level sports performance, especially in the midst of collective sports, on the effects that the relative age has in the permanence of the sportive practice.

From the context analyzed, the opportunity of competitive handball practice for young people up to 14 years old is influenced by the coaches' perceptions that offering greater competitive practice to the older athletes of their team, aspects that can directly interfere in the maintenance of the sportive practice of young athletes.

We consider that the correlations between the variables observed in the present study point to the need for future investigations with a similar research design so that the evidence found can be compared in different contexts, expanding the possibilities of analysis and further enriching the findings about the phenomenon of the effect of relative age from the socio cultural perspective.

In agreement with Musch and Grondin (2009), there are some possibilities to minimize the effects of age, such as classification by biological and non-cronological age; division of age categories into smaller intervals; competitions that last less time, that is, less than a year; distribute players by RAE; give equal playing opportunities to all players, regardless of performance, in the youth categories; and provide different competitions aiming at the different performances of the players.

Conclusions

We found that the coaches identified older players with better performance, this perception contributed to these players having more time to participate in games in the competition. In addition, older players have also occupied more centralized positions in the game, which are related to decision making and game strategies.

Coaches need to know the relationship between the effect of relative age on their choice and perception of the fittest players, which directly interferes with the players' participation time in matches. Therefore, we propose that performance in youth categories may not be the only factor determining players' participation time, at the risk of not giving the youngest chances to learn playing, as they are those who need this learning time.

In practice, the data from this research combined with other studies on the effect of relative age show the need to propose different forms of participation of players of different ages, and that is independent of the perception of performance, at least in competitions of children and adolescents, where the competitive purpose must be focused on learning and sports participation.

Finally, training programs for coaches must invest on the RAE theme, allowing coaches to understand that the birth dates of children and young people should be relativized in terms of momentaneous performance. Understanding that the youngest within the same category (under-14, under-12) need more time and patience can interfere with the Pygmalion Effect. The concept of a coach as a sports educator can help extend this effect to other players, respecting their differences in sports development and learning.

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