

## PLAYING, THEN AND NOW – DIFFERENCES IN TIME AND ELEMENTS OF PLAY FROM PARENTS' PERSPECTIVE

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### ABSTRACT

*The question how the general trend toward physical inactivity and sedentary behavior affects children's capabilities and cognitive skills is becoming increasingly important. The aim of this study was to compare children's play time with parents' play time at their child's age, as well as the elements of play. A survey was conducted among parents of children aged 6 to 8 years. The results of the survey, which was based on a sample of 37 parents, showed that a child nowadays spends more time playing at home (110 minutes/day on average compared to the 96 minutes/day their parents played as children) and, conversely, with a statistically significant difference, only half the time their parents did playing outside (96 minutes/day on average compared to the 157 minutes/day on average that their parents spent at the same age). We also found a statistically significant difference in screen time in children today (93 minutes/day on average), which is three times as much as it used to be in their parents at that age. Differences were also evident in activities involving elements of rotation, balance, and dynamic accommodation, with most children now spending 0-15 minutes/day compared to parents who used to spend an hour or more on similar activities. For activities based on fine motor skills, half of the children nowadays spend 15-30 minutes/day, whereas half of the parents used to spend an hour or more. The contemporary lifestyle that is highly sedentary can affect many aspects of children's play. The paper discusses differences of play in the time dimension and possible consequences of such behavior for child development.*

**Keywords:** motor skills, play, cognitive development, childhood, leisure time.

## IGRA NEKOČ IN DANES – RAZLIKA V ČASU IN ELEMENTIH IGRE IZ PERSPEKTIVE STARŠEV

### IZVLEČEK

*Vprašanje trenda vpliva telesne neaktivnosti in sedentarnega življenjskega sloga otrok na njihov splošni razvoj in kognitivne sposobnosti, postaja iz dneva v dan bolj pomembno. Za boljše razumevanje tega fenomena in podrobnejši vpogled v splošne trende preživljanja prostega časa pri otrocih, je bila izvedena raziskava med starši otrok, starih od 6 do 8 let. Namen raziskave je bila primerjava časa, namenjenega igri in posameznim elementom igre pri otrocih, s časom, ki so ga igri namenili njihovi starši, ko so bili stari toliko, kot njihovi otroci. Pri vzorcu 37 staršev otrok, starih od 6 do 8 let je bilo ugotovljeno, da otroci danes igri doma namenijo v povprečju 110 min/dan, medtem ko so starši v njihovih letih domači igri namenili povprečno 96 min/dan, kar ni statistično pomembno. Na drugi strani pa otroci danes igri na prostem namenijo v povprečju 96 min/dan, medtem ko so njihovi starši tej vrsti igre povprečno namenjali 157 min/dan, kar je skoraj dvakrat več in torej očitna, statistično pomembna razlika. Otroci danes preživijo v povprečju 93 min/dan pred ekrani, kar je trikrat toliko časa, kot so ga temu namenjali starši v njihovih letih (povprečno 30 min), in je statistično pomembno. Pri aktivnostih, ki vsebujejo elemente rotacijskega gibanja, ravnotežja in dinamičnega prilagajanja očesa, večina otrok danes preživi 0–15 min, medtem ko so njihovi starši tovrstnim aktivnostim namenjali v povprečju uro ali več. Aktivnostim na osnovi fine motorike polovica otrok nameni 15–30 min, medtem ko je polovica staršev tem aktivnostim namenila vsaj eno uro časa ali celo več. Sodobni življenjski slog, ki na eni strani vključuje malo gibanja in telesnih aktivnosti, na drugi strani pa precej časa, preživetega pred ekrani, lahko vpliva na številne aspekte otrokovega razvoja. Članek obravnava posledice tovrstnega vedenja in morebitne načine za preprečevanje tega naraščajočega trenda.*

**Ključne besede:** gibalne sposobnosti, igra, kognitivni razvoj, otroštvo, prosti čas.

## INTRODUCTION

Currently, schoolteachers estimate children's abilities (motor skills, attention, and concentration) to be significantly lower than those of previous generations of children (Rajović, Rajović, Kovačić, & Dajčman, 2016). One of the reasons for that could be the contemporary lifestyle that includes a lower level of physical activity (PA).

An increasing number of teachers and experts share this opinion, which could be justified by numerous studies which have shown that the prevalence of certain neurodevelopmental disorders has increased over the past four decades (U.S. Environmental Protection Agency, 2015, p. 233). In comparison to previous generations, a changing trend has been observed with regard to developmental problems, such as speech disorders, dyslexia, dysgraphia, and disorders associated with attention deficit, and behavior, emotional and impulse control. Educators and paediatricians report a rise in the number of schoolchildren with behavioral and learning disorders (U.S. Environmental Protection Agency, 2015, p. 233).

Several studies carried out in the past 10 years in the countries of former Yugoslavia have shown that an increasing number of children have flat feet. Research conducted in Ljubljana, Slovenia, on a sample of 127 children aged three years, showed that 72% of the respondents had fallen arches (Videmšek, Klopčič, Štihec, & Karpljuk, 2006). In Novi Sad, Serbia, it was found that in a sample of 377 children aged six, only 31.66% of them had healthy feet (Milošević & Obradović, 2008). All these issues indicate a persistent and progressive problem that has not been fully understood yet.

The most intense period of synaptogenesis occurs in the first few years of life and PET imaging studies reveal that overall brain metabolism rises to twice the level in adults by 4–5 years of age and remains high until 9–10 years of age. The first two years of human life are marked by rapid elaboration of neural processes and synaptogenesis, followed by a so-called “plateau” phase of development (Horska, Kaufmann, Brant, Naidu, Harris, & Barker, 2002). Although brain size between the ages of two and five years does not change much, myelination and synaptic remodeling are particularly active during this so-called “plateau” phase of development (Tau & Peterson, 2010). Such findings help us understand the importance of childhood and especially the first few years of life for brain development. However, it is becoming increasingly evident that one of the main issues of contemporary lifestyle is sedentary behavior, more generally lack of physical activity, and consequent deterioration of child development and health. It is often forgotten that physical activity is a necessity and not a luxury. Until the age of twelve, the human brain goes through intensive developmental stages. Children possess enormous energy that is biologically given to them for movement, through which important brain functions develop, structures interconnect and new neural pathways form. Through complex movements like walking uphill and downhill, skipping, jumping, rolling, running, climbing, tumbling, etc., a child prepares for life by developing basic biological functions. The human organism has a very difficult task maintaining homeostasis in ages marked by rapid change. Some consequences are more, and some less obvious, but it is a fact that a sedentary lifestyle is responsible for a growing num-

ber of diseases and disorders suffered in modern society. Sedentary behavior in children, and particularly increasing screen time, has been linked to inadequate cardiorespiratory fitness (Sandercock & Ogunleye, 2013), high BMI (Ullrich-French, Power, Daratha, Bindler, & Steele 2010), diabetes type II (Henderson et al., 2012), hypertension (Martinez-Gomez, Tucker, Heelan, Welk, & Eisenmann, 2009), asthma (Protudjer, Kozyrskij, McGavock, Ramsey, & Becker, 2012), ADHD (Christakis, 2009), and poor executive functions (Lillard, Drell, Richey, Boguszewski, & Smith, 2015). Moreover, the level of aerobic fitness in children is directly correlated to the volume of certain brain structures, such as basal ganglia, as well as to children's cognitive abilities, such as attention and cognitive control (Chaddock et al., 2010).

The idea that there is a connection between motor and cognitive development is not radically new. In 1953, Piaget suggested the importance of sensorimotor experience for the development of cognitive abilities (Piaget, 1953). If we look at a simple analogy, living beings that do not move don't have nerve cells and a nervous system, and species that move have a nervous system, then important characteristics of the human include their upright gait and motor movement. This is particularly important for children because their brains develop rapidly until the age of five, and the reason why walking and running must be one of a child's main activities (Rajović, 2010). A growing body of research indicates a high correlation between intelligence and connectivity between lateral prefrontal regions and other brain regions (Cole, Yarkoni, Repovš, Anticevic, & Braver, 2012). Consistent with these findings, it is necessary to promote connectivity between sensorimotor and associative brain regions of the developing brain through specific games and activities.

The aim of the study was to investigate whether leisure time of children today contains less PA and complex outdoor play in comparison to that of their parents at the same age. Of particular interest were the activities or children's play that include these elements: (a) rotation, (b) balance, (c) dynamic accommodation, (d) fine motor skills, and (e) running. Complex motor movements and activities that promote aerobic fitness such as running are seen as particularly important, as their lack can contribute to cognitive dysfunction in children (Sibley & Etnier, 2003; Chaddock et al., 2010; Gomez-Pinilla & Hillman, 2013; Buckley, Cohen, Kramer, McAuley & Mullen, 2014; Denham, Marques, O'Brien & Charchar, 2014; Erickson, Hillman & Kramer, 2015). There are specific games that involve rotation, balance, dynamic accommodation, fine motor skills, and running, and the very reason children should practice these activities is the prevention of many cognitive, motor, or other deficits that we can increasingly observe in them. In order to understand the importance and outreach of these elements, we will provide you with a brief overview.

Activities such as rotation and balance maintenance, often practiced through various spinning games, were long ago recognized as an important building block for proper child development. These activities are the source of vestibular stimulation and, as Elliot (1999) states, the vestibular system is one of the earliest senses to mature. Vestibular stimulation thus provides the child with a large amount of early sensory experience upon which other sensory and motor skills are built, which in turn encou-

rage the development of higher emotional and cognitive skills (Elliot, 1999, p. 154). As already mentioned, aerobic fitness, apart from maintaining physical wellbeing, has been shown to be directly correlated to children's cognitive abilities, such as attention and cognitive control (Chaddock et al., 2010). This type of fitness is mainly achieved through activities that involve walking and running. The impact of fine motor skills goes well beyond the development of dexterity, strength, and everyday skills. In the school readiness test, fine motor skills, along with attention and general knowledge, have been shown to be much stronger predictors of math, reading, and science achievements overall in elementary school than early math and reading scores alone (Grissmer, Grimm, Aiyer, Murrah, & Steele, 2010). Moreover, numerous studies conducted to date have shown a clear correlation between fine motor skills and reading performance (Brookman, McDonald, McDonald, & Bishop, 2013; Cameron et al., 2012; Grissmer et al., 2010). Because of its complexity, authors consider dynamic accommodation to be particularly important for the proper development of a child. In order to explore the cross-generational trend of leisure activities at an early school age, a survey of play elements and time was conducted among parents of children aged 6 to 8.

## METHODS

The research was conducted in "Dečiji kulturni centar," Belgrade, on 9 June 2017. The survey with its specific questionnaire was created for the purpose of this study, as we could not find an appropriate questionnaire in the existing literature. The survey consists of four parts and is a combination of open- and closed-ended questions (see Appendix). The first part of the survey was structured to collect data on independent (demographic) variables such as sex, marital status, education level, etc. The next two parts, labelled A and B, focus on examining core research questions (correlation between the amount and quality of outdoor and indoor play and cognitive development of children). Part A investigates this topic via a set of questions for parents about their children, while part B investigates the same topic from the perspective of parents in their childhood. The last part, C, investigates the amount of screen time in the parents when they were young and, in their children, now.

The probability sampling method was used for this study in which parents who attended a lecture given by the first author of the paper were asked to complete the questionnaire after the lecture. Participation in the survey was voluntary, all parents who attended the lecture were happy to take part in the research. The sample consisted of 37 parents (7 males) with an age range of 30–49 (mean 39.97 years), 32 of them were married (3 divorced, 2 single). As for their education, the majority (67.6%) had a university diploma or higher education (19 university diplomas, 4 masters and 2 PhDs), while one third had a college or lower education level (5 primary school, 4 secondary school and 3 college). Accordingly, children can be considered a "subsample" because their experiences and habits were reported indirectly through their parents.

The SPSS software (version 16.0, IBM, USA) was used for data analysis. The data were presented as mean and additionally frequency analysis of differences in play time between children and parents at the child's age. Chi square analysis for play elements of: (a) rotation, (b) balance, (c) dynamic accommodation, (d) fine motor skills, and (e) running, and other specific games with these elements was used to determine a statistically significant relation at  $p < .001$ .

## RESULTS

The results section presents a parallel perspective of core research questions between parents and their children. As has been stated above, authors compare the childhoods of parents and their children at 6-8 years. At the very beginning, the amount of time spent playing indoors and outdoors is compared as well as screen time. Afterwards, a more profound and segmental approach is taken, investigating both populations regarding time spent in play involving elements of: (a) rotation, (b) balance, (c) dynamic accommodation, (d) fine motor skills, and (e) running, and the specific games including these elements.

The survey results have shown that a child today spends 110 min/day on average playing indoors (Table 1), while their parent used to spend 96 min/day, which is not a statistically significant difference ( $t(1, 66)=0.9, p=.371$ ). On the other hand, a child today spends 96 min/day on average in outdoor play, while a parent used to spend 157 min/day on average, almost twice as much as their children, with a statistically significant difference ( $t(1, 66)=3.93, p<.001$ ). A child today spends 93 min/day in front of a screen on average, which is three times as much as their parents used to (30 minutes on average), which is statistically significant ( $t(1, 66)=4.95, p<.001$ ).

*Table 1. Overview of the play time of children and parents at their age spent indoors, outdoors, and in front of a screen.*

		N	Mean	Std. Deviation	Std. Error Mean
<b>Home</b>	child	37	110.00	70.711	11.625
	parent	31	96.13	52.769	9.478
<b>Outdoors</b>	child	37	96.62	43.494	7.150
	parent	32	157.97	82.773	14.632
<b>TV, Smartphone, etc.</b>	child	35	92.71	69.540	11.754
	parent	33	29.39	24.487	4.263

The overview of the time that children spend in various elements of play involving rotation, balance, dynamic accommodation, fine motor skills, and running, as estimated by their parents, and the amount of time the parents used to spend in the same activities when they were children is structured in the survey via Likert scale with time categories. These are formed based on the minutes spent on a game (from 0, 15 min, 30 min, 45 min, 60 min, over 60 minutes). In activities that have the elements of rotation (elastics, playing with marbles<sup>1</sup>, running, hopscotch), balance (elastics, rope skipping, climbing, hopscotch) and dynamic accommodation (jumping over obstacles, catching and throwing a ball, etc.), most of the children spend 0-15 minutes, while parents used to spend an hour or more. In fine motor skills-based activities (marbles, stickers, plasticine, playing an instrument, etc.), half of the children spend 15 to 30 minutes, while half of the parents used to spend at least an hour or more. In activities that include walking and running, half of the children and 75% of the parents used to spend an hour or more (this is the activity in which parents and children spent an equal amount of time).

### Elements of play involving rotation

As can be seen from the comparative bar chart data presentation (Figure 1), there is a significant difference between the results obtained for parents and their children.

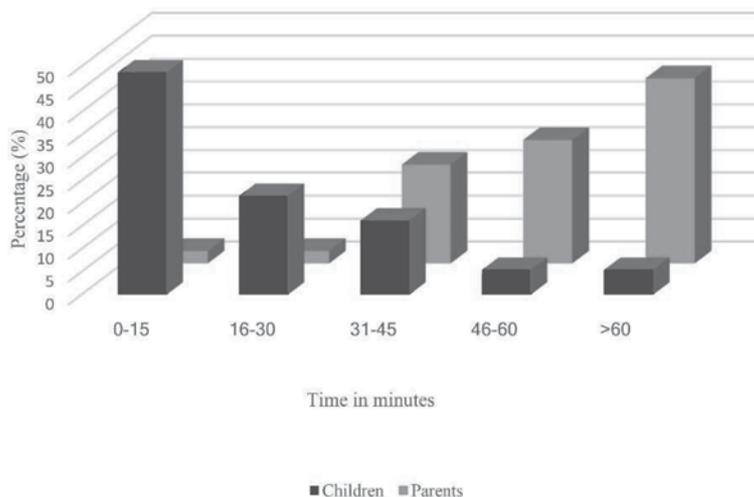


Figure 1. Play time of children and parents at children's age spent in elements of play involving rotation.

<sup>1</sup> A classic game of marbles, that used to be played in parks and playgrounds, is a dynamic game which involves a lot of turns and squatting. Physically dynamic nature of the game requires a constant change of body position which involves both rotation and sustained balance.

Table 2. Play time of children and parents at children's age spent in elements of play involving rotation.

	Daily duration of games and activities involving rotation					
	No answer	0-15 min	16-30 min	31-45 min	46-60 min	>60 min
<b>Children</b>	2.70%	48.65%	21.62%	16.22%	5.41%	<b>5.41%</b>
<b>Parents</b>	5.41%	2.70%	2.70%	21.62%	27.03%	<b>40.54%</b>
<b>Chi square analysis for rotation</b>	$\chi^2(1.5)=36.55, p<0.001$					

What is striking in these two representations of data is the totally opposite maximum and minimum amounts of time spent in games involving rotation activities. 40.5% of parents used to spend over 60 minutes in games involving rotation (elastics, marbles, running, hopscotch) while only 5.41% of their children spend time playing these kinds of games.

### Elements of play involving balance

Data on the comparative analysis of elements of play involving balance are presented in Table 3 and Figure 2.

Table 3. Play time of children and parents at children's age spent in elements of play involving balance.

	Daily duration of games and activities involving balance						
	No answer	None	0-15 min	16-30 min	31-45 min	46-60 min	>60 min
<b>Children</b>	2.70%	2.70%	51.35%	21.65%	18.92%	2.70%	<b>2.70%</b>
<b>Parents</b>	5.41%	/	/	8.11%	10.81%	32.43%	<b>43.24%</b>
<b>Chi square analysis for rotation</b>	$\chi^2(1.5)=48.73, p<0.001$						

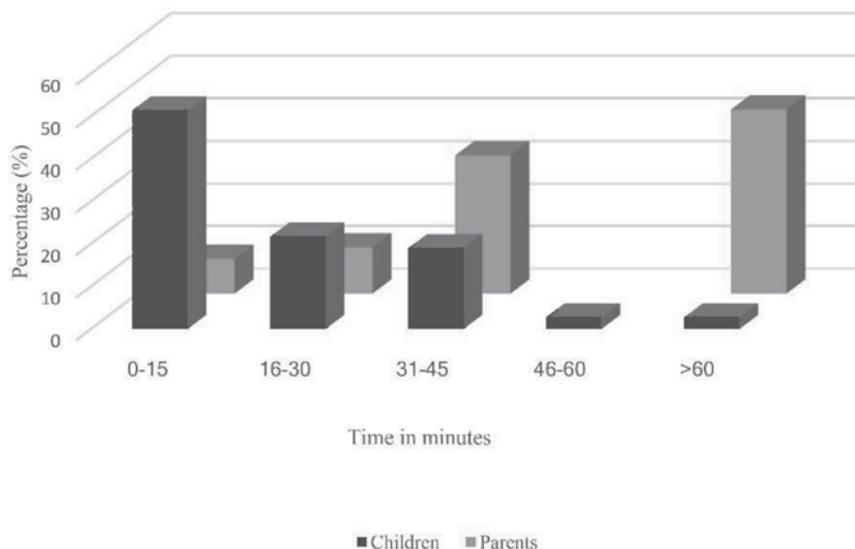


Figure 2. Play time of children and parents at children's age spent in elements of play involving balance.

Interestingly, the situation is similar to that reflected in Table 2, as 43.24% of parents used to spend over 60 minutes in games involving balance (elastics, skipping rope, climbing, hopscotch) while only 2.7% of their children spend time playing these kinds of games now.

### Elements of play involving dynamic accommodation activities

Data on the comparative analysis of games involving dynamic accommodation activities are presented in Table 4.

Here, too, we can see that more than one third of parents (35.14 %) used to spend over 60 minutes in games involving dynamic accommodation (jumping over obstacles, catching and throwing a ball, etc.) while only 8.11% of their children spend time in these kinds of games.

Table 4. Play time of children and parents at children's age spent in elements of play involving dynamic accommodation.

	Daily duration of games and activities involving dynamic accommodation						
	No answer	None	0-15 min	16-30 min	31-45 min	46-60 min	>60 min
<b>Children</b>	2.70%	8.11%	27.03	43.24%	10.81%	8.11%	/
<b>Parents</b>	5.41%	/	2.70%	13.51%	13.51%	29.7%	<b>35.14%</b>
<b>Chi square analysis for rotation</b>	$\chi^2(1,5)=34.14, p<0.001$						

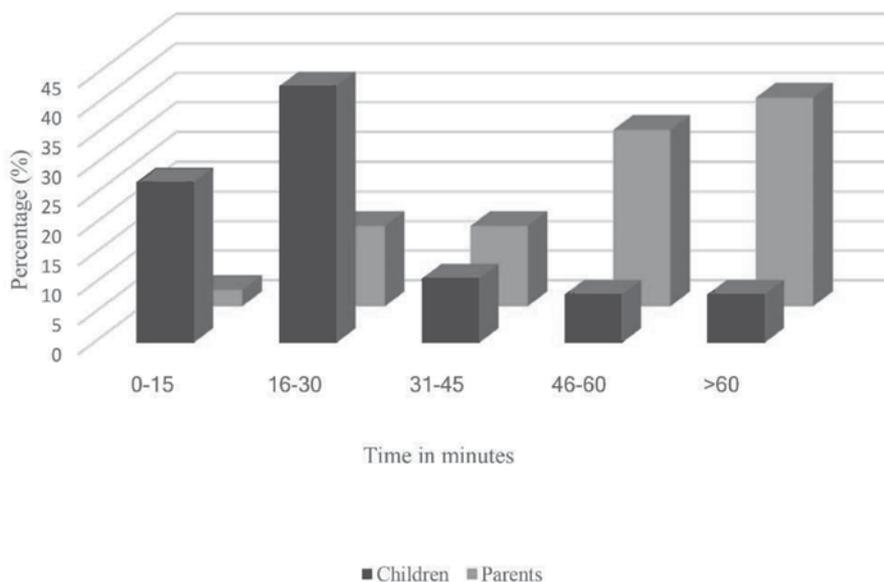


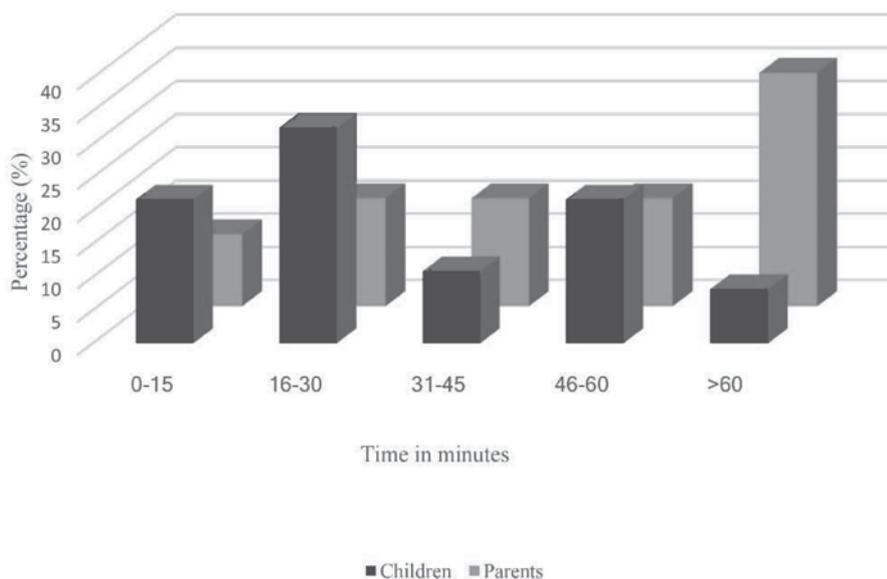
Figure 3. Play time of children and parents at children's age spent in element of play involving dynamic accommodation.

**Elements of play involving fine motor skills**

Data on the comparative analysis of the games involving fine motor skills activities are presented in Table 5.

*Table 5. Play time of children and parents at children's age spent in element of play involving fine motor skills.*

	Daily duration of games and activities involving fine motor skills						
	No answer	None	0-15 min	16-30 min	31-45 min	46-60 min	>60 min
<b>Children</b>	/	8,11%	21,62%	32,43%	10,81%	21,62%	<b>5,41%</b>
<b>Parents</b>	5,41%	/	10,81%	16,22%	16,22%	16,22%	<b>35,14%</b>
<b>Chi square analysis for rotation</b>	$\chi^2(1,5)=17.09, p<0.01$						



*Figure 4. Play time of children and parents at children's age spent in elements of play involving fine motor skills.*

As with most elements, that of play involving fine motor skills shows a big difference as 35.14% of parents compared to 8.11% of their children spent over 60 minutes in games involving fine motor skills-based activities (marbles, stickers, plasticine, playing an instrument etc.).

### Elements of play involving running

Data on the comparative analysis of games involving running activities are presented in Table 6.

Table 6. Play time of children and parents at children's age used in elements of play involving running.

	Daily duration of games and activities involving running					
	No answer	0-15 min	16-30 min	31-45 min	46-60 min	>60 min
<b>Children</b>	/	5,41%	29,73%	13,51%	21,62%	<b>29,73%</b>
<b>Parents</b>	5,41%	2,70%	5,41%	13,51%	21,62%	<b>51,35%</b>
<b>Chi square analysis for rotation</b>	$\chi^2(1,5)=10.69, p=0.058$					

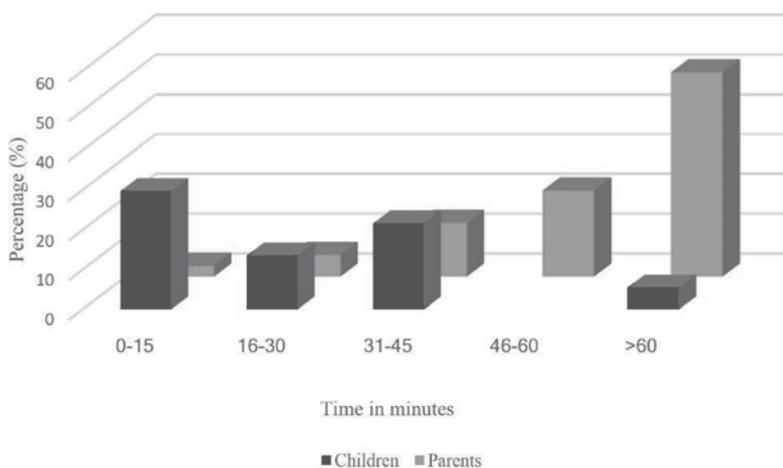


Figure 5. Play time of children and parents at children's age spent in element of play involving running.

Results for elements of play involving running are similar to previous tables, showing that more than half of parents (51.35%) used to spend over 60 minutes in games involving running activities while only 5.41% of their children are spending time on such games now.

Chi square analysis for rotation, balance, dynamic accommodation and fine motor skills were significantly different, whereas running was at the borderline of significance.

## DISCUSSION AND CONCLUSION

From the parent's perspective and from our own experience we found no difficulties making the estimation of the past time spent outdoors when we were young. The recall came with ease, because apart from school and other activities, meals and sleep, most of the leisure time was spent outdoors. With nostalgia, generations from the late 1970s to the late 1980s remembered how hard our parents had to try to get us to come inside for meals or sleep. Free play as well as the contact with nature that seems to be scarce in today's generations of children were among the motivations for this study. Hence, we created a questionnaire which would capture this common knowledge or insight (at least in this region of the world) to enable us to point to the problems and potential consequences of such dramatic change concerning leisure time play behaviors taking place over only two to three decades.

Since the aim of the study was to compare the domains of PA or play elements and the quantity of children's play time with the respective values for their parents at the same age, we managed to analyze not only the overall time spent in indoor and outdoor play, but also more specific aspects of play elements involving rotation, balance, dynamic accommodation, fine motor skill-based activities, and activities involving walking and running. We observed and reported a significant difference in both the domains (elements of play) and the quantity of play time between contemporary children and their parents at their age.

While children today spend about the same amount of time playing at home as their parents did during childhood (about two hours), they spend an average of one and a half hours playing outdoors, as opposed to their parents who used to spend almost twice that amount of time outdoors. In contrast, children today spend three times as much time in front of a screen (TV, computer, mobile phone, etc.) as their parents did in their childhood (one and a half hours vs. half an hour).

These findings strongly suggest that the contemporary lifestyle of children involves less physical activity (PA) and much more screen time, which must have a strong impact on their development.

Play is of intrinsic motivation for every child and a natural way of learning. To stimulate the overall biological potential of children it is important to integrate complex motor skills and mental processes into play. Particularly, fine motor skills, dynamic accommodation, balance, and rotation have been found to be important play elements.

Moreover, speech, which underlies many areas of child development, is naturally fostered by the play process, as it is a common element of the classic children's games listed in the questionnaire. If we take into consideration that there is a clear correlation between motor, cognitive, and emotional development that decreases with age, it becomes clear that early childhood age plays a key-role in regard to overall child development.

When there is a clear decrease of aerobic and motor activities in children, and with the consequences of such behavior well known, it becomes a priority to educate parents and especially those who work with young children to prevent or at least reduce the effects of this trend.

### Limitations

First, the use of a non-validated set of questions in the questionnaire survey to measure the generations' differences in elements and quantity of play may limit the strength of the study. Second, the self-reported data and structure of the survey (recall bias) may represent another potential source of bias and third, the use of the chi-square test is less reliable for small sample frequencies (< 5).

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## APPENDIX

### QUESTIONNAIRE - Playing, then and now

Dear parents, please provide your answers on the given lines or by circling the intended answer and putting an "X" in the appropriate table boxes. There are no right or wrong answers in this questionnaire, so we are kindly asking you to answer the questions as truthfully as possible.

1. Gender:                      F              M                      Age: \_\_\_\_\_

2. Education level (please circle the correct answer):

- a) primary school    b) secondary school    c) college  
d) university    e) MA/MSc    f) PhD

3. You are (please circle the correct answer):

- a) married    b) in a common law marriage    c) widow/widower  
d) divorced    e) remarried

4. How many children do you have? \_\_\_\_\_.

What is the birth order of the child referred to in the questionnaire? \_\_\_\_\_.

5. What is your birth order in your family? \_\_\_\_\_,

out of how many children? \_\_\_\_\_.

6. Do you wear glasses? YES    NO

If YES, what is your eye prescription? \_\_\_\_\_ (put + or - in front of the number)

#### A. QUESTIONS ABOUT YOUR CHILD

Child's age \_\_\_\_\_ (6 to 8 yrs.)

1. Does the child wear glasses? YES    NO

If YES, please write the child's eye prescription. \_\_\_\_\_ (put + or - in front of the number)

2. Does your child play any sport?              YES    NO

If YES, please specify the sport. \_\_\_\_\_

How often does your child practice per week? \_\_\_\_\_

When did your child start practicing that sport? \_\_\_\_\_

3. How much time does your child usually spend playing (not including video games and similar activities):

Outdoors: \_\_\_\_\_ minutes      Indoors: \_\_\_\_\_ minutes

4. How much time per day does your child spend playing games containing the elements listed below (put an X in the appropriate box for each type of activity, that is, 10 X signs in total: 5 for working days, 5 for weekends). It may seem to you that your child does not play the same games you played as a child, but please try to specify the number of games your child engages in per day that contain the specified elements while playing in the park, playroom, on a playground, etc.

**REMARK: Please put an X in the appropriate box: working day (WD - the grey column box) and weekend (W - the white box).**

Games	Duration		None.		0-15 minutes		15-30 minutes		30-45 minutes		45-60 minutes		Over 60 minutes.	
	WD	W	WD	W	WD	W	WD	W	WD	W	WD	W	WD	W
Rotation (e.g., elastics, marbles, running, hopscotch, etc.)														
Balance (elastics, marbles, climbing, hopscotch, rope jumping ...)														
Dynamic accommodation (e.g., running over obstacles, ball catching and throwing, etc.)														
Fine motor skills, making sure the child uses all ten fingers (marbles, napkins, stickers, making flower wreaths, playing instruments, playing with clay and other modeling materials.														
Walking, running.														

5. What is your child’s favorite game? \_\_\_\_\_

6. What is your child’s least favorite game? \_\_\_\_\_

7. If your child spends more than 60 minutes outdoors per day, please specify how much time:

On working days: a) 60-120 minutes b) 120-180 minutes c) more than 180 minutes

On weekends: a) 60-120 minutes b) 120-180 minutes c) more than 180 minutes

**B. QUESTIONS ABOUT YOUR OWN CHILDHOOD**

1. Try to remember your childhood and how much time per day you (aged 6 to 8) played games that contained the elements listed below (put an X in the appropriate box for each type of activity, that is, 10 X signs in total: 5 for working days, 5 for weekends).

**REMARK: Please fill in the appropriate box: working day (WD - the grey column box) and weekend (W - the white box).**

Games	Duration		None.		0-15 minutes		15-30 minutes		30-45 minutes		45-60 minutes		Over 60 minutes.	
	WD	W	WD	W	WD	W	WD	W	WD	W	WD	W	WD	W
Rotation (e.g., elastics, marbles, running, hopscotch, etc.)														
Balance (elastics, marbles, climbing, hopscotch, rope jumping ...)														
Dynamic accommodation (e.g., running over obstacles, ball catching and throwing etc.)														
Fine motor skills, making sure the child uses all ten fingers (marbles, napkins, stickers, making flower wreaths, playing instruments, playing with clay and other modeling materials.														

Walking, running.											
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2. What was your favorite game? \_\_\_\_\_

3. What was your least favorite game? \_\_\_\_\_

4. How much time did you spend playing? Outdoors: \_\_\_\_\_ minutes  
Indoors: \_\_\_\_\_ minutes

5. If you spent more than 60 minutes outdoors, please specify how much time?  
On working days: a) 60-120 minutes b) 120-180 minutes c) more than 180 minutes  
On weekends: a) 60-120 minutes b) 120-180 minutes c) more than 180 minutes

**C. SCREEN TIME**

1. How much time does your child spend in front of screens (TV, computer, smart phone etc.) on working days (WD), and how much on weekends (W)?

MINUTES	
WD	W
MINUTES	
WD	W

2. How much time did you spend in front of screens (TV, computer) at that age on working days (WD), and how much on weekends (W)?

**D. QUESTIONS RELATED TO SLEEP HABITS**

1. What time does your child usually go to bed?  
On working days: \_\_\_\_\_ On weekends: \_\_\_\_\_

2. What time does your child usually get up in the morning?  
On working days: \_\_\_\_\_ On weekends: \_\_\_\_\_

3. Does your child nap during the day? If yes, how much time does your child spend napping during the day?  
Answer: \_\_\_\_\_

4. Are there any activities or routines your child usually engages in before going to bed (reading a book, watching TV, etc.)?  
Please specify these activities: \_\_\_\_\_

How long do these activities usually take? \_\_\_\_\_

5. Is your child a restless sleeper, frequently rolling over during sleep?

a) No                                      b) Sometimes                                      c) Yes, frequently.

6. Does your child wake up at night?

a) No                                      b) Sometimes                                      c) Yes, frequently.

7. Is your child often tired during the day?

a) No                                      b) Sometimes                                      c) Yes, frequently.

8. Does your child fall asleep doing certain activities during the day?

a) No                                      b) Sometimes                                      c) Yes, frequently.

**THANK YOU FOR YOUR COOPERATION**