

# Kinesiological activities of preschool-aged children in the family environment

## Abstract

It is essential to enable early and preschool-aged children with the highest quality of growth and development, which they can achieve in an adequate familial environment in which they spontaneously and through motor play develop kinanthropological characteristics, as well as through out-of-home forms of education and participation in various kinesiological programs.

This research aimed to gain an insight into the involvement of children in the realization of different physical activities compared to sedentary activities.

The research was conducted by interviewing 149 parents whose children were enrolled in a preschool program in 2016. The results show that 21.5% of children are included in a preschool sports program. When it comes to children's activities outside institutional education, it is an encouraging fact that, despite the many stressful situations experienced by parents with preschool and early school-aged children, 77.2% of parents spend time with their children in indoor and outdoor play during the working week and the same amount of time during the weekends and holidays. However, despite this, it is a worrying fact that 83.9% of the children spend their free time watching TV and playing games on their computers and tablet. When we add to this the time spent on walking, swimming, or riding a bicycle, it can be concluded that already in the preschool period, children lead a more sedentary than active lifestyle.

**Keywords:** motor activities, preschool child, joint activities of parents and children

## Introduction

Each child is born with certain physical and psychological predispositions. They are the imperative of his existence, and the internal conditionality is the movement, i.e., various changes in the position of parts or the whole body. The extent to which the child's potential will develop depends on the environment of his upbringing and active involvement in this dynamic process of the child's life.<sup>1</sup> The child wants to get to know the world that surrounds him in order to be able to navigate through it, leading to motor development.<sup>2</sup> In this way, motor development is intertwined and complemented with other areas of the child's development – cognitive, social, and emotional.<sup>3</sup> Numerous authors have emphasized the importance and impact of movement through a variety of kinesiological activities, especially until the child's fifth year of age.<sup>4-7</sup> They believe that this period is the most favorable not only for the child's growth and development but also for the acquisition of adequate habits of a healthy lifestyle in modern society, which is increasingly saturated with activities involving little movement.<sup>8</sup>

Recognizing the child's preschool period as a sensitive period of his life, it is necessary to create opportunities that will influence the growth and development of the child's knowledge and abilities since missed opportunities can hardly be made up for later in life. Kinesiological activities, as a common name for activities aimed at the development of motor knowledge (conventional kinesiological activities), traits, and abilities (unconventional kinesiological activities),<sup>9</sup> occupy an important place. This is also embedded in a document that has had an important impact on understanding the nature and development of relationships with the child, consequently creating a contemporary image of the child as a whole being, a social entity with "specific needs, rights, and culture" (National Curriculum for Early Childhood Education and Care, 2014: 35), as a researcher and active creator of

knowledge and citizen of the community, expressing his potential creativity (National Curriculum for Early Childhood Education and Care, 2014; Convention on the Rights of the Child, 1989).

The environment in which a child learns and lives his rights during the preschool period is the family and early childhood institutions, most often the kindergarten. Family is the first and most important educational environment comprising children and parents. Among them, there is a complex interactional relationship in which children develop, learn, assume social roles, and "develop responsibilities towards themselves, other people, and the environment".<sup>10</sup> Joint activities of children and parents, especially important for the quality development and care of children, contribute to a stimulating family atmosphere. Despite numerous demographic changes that have affected family functioning, some authors believe that parents are motivated and willing to make additional effort to spend quality time with their children.<sup>11,12</sup> Spending quality time together contributes to the well-being of the child as well as family members as a whole, whereby quality time refers to the time in which the needs for fun, rest, recreation, and culture are met, i.e., time in which children and parents are oriented on themselves.<sup>13</sup> It is the time that, in the broadest sense, is referred to as family leisure.

Another important environment that aims to provide the most appropriate conditions for the development of the current and potential abilities of children is the kindergarten. These are institutions that base their educational activities on the contemporary understanding of the child. It is manifested in the promotion of active forms of learning through activities in which it actively acquires knowledge and understanding.<sup>14</sup> For this purpose, different types of programs are implemented in institutions of early and preschool education, kindergartens, and diversity is manifested in both duration and content. In addition to entire development programs, there are also special

programs focused on sports activities, among others. According to data provided by the Ministry of Science of Education and Sports, in recent years, an increasing number of sports clubs and associations have been involved in the implementation of shorter sports programs, rhythm, dance, soccer, swimming, and others, with a total involvement of children of about 86% (<https://mzo.hr/hr/node/3018>).

The 1970s marked the beginning of a period of restructuring the social reality. New patterns of social values and structures, referred to as knowledge society, information society, world society, among others, have become recognized through the predominance of service activities, the commercialization of leisure time, different combinations of working hours, the increased importance of intellectual (information, knowledge, experience) over physical capital, culture that has become cultural capital, as well as intangible resources that have become marketable goods.<sup>13,15</sup> All of this sets new expectations for parents, preschool teachers, and early childhood institutions as a whole. It is an indisputable fact that the child's early years play a significant role in his overall development and that this development is the result of the child's complex and continuous interactions with his material and social environment. The child's activities, the conditions in which they take place, the amount of his initiative and independence depend on the parent and the preschool teacher and affect the overall socio-emotional, intellectual, and physical development in general.<sup>16</sup>

Given these societal changes, which, besides their positive aspects (e.g., the possibility of building a freely chosen personal identity, etc.) are also characterized by negative ones such as insufficient movement, inadequate nutrition, the sense of burden associated with parental and professional roles, parents and children necessarily become part of such life, which produces new needs in educational institutions.<sup>10</sup>

Knowing that obesity begins as early as in the preschool age,<sup>17</sup> that children are inadequately physically active<sup>18</sup> as well as that physical activity also depends on material conditions<sup>19</sup> and how parents spend their leisure time with their children,<sup>20</sup> it is indispensable to resort to the useful and healthy organization of preschool children's physical activity as well as spending quality free time within the family to improve the quality of life for children and their parents. In addition, physical movement, whether structured or unstructured, is an important factor in the optimal development of organ systems, including the neurological system, which can play an important role in the prevention of neurodevelopmental disorders in children.<sup>21</sup> It is especially important at the earliest possible age and early intervention when additional professional assistance in children is not yet undertaken for various organizational and other reasons.<sup>22</sup>

Leisure time is defined as the remaining time, i.e., time remaining after having completed other obligations and as activities understood as pleasure in play, recreation.<sup>23,24</sup> It is essential for preschool children to spend much of their free time with their family playing, in the fresh air, or any other activity with parents and peers. Inside the family, as a community of parents and children, parents play a major and important role in ensuring the conditions for different activities of children. Modern parents, in addition to their obligations, are experiencing a decrease in the time available for their children, who, on the other hand, need to spend quality time with their parents.<sup>25,26</sup> The imbalance of the two sides leads to the creation of a child's activity that is devoid of muscular effort. These are activities that the child performs on his own or with his parents in front of the TV, which parents consider as quality time spent with their child.<sup>9</sup> Accepting the

fact that "the need for movement is a basic biotic need, and that the child individually and completely surrenders to spontaneous play or some other form of physical activity, concludes that from the point of view of beneficial use of leisure time by parents and children, kinesiological activity is not influential".<sup>9</sup> Parents should be aware of the importance of spending quality time with their children because with all the obligations they face, it is not the time spent with the child that matters, but the way in which it is spent.

Because of all of the abovementioned, this paper presents the results of a research that aimed to gain an insight into the type and frequency of different (kinesiological) activities of preschool children in the Primorsko-Goranska County within the framework of time a child spends with his family members outside their work responsibilities.

## Research methodology

### Research aim and objectives

Starting from the importance of ensuring adequate conditions in order for the child's upbringing to take place in a family and institutional setting, the primary objective was to describe the types and frequency of children's different activities in the family setting. To this end, the research objectives were to examine:

- A. The involvement of children in sports programs (both inside and outside the family setting);
- B. How parents spend time with their children during the week (i.e., on weekdays) and on weekends and holidays; and
- C. The amount of time a preschooler spends in motor or sedentary activities.

### Sample

The research was conducted on a suitable sample of parents whose children were enrolled in the pedagogical year 2016/2017 in the city/municipal kindergartens Čavle, Kastav, Viškovo, Kraljevica, and the Kindergarten Rijeka (Sub-centers of preschool education Zamet, Drenova, Pehlin). The survey was completed by 149 parents whose children were born between June 23, 2012 and December 20, 2013.

### Measuring instrument and procedure

The research was conducted in the form of a survey. For research purposes, a semi-structured questionnaire was developed.<sup>27</sup> The questionnaire contained 13 close-ended or open-ended questions. Two questions related to the child's personal information (sex, date of birth). Closed questions provided a range of answers for participants to choose from. Such questions are dichotomous, multiple-choice, and rating scales. The first question is a dichotomous question. There are two multiple-choice questions – the second and third questions. The questions numbered 4, 8, 9, 10, 11, 12, and 13 represent the rating scales in which parents assessed the frequency and time their children spend in various physical activities. In addition to the close-ended questions, the questionnaire also contained three open-ended questions to identify the amount of time spent in sedentary activities.

The parents received the questionnaire in paper form, with the prior information and consent to participate, and filled it out manually. Such a procedure left parents with the opportunity to add comments, but also to make mistakes by skipping questions.

Data processing involved quantitative analysis. Univariate analysis – determination of response percentages – was used for quantitative data processing.

## Results and discussion

The first question, Are the children involved in a sports program in the kindergarten, examined the involvement of children in sports programs in the kindergarten. A higher percentage of children not included in the kindergarten sports program may stem from the kindergarten's commitment to the type of program being implemented, which means that the kindergarten does not have such a program. The reasons for this may lie in the fact that daily physical activities are recognized as important and mandatory activities of the whole organization of the life and work inside the kindergarten, so they do not feel the need to carry out special sports programs (Table 1).

**Table 1** Involvement of children in a kindergarten sports program

Responses	f	%
Yes	32	21.47
No	81	54.36
Without response	36	24.17
Total	149	100

Answers to the second question, What does your child do during the week when he or she is not in the kindergarten, have identified the ways in which a child spends their leisure time when absent from the kindergarten during the week (Table 2).

**Table 2** Children's activity during the week outside the kindergarten

Children's activities	f	Percentage	N
Plays with the parents outdoors and indoors	115	77.2	122
Plays with peers indoors	59	39.6	122
Plays with peers outdoors	92	61.7	122
Watches TV	83	55.7	122
Plays various games on the PC and tablet	42	28.2	122
Participates in various programs implemented for preschool children	18	12.5	122
Something else (sports programs, artistic activities, foreign language learning programs, activities inside and outside the parental home)	18	12.6	131

The finding on the high percentage of parents playing with children outdoors and indoors is the contribution of this research to the selected topic since there are no such systematic findings in the Croatian-speaking area. A similar percentage was obtained by researching family leisure time as a factor of cohesiveness and satisfaction, which was conducted in Zagreb during 2007 and 2008.<sup>28</sup> Research shows that families with infants and preschoolers are more likely to spend leisure time in joint outdoor and indoor activities, although they are often burdened with childcare, leading to a more pronounced conflict between professional work and family roles.<sup>24,28,29</sup> Children who spend their free time watching television and playing computer

games on a computer and tablet represent a total of 83.9% of children, which is certainly a concern in the case of preschool children and should certainly be explored in greater detail. Further analysis of the programs in which children are involved has revealed that children are most often involved in sports programs (sports playgrounds, sports school, swimming, gymnastics, karate, and relaxation for children), art programs (e.g., ballet, dance, cheerleading, singing), and programs of foreign language learning (mainly English). The inclusion of children in these programs may require from parents additional engagement, planning, and more careful organization due to the situations mentioned above in which parents with early and preschool children may find themselves with an additional, more favorable economic status.<sup>11,28</sup> It can be observed that all programs in which children are involved, except for singing and learning English, are directed by certain forms of movement.

In addition to devoting time which the child spends with his family members outside their work obligations and outside the kindergarten, 12.5% of parents mentioned other content. Such content is realized through activities that take place inside and outside the parental home, such as drawing, singing, dancing, playing with siblings and friends, flipping through picture books, playing with Legos. The activities outside the parents' home include going on field trips, attending plays (puppet theater), karate, staying in a playroom, walking, gardening with grandmother, cinema, swimming, sports playroom, and cycling. Even among these latter activities, there are physical activities that parents did not list as specific sports programs. Also, it can be observed that the activities include members of the extended family. These findings largely coincide with findings from previous research that emphasize the importance of a healthy, supportive environment filled with quality content, especially during the early developmental period.<sup>28</sup> It can be concluded that the results presented here show that children of this age are playing a lot less on the computer than with their parents and peers.

Answers to the third question, How do you spend your weekends and holidays with your child, are shown in Table 3.

**Table 3** Activities performed by parents and children on weekends and holidays

Children's activities	f	%	N
Spending time with friends, family members indoors	93	62.4	122
Spending time with friends, family members outdoors	115	77.2	122
Playing sports at the gym: gymnastics, basketball, football, handball, martial arts, tennis, badminton, bowling	4	2.7	122
Playing sports in the swimming pool: swimming, water polo, diving, jumps, water games	17	11.4	122
Playing outdoor sports: horse riding, orientational running, hiking, biking, kayaking, outdoor games	58	38.9	122

The obtained answers indicate that most of them spend the weekends (77.2%) with friends outdoors, and slightly less (62.4%) indoors, and that 38.9% of them engage in various outdoor sports.

Parents' assessments of the frequency of their children's physical activity are provided in the fourth question, How often does your child have the opportunity to engage in physical activity, formulated as a five-point Likert-type scale (Table 4).

**Table 4** Frequency of the child's engagement in physical activity

Frequency	f	Percentage	N
Not actively	13	8.7	103
Every day	63	42.3	103
Once a week	6	4.0	103
Twice a week	21	14.1	103
One to three times a month	0	0	103

The categories offered, mutually exclusive, cover the full range of responses given by the participants, namely that 42.3% of children engage in physical activity each day, 8.7% of them are inactive, only 4% of children engage in physical activity once a week and 14.1% twice a week. Since the largest percentage of responses was that their children engage in physical activity each day, it may, to some extent, indicate that parents are aware of the importance of ensuring the conditions for children's continued physical activity.

Questions 8-13 checked how much a child walks, swims, or rides a bicycle, and how often. Walking is distinguished as a phylogenetically conditioned mode of movement and swimming and cycling as

ontogenetically conditioned learned forms of movement that require specific space and manner in which they are performed.<sup>3</sup> The answers are shown in Table 5.

From the obtained results it can be seen that children of this age most frequently (very often 38.3% of children) and the longest (more than 45 min-32.2% of children) walk, often (26.2% of children) and between 30-45 min (19.5% of children) ride a bicycle, while slightly less frequently – sometimes (20.1% of children) swim and a greater number of children do so less than 5 minutes (14.8% of children) and between 15-30 min (14.1% children). It had been expected that they would swim less for the reason that it is more accessible, easier, and cheaper to organize their time for walking and cycling.

The answers provided in these questions confirmed the answers to the third question that the largest percentage of children, almost half of them, engages in some form of physical activity every day.

Questions such as how much time a child spends watching television, reading or playing on a computer (Table 6) provided some interesting answers: about 20% of children watch TV for up to 40 minutes, 37% for an hour, while 25% watch it more than 60 minutes. Children do not read much at all, or their parents do not read to them because 56% of the answers were that children do not read at all. The importance of reading to children has been confirmed by research showing an impact on all areas of the child's development.<sup>30,31</sup> as well as contributes to the quality of time children and parents spend together.<sup>32</sup>

**Table 5** Frequency and duration of walking, swimming, and cycling

Responses	Walking		Swimming		Cycling		
	frequency	time	frequency	time	frequency	time	
Never	<5 min	1.3	0.7	<b>24.2</b>	<b>14.8</b>	6	7.4
Rarely	5 -15 min	18.8	4.7	20.8	6.7	4.7	14.8
Sometimes	15-30 min	5.4	18.1	<b>20.1</b>	<b>14.1</b>	24.8	18.1
Often	30 -45 min	36.2	23.5	6.0	8.7	<b>26.2</b>	<b>19.5</b>
Very often	>45 min	<b>38.3</b>	<b>32.2</b>	2.0	6.0	18.8	18.8

**Table 6** Duration of watching TV, reading, and playing on the computer

Duration in minutes	Watching TV		Reading		Playing on the computer	
	f	%	f	%	f	%
0	4	2.68	83	55.70	69	46.30
Less than 30	9	6.04	16	10.73	12	8.05
30 – 60	69	46.30	15	10.06	34	22.81
61 – 120	33	22.14	2	1.34	1	0.67
121 – 180	4	2.68	0	0	1	0.67
More than 180	1	0.67	0	0	0	0

Considering the time children spent after kindergarten, it can be concluded that even at preschool age, children sit more than they move, which is in accordance with the findings obtained from other studies conducted in the Republic of Croatia.<sup>3,28</sup>

## Conclusion

This paper sought to examine the involvement of children in sports programs (inside and outside the family environment), ways children

and parents spend their time during the week (i.e., on weekdays), and on weekends and holidays, as well as how much time a preschooler spends in motor, i.e., sedentary activities. Based on the results of this research, it can be concluded that the preschool children, whose parents were involved in this research, mostly spend their time playing games with their parents outdoors and indoors. Although more than half of children spend time in outdoor games, which likely indicates different motor activities, the percentage of children who spend time watching TV and playing games on a computer and tablet are worrying. The need and importance of the child's movement have not changed concerning the changes that have taken place in society as a whole. Therefore, it is important, despite the holistic starting point in creating conditions for the realization of the child's right to adequate growth and development, to grant special attention to motor development as a prerequisite for other areas of development. Attention should be paid to ensuring conditions in the institutional setting as well as in the family.

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