

The relative age effect on performance in the individual time trial and the one-day race in the U17 category riders.

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Abstract:

The aim of this study is to determine the relative age effect on performance in the individual time trial and the one-day race in the U17 category riders. Sixty-two (62) male riders (Age=15.24±0.57) in the individual time trial event and fifty-six (56) in the one day race (Age=15.28±0.59), participated in our study. The riders were divided into 8 birth octiles. Better individual time trial performance by riders in the first and fourth octile of the even-numbered year (2006). Better one day race performance of riders belonging to the four octiles of the same year (2006).

Keywords: relative age effect, road events, U17 category

Introduction:

Like most competitive sports, youth road cycling competitions are divided into age categories based on chronological age as defined by the rider's date of birth. These competitions are organized by grouping riders born in the same time period into biannual age brackets. According to JörgSchorer and others (2013) these cut-off dates are used in an effort to reduce maturation differences and create homogeneous competition groups that allow for more judicious coaching and evaluation of athletes, as well as to ensure equal opportunity for success and fair competition for all athletes in youth sports.

These differences result in athletes who have both a more developed physique and body type compared to their younger peers, and these youth are therefore more likely to be selected for elite teams and talent development programs than those born later in the same year.

Then, they have more opportunities to compete in sports and, as a consequence, improve their psychological, technical, and tactical skills, which may be important characteristics for career development, and tactical skills, which may be important characteristics for athlete development (Joseph Baker, A. Jane Logan, 2007). All of this creates the phenomenon known as the relative age effect.

According to Roger H. Barnsley, Angus H. Thompson (1988), relative age effects are differences in age between individuals who have been grouped together for a performance activity, and they have been found to discriminate against athletes born late in the year. Although this type of discrimination may be unintentional, it should be considered important.

Several studies have identified the relative age effect in many individual sports, including swimming (Aldo Costa and others, 2013), track and field (Michael Romann, StephenCobley, 2015) and winter sports (Lisa Müller and others, 2015). This phenomenon has also been identified in team sports, such as soccer (Michael Romann, JörgFuchslocher, 2013), basketball (JörgSchorer and others, 2011), and handball (Claude Karcher and others, 2014).

A study (KamelSadouki, 2020a) was conducted on a group of twenty-nine U17 riders, which, the purpose is to determine what differences might exist between 1st and 2nd year U17 riders from an anthropometric and maximal anaerobic power perspective. However, studies examining the relative age effect on road cycling performance are lacking. The lack of information on these particularities leads us to investigate them. Following this, a question arise:

What is the relative age effect on performance in the individual time trial and the one-day race in the U17 category riders?

The hypothesis:

We suppose that performance in the individual time trial and the one-day race will be able to vary between birth octiles in the U17 category riders.

The objective:

In order to test this hypothesis, we set a single objective: to determine the relative age effect on performance in the individual time trial and the one-day race in the U17 category riders.

1. Research Terms and Definitions :

1.1. Road cycling:

Road cycling requires the rider an aerobic capacity for prolonged exertion and an anaerobic potential to be called upon in breakaways, hill climbing, and 'all-out' sprints. Road cycling is the hardest endurance sport. It includes several types of events, including stage races, one-day race, individual time trial and team time trial.

1.2. One day race:

A one day race is a competition that takes place over a single day with a single start and finishes with distances that can reach 80 km for the U17 category.

1.3. Individual Time Trial (ITT):

This is an individual start event with a specified interval between each rider, which may be increased between the riders starting last. And whoever achieves the best time is declared the winner. For the U17 category, this event is part of the annual calendar of competitions in Algeria, either as a national championship or as a round of the Algerian cup.

1.4. The relative age effect:

Relative age is the chronological age difference between the oldest and youngest individuals in an age group determined by birth date and age group cut-off date. The concept of a relative age effect highlights the difference in age (up to one year) between children who are grouped in the same age group. According to Warner H. Helsen and others (2005), the relative age effect refers to the performance-related advantage of being born early in the selection year.

1.5. Adolescence:

Adolescence begins around the age of 13 to 14 years and ends around 17 to 18 years for girls, while for boys, it begins around 14 to 15 years and ends between 18 and 19 years. It marks the end of an evolution that starts in childhood and ends in the adult stage. It is characterized by a slowdown in the evolution of all the parameters of growth and development. For a child, the annual increase in height and weight used to reach 10 cm and 9.5 kg respectively, now it hardly exceeds 1 to 2 cm and 5 kg, (Jürgen Weineck, 2001).

2. Previous and related studies:

2.1. Study n°01: Alexander Ulbricht and others (2015)

Title : The Relative Age Effect and Physical Fitness Characteristics in German Male Tennis Players

The aims of the study were to test: 1) whether the relative age effect (RAE) was prevalent in young (U12-U18) German male tennis players; 2) the potential influence of age and/or skill level on RAE and 3) whether maturity, anthropometric and fitness measures vary according to birth date distribution in elite youth tennis players.. RAEs were more prevalent at higher competitive levels with more players born in the first quarter of the year compared with the reference population for ranked (29.6%), regional (38.1%) and national (42.1%) players. RAEs are present in the competitive system and it was more pronounced at higher competitive levels. Compared with early born, late born players who were selected into elite squads did not differ in maturation, anthropometric and fitness characteristics.

2.2. Study n°02 : Krystian Rubajczyk, Andrzej Rokita (2018)

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Title : The Relative Age Effect in Poland's Elite Youth Soccer Players

The current study presents research on the RAE in elite youth soccer players in Poland. Players in the Central Junior League (CLJ) finals represent 0.59% of the 25,756 players under 20 years old (U20). To reduce the RAE related to identifying soccer talent, tools should be implemented to optimize the player-selection process, such as those that consider the biological development of a player.

3. Methods:

3.1. Research Methodology:

The descriptive method is used by many researchers in many different fields, including sport, to study many of the current cases. We opted for this method, which is adapted to the nature of the problem and the variables in our study, in order to achieve the results in light of the available data.

3.2.Society and sample Study:

Our study sample is composed of riders, participating in the U17 category and belonging to specialized clubs affiliated with cycling leagues in Algeria (center, east, west and south). The study sample was selected deliberately. As part of the national calendar of competitions for the U17 category, the first round of the Algerian Cup was organized in March 26, 2022 by the league of Biskra, in the city of El Kantara (see appendices). Sixty-two (62) male riders (Age=15.24±0.57) in the individual time trial event and fifty-six (56) in the one day race (Age=15.28±0.59), participated in our study. The riders were divided into 8 birth octiles: octile n°01 (10), octile n°02 (6), octile n°03 (8), octile n°04 (7), octile n°05 (7), octile n°06 (8), octile n°07 (10), octile n°08 (6). The average age of the riders within the octiles are presented in table 1.

Table 1. Average age of riders by octiles of birth

Octiles	Individual time trial		Standard deviation	One day race		Standard deviation
	N	Mean		N	Mean	
1	10	16,09	0,069	11	16,11	0,075
2	6	15,83	0,061	5	15,84	0,068
3	8	15,55	0,060	8	15,55	0,060
4	7	15,34	0,085	6	15,34	0,093
5	7	15,11	0,100	5	15,14	0,096
6	8	14,83	0,059	6	14,82	0,056
7	10	14,64	0,067	9	14,64	0,070
8	6	14,38	0,069	6	14,38	0,069
Total	62	15,24	0,573	56	15,28	0,59

3.3.Research Tools and Data Processing:

Riders' birth dates were divided into eight octiles, each corresponding to the eight octiles of the two-year period.

Riders born in the even-numbered birth year (2006) were therefore included in one of the following groups:

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- Octile 1 (O1), cyclists born between January 1 and March 31
- Octile 2 (O2), cyclists born between April 1 and June 30 ;
- Octile 3 (O3), cyclists born between July 1 and September 30;
- Octile 4 (O4), cyclists born between October 1 and December 31.

Riders born in the odd-numbered birth year (2007) were classified as follows.

- Octile 5 (O5), cyclists born between January 1 and March 31
- Octile 6 (O6), cyclists born between April 1 and June 30 ;
- Octile 7 (O7), cyclists born between July 1 and September 30;
- Octile 8 (O8), cyclists born between October 1 and December 31.

Sixty-two riders of our sample took the start in the first round of the Algerian cup of the U17 category. This round was ride in two days, the first day was devoted to the individual time trial and the second took place the one day race. The rankings divided by birth octiles of this event are detailed in table 2. The detailed results of the time trial and the road race are presented in the appendix.

Table 2. The rankings of riders divided by even-numbered (2006) birth year and odd-numbered birth year (2007) birth years in the time trial and one day race events.

Year	Octiles	Ranking in the individual time trial (Mean $\pm$ standard deviation)	Rankings in the one day race (Mean $\pm$ standard deviation)
2006	1	24,40 $\pm$ 12,66	27,27 $\pm$ 15,42
	2	28,17 $\pm$ 21,90	13,60 $\pm$ 10,26
	3	35,50 $\pm$ 20,83	30,50 $\pm$ 16,89
	4	20,71 $\pm$ 15,65	25,33 $\pm$ 12,64
2007	5	40,71 $\pm$ 22,57	20,40 $\pm$ 20,35
	6	35,13 $\pm$ 16,23	37,17 $\pm$ 15,50
	7	29,10 $\pm$ 16,74	24,89 $\pm$ 14,42
	8	42,33 $\pm$ 14,89	47,17 $\pm$ 7,83

3.4. Statistical methods:

All statistical analyses were performed using SPSS version 22,0 for Windows. Descriptive statistics (means) were determined for all variables. Comparisons between the octiles of the two birth years (2006 and 2007) were made using a non-parametric Mann-Whitney test. The eta squared (η^2) was calculated using the following formula: $\eta^2 = Z^2 / n - 1$

The eta squared is used as a measure of effect size, yielding, 0,01 (small), 0,06 (medium) and 0,14 (large). The significance level was set at 5%.

4. Exposure, Analyses and results exam:

In this section, we will present the results and analyses of our study. The comparison between the averages of the ranks divided into octiles of 2006 and 2007 birth years, will be carried out two by two, starting with the time trial, then, the one day race.

4.1. The comparison between the number of riders born in (1st to 4th) octiles of 2006, in the individual time trial event:

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The comparison between the number of riders born in the first four octiles (1st to 4th), showed us that the performance of the 4th octile is the best with an average value of $20,71 \pm 15,65$ ranks. On the other hand, the performance of the 3rd octile is the lowest with a mean value of $35,5 \pm 20,83$ ranks. The statistical analysis showed us the absence of difference between the means of the octiles for the significance level ($p > 0,05$).

4.2. The comparison between the number of riders born in (5th to 8th) octiles in 2007, in the individual time trial event:

On the other hand, the comparison between the number of riders born in the (5th to 8th) octiles of the 2007, showed us that the lowest performance, is that of the riders belonging to the 8th octile, with a value of $42,33 \pm 14,89$ ranks, while the best performance is that of the riders belonging to the 7th octile. The statistical analysis showed us the absence of difference between the means of the octiles for the significance level ($p > 0,05$).

4.3. The comparison between the number of riders born in the octiles of the 2006 and 2007, in the individual time trial event:

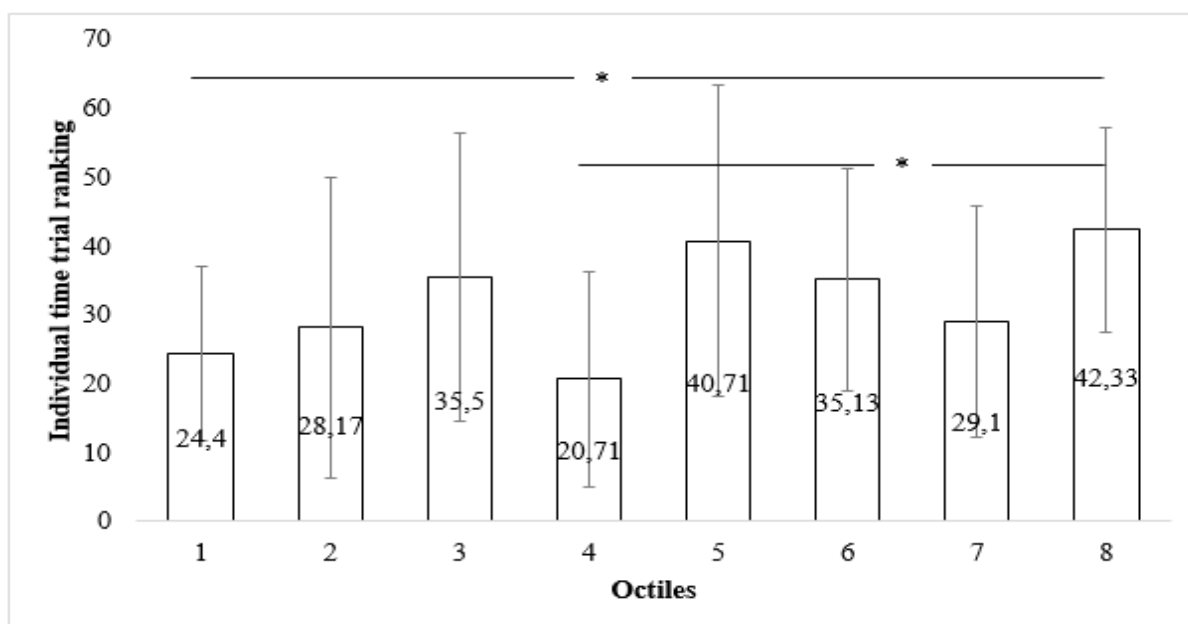
The statistical parameters of the comparison between the number of riders born in the (1st to 8th) octiles of 2006 and 2007 birth years, are represented in the table 3 and illustrated by the figure 1.

Table 3. Analytical statistics of riders' rankings in time trials grouped by octiles (1st to 8th) of 2006 and 2007 birth years.

Octiles	Mann-Whitney U	Sig	Z	Effect size (Eta square (η^2))
1 vs 5	19	Ns ($P > 0,05$)	-1,561	0,15(Large)
1 vs 6	24	Ns ($P > 0,05$)	-1,422	0,12 (Medium)
1 vs 7	42	Ns ($P > 0,05$)	-0,605	0,02(Small)
1 vs 8	10	S ($p < 0,05$)	-2,169	0,31(Large)
2 vs 5	14	Ns ($P > 0,05$)	-1,000	0,08(Medium)
2 vs 6	20	Ns ($P > 0,05$)	-0,516	0,20 (Small)
2 vs 7	29	Ns ($P > 0,05$)	-0,108	0,001(Small)
2 vs 8	10	Ns ($P > 0,05$)	-1,281	0,15(Large)
3 vs 5	21	Ns ($P > 0,05$)	-0,810	0,05(Small)
3 vs 6	31	Ns ($P > 0,05$)	-0,105	0,001(Small)
3 vs 7	32	Ns ($P > 0,05$)	-0,711	0,03(Small)
3 vs 8	21	Ns ($P > 0,05$)	-0,387	0,01(Small)
4 vs 5	10	Ns ($P > 0,05$)	-1,853	0,26(Large)
4 vs 6	14	Ns ($P > 0,05$)	-1,620	0,19(Large)
4 vs 7	25	Ns ($P > 0,05$)	-0,976	0,06(Medium)
4 vs 8	6	S ($p < 0,05$)	-2,143	0,38(Large)

Figure.1. Averages of the individual time trial riders' ranks divided into birth octiles (1st to 8th), * $P < 0,05$.

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In addition, the comparison shows that the mean value of the 8th octile (42,33±41,89 ranks) is higher than the means of the other octiles. The riders of the 4th octile recorded the smallest average value with a value of 20,71±15,65 ranks. On the other hand, there is a similarity between the means of the 2nd (28,17±21,90 ranks) and 7th (29,1±16,74 ranks) octile, as well as for the 3rd (35,5±20,83 ranks) and 6th (35,13±16,23 ranks) octile. The difference between the means of the 1st and 8th octile, as well as between the 4th and 8th octile is significant for ($p < 0.05$; $\eta^2 = 0.31$; $\eta^2 = 0.38$).

4.4. The comparison between the number of riders born in (1st to 4th) octiles of 2006 , in the one day race event:

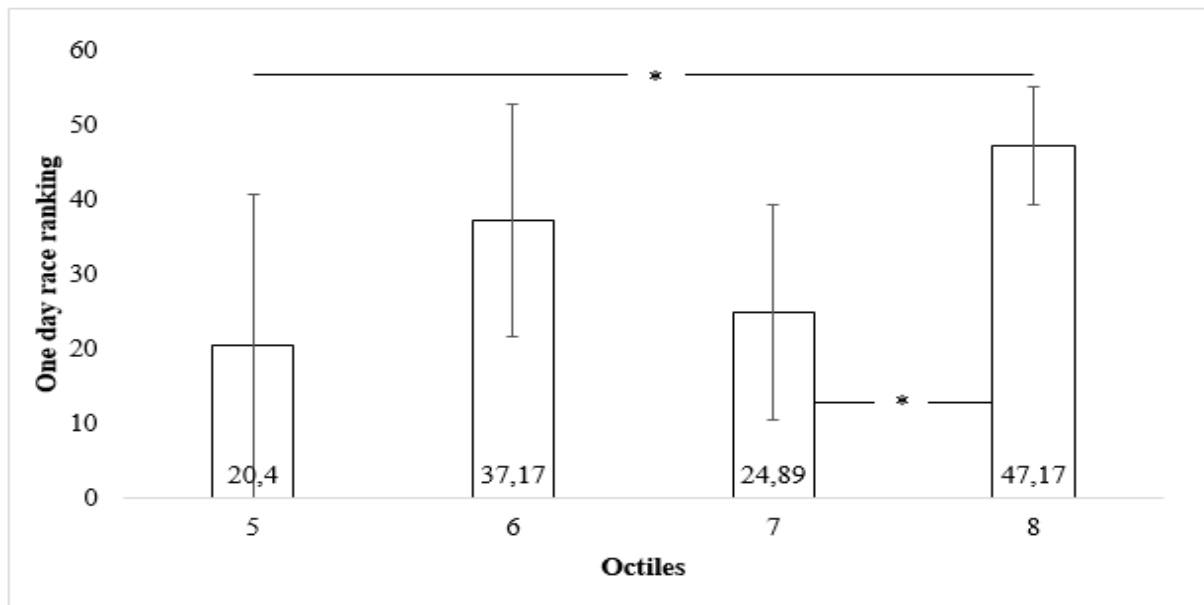
In the comparison between the number of riders born in the (1st to 4th) octiles, we revealed that the smallest mean value is recorded by riders belonging to the 2nd octile with a value of 13,6 ± 10,26 ranks. The largest mean value (30,5 ± 16,89 ranks) is that recorded by riders belonging to the 3rd octile. The statistical comparison shows non-significant differences for $p > 0,05$.

4.5. The comparison between the number of riders born in (5th to 8th) octiles of 2007, in the one day race event:

The statistical parameters of the comparison between the number of riders born in the octiles (5th to 8th) of 2007, are represented in table 4. and illustrated by figure 2.

Table 4. Analytical statistics of the rankings of riders in the road race grouped by octiles (5th to 8th) of birth.

Octiles	Mann-Whitney U	Sig	Z	Effect size (Eta square (η^2))
5 vs 6	7	Ns (P>0,05)	-1,461	0,21 (large)
5 vs 7	18	Ns (P>0,05)	-0,600	0,03(Small)
5 vs 8	3	S (p<0,05)	-2,191	0,48 (Large)
6 vs 7	15	Ns (P>0,05)	-1,414	0,14 (Large)
6 vs 8	10	Ns (P>0,05)	-1,281	0,15 (Large)
7 vs 8	6	S (p<0,05)	-2,475	0,44 (Large)

Figure.2. Averages of road race riders' ranks divided into birth octiles (5th to 8th), *P<0,05.

According to figure 2, the mean of the 5th octile is the smallest with a value of 20,4 $\pm$ 20,3 ranks. On the other hand, the largest mean value belongs to the 8th octile (47,17 $\pm$ 7,83 ranks). Statistical comparison indicates significance of the difference ($p < 0,05$; $\eta^2 = 0,48$; $\eta^2 = 0,44$), between the 5th and 8th octile and between the 8th and 7th octile, respectively.

4.6. The comparison between the number of riders born in the octiles of the 2006 and 2007 birth years, in the one day race event:

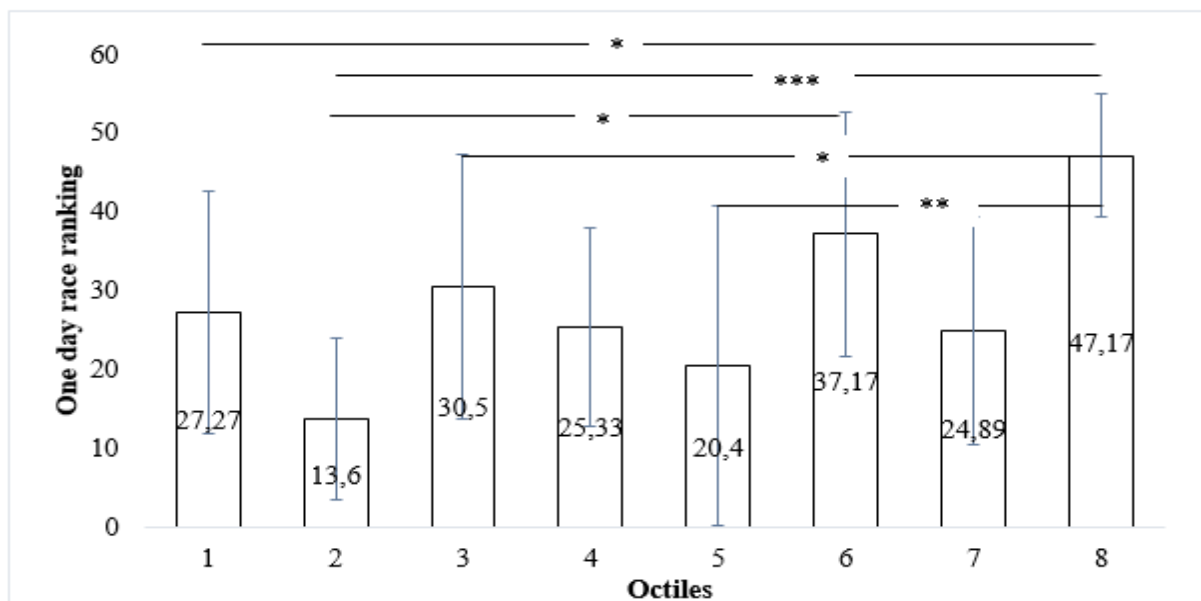
Regarding the comparison of the number of riders born in the octiles (1st to 8th) in 2006 and 2007 birth years. The statistical parameters are represented in the table 4. and illustrated by the figure 3.

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Table 4. Analytical statistics of riders' rankings in one day race grouped by octiles (1st to 8th) of 2006 and 2007 birth years.

Octiles	Mann-Whitney U	Sig	Z	Effect size (Eta square (η^2))
1 vs 5	20	Ns (P>0,05)	-0,850	0,05(Small)
1 vs 6	20	Ns (P>0,05)	-1,307	0,11(Medium)
1 vs 7	44	Ns (P>0,05)	-0,418	0,01(Small)
1 vs 8	10	S (p<0,05)	-2,312	0,33(Large)
2 vs 5	11	Ns (P>0,05)	-0,313	0,01(Small)
2 vs 6	3	S (p<0,05)	-2,191	0,48(Large)
2 vs 7	12	Ns (P>0,05)	-1,400	0,15(Large)
2 vs 8	0	S (p<0,001)	-2,739	0,75(Large)
3 vs 8	12	Ns (P>0,05)	-1,171	0,11 (Medium)
3 vs 6	19	Ns (P>0,05)	-0,645	0,03(Small)
3 vs 7	28	Ns (P>0,05)	-0,770	0,04 (Small)
3 vs 8	8	S (p<0,05)	-2,066	0,33 (Large)
4 vs 5	13	Ns (P>0,05)	-0,365	0,01 (Small)
4 vs 6	8	Ns (P>0,05)	-1,601	0,23 (Large)
4 vs 7	26	Ns (P>0,05)	-0,118	0,00 (Small)
4 vs 8	1	S (p<0,01)	-2,722	0,67 (Large)

Figure.3. Averages of one day race riders' ranks divided into birth octiles (1st to 8th), *P<0,05; **P<0,01; *P<0,001.**



The comparison of the averages taken two by two, shows that the average value of the 8th octile ranks ($47,17 \pm 7,83$ ranks) is higher than the averages of the other octiles. The smallest mean value is recorded by the 2nd octile with a value of $13,6 \pm 10,26$ ranks. The difference between these two means is significant for ($p<0,001$; $\eta^2 = 0,75$). On the other hand, the comparison of the 8th octile with the 1st, 3rd and 4th octiles shows significant

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differences for ($p < 0,05$; $\eta^2 = 0,33$; $p < 0,05$; $\eta^2 = 0,33$; $p < 0,01$; $\eta^2 = 0,67$) respectively. For their shares, the comparison between the 2nd and the 6th octile revealed a significant difference for ($p < 0,05$; $\eta^2 = 0,48$).

5. Discussion:

In our study, we chose two events, namely the individual time trial, which favors the use of a high percentage of maximal aerobic power, and the one day race, which requires good aerobic capacity and anaerobic power for breakaways, sprints and mass finishes.

Our sample is represented by sixty-two U17 riders. This age range groups riders born in the same period into two-year age ranges, an even-numbered year (2006) and an odd-numbered year (2007). The division of our sample into eight octiles, showed us the differences that could exist between riders in the same year of birth, for example the difference between the average age of the first octile (16,09 years) and the fourth octile (15,34) of riders born in 2006 is almost one year, and it was the same for riders born in 2007.

This has been confirmed by Roger H. Barnsley and others (1985) and Megan Hill and others (2021), who state that athletes born near the sport cut-off date are chronologically almost a year older than their peers born at the end of the sport year.

Comparing the mean ranks of riders divided into octiles (1st to 4th) born in 2006, with the individual time trial event, we found no difference ($p > 0,05$). Likewise, the comparison of octiles (5th to 8th), riders born in 2007, revealed the same results. This confirms that from a maximal aerobic power point of view, riders born later in 2006 or 2007 birth years are not at a disadvantage compared to those born early. This result is consistent with the results of (Jean Côté and others, 2006) who showed the non-existence of the relative age effect in different sports.

However, comparing the octiles (1st to 8th) of riders born in 2006 and 2007 birth years, in this same event, showed us differences between the 1st and 8th octile means ($p < 0,05$), as well as between the 4th and 8th octile, for ($p < 0,05$), and with large effect sizes. This shows us the relative age effect on individual time trial performance in the U17 category. This could be explained by the fact that the maximum aerobic power (MAP) values developed by riders in the even-numbered birth year are higher than those of their rivals in the odd-numbered birth year. This result confirms what has been reported by Patrick Mallet (2011), who states that U17 (second year) riders have higher average MAP values in relative and absolute values than U17 (first year) riders.

Thus, could it, the cause of the early maturation of cyclists born in the even-numbered year, and that can present an advantage in this type of exercise, (BelkacemKhat, 2010; KamelSadouki, 2020(b)). Also, it is the result of a development that undergoes the body of the adolescent in this age category with an increase in height and weight (Ahmed Asmani, 2022), speed, resistance, agility and strength improve, (Manuel J. Coelho-e-Silva and others, 2008).

The comparison of the average ranks of the riders divided in octiles (1st to 4th) born in 2006, in the one day race event, showed us the absence of difference ($p > 0,05$). Although, the statistical study of the effect size showed a large size when comparing the 2nd octile with the rest of the octiles. On the other side, the statistical comparison shows significance of the difference between the 5th and 8th octile ($p < 0,05$) and between the 8th and 7th octile ($p < 0,05$) with a large effect size.

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Contrary to what was found in the individual time trial. Several significant differences were revealed by comparing the octiles (1st to 8th) of the rankings of our riders in 2006 and 2007 birth years, especially between the octiles of the beginning of the 2006 year and the octiles of the end of the 2007 year, namely the 6th and 8th octile. Knowing that the final result in the one day race event was shared in a bunch sprint. This situation favors riders in possession of a very high maximum anaerobic power. This result was confirmed by kamelSadouki (2020(a)), who concluded that 2nd year U17 riders, possess a higher anaerobic maximum power and anaerobic average power in absolute values than 1st year riders. This result shows that absolute power in riders increases with chronological age. This confirms what has been reported by Bareket Falk, OdedBar-Or (1993).

Conclusion:

In road cycling, riders in the U17 category, divided into octiles of birth year, show variations in their time trial and one day race performances. The results show that:

- Better individual time trial performance by riders in the first and fourth octile of the even-numbered year (2006) compared to the eighth octile of the odd-numbered year (2007);
- Better individual time trial performance of riders in the fifth and seventh octile of the year (2007) compared to the eighth octile;
- Better one day race performance of riders belonging to the first, second, third and fourth octile of the year (2006) compared to the sixth and eighth octile.

In the U17 category, there is a great relative age effect. This category corresponds to the stage of the basic specific preparation of the juniors and a decisive phase in the preparation to face international competitions.

Therefore, coaches need to pay attention to this age group, their selection and orientation, and consider the relative age effect on performance in competition.

Opening the door to studying the relative age effect on performance in other categories in a large sample will be of great interest.

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The relative age effect on performance in the individual time trial and the one-day race in the U17 category riders.

Appendices:

Individual time trial ranking:



1er Manche Coupe d'Algérie 2022 "CADET"

CLASSEMENT AU TEMPS (cadet garçons) : Etape 1
CLM/Ind

FAC/CLB		Bliskria	El Kantara		5,08 km		33,341 km/h		07	25/03/2022
Place	De	UCI ID	Coursur	Équipe	Nat.	Cat.	Temps	Écart		
1	17	10111071852	HAMZA MOHAMED AMEN	NRDI	ALG	CA	13 53.33			
2	34	10112340094	RIAH ANES	VTT-TLEMCEIN	ALG	CA	13 55.62	0 2		
3	1	10101024470	BOUTTABA MOHAMED ABDELJAL	IRBEK	ALG	CA	14 16.44	0 23		
4	89	10114841849	BENDIB KAIS	ODC	ALG	CA	14 17.20	0 24		
5	47	10101027805	SEBIA BILAL	ODC	ALG	CA	14 26.70	0 33		
6	10	10111580700	TAMAZOULT HICHEM	MCA	ALG	CA	14 27.55	0 34		
7	15	10113143011	MINOUBI NASR EDDINE	NRDI	ALG	CA	14 32.07	0 39		
8	2		CHERHABIL ABDELHAMID	IRBEK	ALG	CA	14 32.53	0 39		
9	42	10111616495	SAIDI SIEF HAYTHEM	VCB	ALG	CA	14 35.93	0 42		
10	88	10120363148	BOUASLA ALI SAFOUANE	ETOIL	ALG	CA	14 38.71	0 45		
11	80	10112583984	IZRI ANIS	VCK	ALG	CA	14 39.37	0 46		
12	37	10111614042	DAHDOUH ABDELOUAKIL	CCDM	ALG	CA	14 41.71	0 48		
13	68	10120258937	BOULASSEL MOHAMED MEHDI	ETOIL	ALG	CA	14 51.11	0 58		
14	43	10113208579	SAIDI SIEF AYOUB	VCB	ALG	CA	14 56.01	1 3		
15	13	10111682138	BOUDINI MOHAMED FAOUZI	MCA	ALG	CA	14 58.29	1 5		
16	7		KEZZOUB MOHAMED AMINE FOUA	MCA	ALG	CA	15 2.57	1 9		
17	85	10112250707	ROUABAH AHMED SAMAH	UFCB	ALG	CA	15 5.00	1 12		
18	28	10111064374	YOUSFI HEITHAM	VCTAB	ALG	CA	15 6.52	1 13		
19	70	10112258995	LAGGOUN MOUAD	JPCR	ALG	CA	15 11.98	1 18		
20	3	10111010218	OGBI MOHAMED LAZHARI	IRBEK	ALG	CA	15 17.24	1 24		
21	6	10111414382	LAGAB ELYES	MCA	ALG	CA	15 21.88	1 28		
22	18	10111260003	DIJETTOU YASSER MOHAMED	NRDI	ALG	CA	15 22.53	1 29		
23	40	10101028716	BOUMEZAAZ YACER ABDERRAHIM	CCDM	ALG	CA	15 24.46	1 31		
24	29		BENHALIMA YAZID ABDERRAHIM	TOR	ALG	CA	15 28.14	1 35		
25	36	10111613739	SMADI AMER	CCDM	ALG	CA	15 28.28	1 35		
26	52	10100892108	CHELIHI LOUAI	VCS	ALG	CA	15 28.89	1 35		
27	41	10113208983	TOUDJINE HAYTHEM	VCB	ALG	CA	15 33.87	1 40		
28	50	10101025379	HARBOUCHE AMOJED	VCS	ALG	CA	15 33.96	1 40		
29	14	10112384772	BAZ AYMEN	NRDI	ALG	CA	15 35.37	1 42		
30	35	10111360942	DEHDOUN MOHAMED OUASSIM	CCDM	ALG	CA	15 37.56	1 44		
31	73		DEBILI ROCHDI	ODC	ALG	CA	15 42.97	1 49		
32	11		OULAD DAOUD ACHREF	MCA	ALG	CA	15 43.51	1 50		
33	48	10101027708	BENTOUATI ELYES	ODC	ALG	CA	15 48.69	1 56		
34	83	10112234842	KACHOUANE YACINE	VCC	ALG	CA	15 55.59	2 2		
35	38	10117732217	HALFAOUI LOUAI ABDELMOUAMANE	CCDM	ALG	CA	15 55.62	2 2		
36	25	10114218187	IGUEDJAL ADLANE	VCTAB	ALG	CA	15 58.00	2 5		
37	39		CHERIBI MOHAMED ABDELLAH	CCDM	ALG	CA	16 0.44	2 13		
38	64	10124738041	BOULGHEDAR ABDELHAK	UFCB	ALG	CA	16 9.23	2 16		
39	87	10124546889	BOUASLA HASSIM	ETOIL	ALG	CA	16 9.42	2 16		
40	58		GHRIB ABDELHALIM	VCK	ALG	CA	16 20.90	2 27		
41	16	10111200073	HAMZA MAHEDDIN	NRDI	ALG	CA	16 21.68	2 28		
42	56	10101023881	SELMANI AYMENE AISSA	CSOSET	ALG	CA	16 23.56	2 30		

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1er Manche Coupe d'Algérie 2022 "CADET"

CLASSEMENT AU TEMPS (cadet garçons) : Etape 1 CLM/Ind (Suite)

FAC/LCBiskra			El Kantara			07	25/03/2022	
Place	Do	UCI ID	Coureur	Équipe	Nat.	Cat.	Temps	Écart
43	45	10113207367	HIMED LOUAY	VCB	ALG	CA	16 39.48	2 46
44	28		ADJAOU MOHAND REDHA	VCTAB	ALG	CA	16 41.50	2 48
45	54	10100891300	REBIAI ADEL AMINE	CSCSET	ALG	CA	16 42.79	2 49
46	72		BARKA HAYTHAM	OCS	ALG	CA	16 44.38	2 51
47	24	10111200982	SADOUN SALAH EDDINE	OFC	ALG	CA	17 2.40	3 9
48	8	10114852327	HADBI ARSLEN ACHOUR	MCA	ALG	CA	17 4.25	3 11
49	12	10115307116	ZEKRI ZAKARIA	MCA	ALG	CA	17 5.14	3 12
50	5		MAKOUF MOHAMED EL HACEN	TSB	ALG	CA	17 8.94	3 15
51	62	10112235347	RAIT NOUR EDDINE	VCC	ALG	CA	17 12.12	3 19
52	61	10120294027	EL MILOUDI YACINE	VCK	ALG	CA	17 14.24	3 21
53	44	10113214441	DERARDJA MOHAMED MOUNDER	VCB	ALG	CA	17 22.19	3 29
54	20		ZIDI ZAKARIA	WBAB	ALG	CA	17 35.22	3 42
55	9		DJAKBOUB SAMI ABDERRAHMANE	MCA	ALG	CA	17 59.50	4 6
56	57		BOUADAM SIRADJ ABDELOUAHED	CSCSET	ALG	CA	18 2.47	4 9
57	51	10101027096	AMMARDJIA MOHAMED ADIB	VCS	ALG	CA	18 3.33	4 10
58	55	10101023460	CHOUGUI LOUAI	CSCSET	ALG	CA	18 15.05	4 22
59	59	10113009226	CHEKH AHMED	VCK	ALG	CA	18 16.67	4 23
60	21	10111198255	SIKAQUI ISMAIL	WBAB	ALG	CA	19 49.87	5 56
61	19		MALOU SOUFIANE MOHAMED	WBAB	ALG	CA	22 22.11	8 29
62	46	10113206761	LAIDI YASSER	VCB	ALG	CA	24 29.96	10 36
	22		DJIDJELI MOHAMMED	OMB	ALG	CA	Non partant	
	23	10111414887	ZITOUNI MOHAMED FAHD ABDELA	OFC	ALG	CA	Hors course	
	32		BOUSALA ISMAIL	JST	ALG	CA	Non partant	
	33		BOUKLI HACENE ISLAM	JST	ALG	CA	Non partant	

The relative age effect on performance in the individual time trial and the one-day race in the U17 category riders.

One day race ranking:

 Grille d'arrivée 									
1er Manche Coupe d'Algérie 2022 "CADET"									
CLASSEMENT AU TEMPS (cadet garçons) : Etape 2									
FAC/LCBiskra Circuit El Kantara 44,15 km 33,140 kmh 07 26/03/2022									
Place	Do	UCI ID	Coureur	Équipe	Nat.	Cat.	Temps	Écart	Bonif
1	34	10112240094	RIAH ANES	VTT-TLEMSEN	ALG	CA	1 19 56		
2	1	10101024470	BOUTTABA MOHAMED ABDELJAL	IRBEK	ALG	CA	1 19 56		
3	42	10111616466	SAIDI SIEF HAYTHEM	VCB	ALG	CA	1 19 56		
4	40	10101028716	BOUMEZAAR YACER ABDERRAHM	CCDM	ALG	CA	1 19 56		
5	46	10113206761	LAIDI YASSER	VCB	ALG	CA	1 19 56		
6	59	10113009238	CHEKH AHMED	VCK	ALG	CA	1 19 56		
7	17	101110 71852	HAMZA MOHAMED AMEN	NBDI	ALG	CA	1 19 56		
8	58		GHRIB ABDELHALIM	VCK	ALG	CA	1 19 56		
9	43	10113208579	SAIDI SIEF AYOUB	VCB	ALG	CA	1 19 56		
10	26	10111084374	YOUSFI HEITHAM	VCTAB	ALG	CA	1 19 56		
11	47	10101027805	SEBIA BILAL	CDC	ALG	CA	1 19 56		
12	60	10112983964	IZRI ANIS	VCK	ALG	CA	1 19 56		
13	52	10100892108	CHELIHI LOUAI	VCS	ALG	CA	1 19 56		
14	65	10112295707	ROUABAH AHMED SAMAH	UFCB	ALG	CA	1 19 56		
15	66	10120393148	BOUASLA ALI SAFOUANE	ETOIL	ALG	CA	1 19 56		
16	69	10114941849	BENDIS KAIS	CBC	ALG	CA	1 19 56		
17	24	10111200962	SADOUN SALAH EDDINE	OFC	ALG	CA	1 19 56		
18	10	10111580700	TAMAZOURT HICHEM	MCA	ALG	CA	1 19 56		
19	50	10101025379	HARBOUCHE AMOJED	VCS	ALG	CA	1 19 56		
20	68	10120589937	BOULASSEL MOHAMED MEHDI	ETOIL	ALG	CA	1 19 56		
21	41	10113208963	TOUDJINE HAITHAM	VCB	ALG	CA	1 19 56		
22	14	10112984772	BAZ AYMEN	NBDI	ALG	CA	1 19 56		
23	7		KEZZOUH MOHAMED AMINE FOUA	MCA	ALG	CA	1 19 56		
24	35	10111390942	DEHDOUH MOHAMED OUASSIM	CCDM	ALG	CA	1 19 56		
25	25	10114216167	IGUEDJAL ADLANE	VCTAB	ALG	CA	1 19 56		
26	48	10101027706	BENTOUATI ILYES	CDC	ALG	CA	1 19 56		
27	54	10100891300	REBIAI ADEL AMINE	CSCSET	ALG	CA	1 19 56		
28	15	10113143511	MIHOUBI NASR EDDINE	NBDI	ALG	CA	1 19 56		
29	18	10111290003	DJETTOU YASSER MOHAMED	NBDI	ALG	CA	1 19 56		
30	2		CHERHABIL ABDELHAMID	IRBEK	ALG	CA	1 19 56		
31	6	10111414382	LAGAB ELYES	MCA	ALG	CA	1 19 56		
32	63	10112234842	KACHOUANE YACINE	VCC	ALG	CA	1 19 56		
33	38	10117732217	HALFAOUI LOUAI ABDELMOUMANE	CCDM	ALG	CA	1 19 56		
34	45	10113207367	HIMED LOUAY	VCB	ALG	CA	1 19 56		
35	36	10111613739	SMADI AMER	CCDM	ALG	CA	1 19 56		
36	64	10124738041	BOULGHEBAR ABDELHAK	UFCB	ALG	CA	1 19 56		
37	67	10124848889	BOUASLA NASSIM	ETOIL	ALG	CA	1 19 56		
38	16	10111200073	HAMZA MAHIEDDIN	NBDI	ALG	CA	1 19 56		
39	37	10111614042	DAHDOUH ABDELOUAKIL	CCDM	ALG	CA	1 19 56		
40	56	10101025881	SELMANI AYMENE AISSA	CSCSET	ALG	CA	1 21 19	1 23	
41	62	10112235347	RAIT HOUR EDDINE	VCC	ALG	CA	1 24 14	4 18	
42	73		DEBILI ROCHDI	CBC	ALG	CA	1 25 1	5 5	
43	11		OULAD DAUD ACHREF	MCA	ALG	CA	1 25 1	5 5	

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1er Manche Coupe d'Algérie 2022 "CADET"

CLASSEMENT AU TEMPS (cadet garçons) : Etape 2 (Suite)

FAC/LCBiskra			Circuit El Kantara			07	26/03/2022		
Place	Do	UCI ID	Coureur	Équipe	Nat.	Cat.	Temps	Écart	Bonif
44	55	10101023460	CHOUGUI LOUAI	CSCSET	ALG	CA	1 26 1	6 5	
45	20		ZIDI ZAKARIA	WBAB	ALG	CA	1 26 21	6 25	
46	51	10101027098	AMMARDJA MOHAMED ADIB	VCS	ALG	CA	1 28 27	8 31	
47	3	10111010218	OGBI MOHAMED LAZHARI	IRSEK	ALG	CA	1 28 27	8 31	
48	12	10115307116	ZEKRI ZAKARIA	MCA	ALG	CA	1 28 27	8 31	
49	5		MAKOUF MOHAMED EL HACEN	TSS	ALG	CA	1 30 13	10 17	
50	44	10113214441	DERARDJA MOHAMED MOUNDER	VCB	ALG	CA	1 30 13	10 17	
51	57		BOUADAM SIRADJ ABDELOUAHED	CSCSET	ALG	CA	1 30 13	10 17	
52	39		CHERIBI MOHAMED ABDELLAH	CCDM	ALG	CA	1 35 56	16 0	
53	9		DJAKBOUB SAMI ABDERRAHMANE	MCA	ALG	CA	1 37 19	17 23	
54	28		ADJAOU MOHAND REDHA	VCTAB	ALG	CA	1 40 44	20 48	
55	23	10111414887	ZITOUNI MOHAMED FAHD ABDELA	OFC	ALG	CA	1 40 44	20 48	
56	19		MALOU SOUFIANE MOHAMED	WBAB	ALG	CA	1 46 13	26 17	
	8	10114852327	HADBI ARSLEN ACHOUR	MCA	ALG	CA	Abandon		
	13	10111862138	BOUDINI MOHAMED FAOUZI	MCA	ALG	CA	Abandon		
	21	10111198255	SIKAOUI ISMAIL	WBAB	ALG	CA	Abandon		
	29		BENHALIMA YAZID ABDERRAHIM	TCR	ALG	CA	Non partant		
	61	10120294027	EL MILOUDI YACINE	VCK	ALG	CA	Abandon		
	70	10112259595	LAGGOUN MOUAD	JPCR	ALG	CA	Abandon		
	72		BARKA HAYTHAM	CCS	ALG	CA	Non partant		