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PARENTS´ PERCEPTION OF RESTRICTION AND ENCOURAGEMENT OF TODDLERS DURING PHYSICAL ACTIVITY IN PLAY

Abstract

The aim of the paper was to determine whether there were interactions or differences between gender, age, level of education of parents regarding safety concerns, restrictions, freedom and encouragement of physical activity in the play of toddlers of different gender and age. The sample of respondents consisted of parents of children who attend preschool institutions in the Virovitica-Podravina County (Republic of Croatia). The respondents filled out a survey. Factor analysis identified two factors: concern for safety and restriction of physical activity in play, and freedom and encouragement of physical activity in play. A two-way analysis of the variance was used to examine whether there were differences between sociodemographic variables on the factors and whether there was an interaction between sociodemographic variables. It was found that the gender of the parents and the level of education of the parents has significant effect on how they will treat their children up to the age of 4, i.e. whether they will encourage or restrict them during physical activity in play.

Keywords: toddlers; encouragement of motor development; physical activity in play; restricting physical activity; parents' practices

PERCEPCIJA RODITELJA O OGRANIČAVANJU I POTICANJU FIZIČKE AKTIVNOSTI TIJEKOM IGRE DJECE RANE DOBI

Sažetak

Radom se željelo utvrditi postoje li interakcije ili razlike između spola, dobi, razine obrazovanja roditelja u odnosu na brigu za sigurnost, ograničavanje, slobodu i poticanje fizičke aktivnosti tijekom igre djece rane dobi različitog spola i starosti. Uzorak ispitanika činili su roditelji djece koja pohađaju predškolske ustanove na području Virovitičko-podravske županije (Republika Hrvatska). Ispitanici su ispunjavali anketu na kojoj je provedena faktorska analiza. Izdvojena su dva faktora: zabrinutost za sigurnost i ograničavanje fizičke aktivnosti tijekom igre te sloboda i poticanje fizičke aktivnosti tijekom igre. Dvofaktorska analiza varijance korištena je kako bi se istražilo postoje li razlike između sociodemografskih varijabli unutar faktora te postoji li interakcija između sociodemografskih varijabli. Utvrđeno je da spol roditelja i razina obrazovanja roditelja ima značajnoga efekta na to kako će se odnositi prema svojoj djeci u dobi do 4 godine, tj. hoće li ih više poticati ili ograničavati fizičku aktivnost tijekom igre.

Ključne riječi: djeca rane dobi; fizička aktivnost tijekom igre; ograničavanje fizičke aktivnosti; poticanje motoričkog razvoja; roditeljski postupci

1 INTRODUCTION

The encouragement of children's development of the motor skills requires certain restrictions and increased concern for the children's safety. However, a lack of physical activity among young children has been recorded due to these restrictions on the children's physical activity that are set by parents (e.g. due to safety issues) and the environment (e.g. lack of backyard) (Hesketh, Hinkley & Campbell, 2012). Restrictions, barriers (Table 1), and concern for safety prevent injuries or even more severe outcomes of physical activity. Nevertheless, such measures should not be overdone as this can lead to reduced physical activity. In addition to the occurrence of reduced physical activity, excessive preoccupation with certain types of safety leads to a decrease in the child's freedom in play and freedom to explore the world outside the house and kindergarten, which has long-term consequences for child's well-being (Zecevic et al., 2010). This is also indicated by Jurenac (2015), who states that previous research has shown that excessive parental protection does not generally have a positive effect on the up-bringing of a child and the development of its personality. Furthermore, excessive attempts to keep a child safe can expose them to unnecessary risk, which represents a disadvantage for children and their parents (Zecevic et al., 2010). Accordingly, it can be concluded that the issue of excessive security (care or protection) is a multidimensional problem (Zecevic et al., 2010).

Table 1. Barriers limiting children's physical play and activity

CHILDREN 0-12 MONTHS	CHILDREN 3-5 YEARS
• Security (neighbourhood safety, road safety issues, access to parks, dangerous strangers) • Season and weather conditions • Child age • Lack of knowledge about appropriate activities with regard to the age of the child • The child does not enjoy physical activity • Absence of siblings • The person caring for the child • Lack of time • Fear of possible injury • Parents' level perception of children's independence or autonomy • Facilities in the park and on the playground	• Safety (child supervision in public open spaces) • Season and weather conditions • Lack of knowledge about appropriate activities with regard to the age of the child • Lack of parental energy (fatigue / mood) • The child's health condition • The level of the child's abilities • Absence of siblings • Financial cost for participation • Certain preferences of the child according to a certain activity • Schedule • Lack of time • Family conflicts • Cultural values according to educational achievements • Rules regarding equipment and sun exposure • Fear of possible injury

Sources: Dwyer, Higgs and Hardy, 2008; Hesketh, Hinkley andCampbell, 2012; Irwin et al., 2005; Rhodes et al., 2013; Veitch et al., 2006

Concerns that the child will be injured while playing have led primarily to the personal responsibility of many parents, as they try to move the child away from "dangerous" areas and activities, rather than collective responsibility in which our society and our urban spaces are built safer for the children (Zecevic et al., 2010). Veitch et al. (2006) found that among parents, in 94% of cases, safety is a major factor determining where their children will play. Issues around excessive safety are related predominantly to parents' personal focus on their children's safety, but not toward the entire community that should respond issues related to the welfare of children.

Parents' perception of children's autonomy or their independence level can cause excessive concern for their security. Due to an excessive concern for safety, parents can reduce the number of places, facilities and devices (in the house or on the children's playground) for active free play, which certainly does not contribute to the children's motor development. Too many assumptions of safety by adults generally increase their engagement, but offer little reward (Zecevic et al., 2010). Parents should look for ways to help their children engage in physical activities they enjoy (Cheatom, 2014), rather than excessively focusing on safety.

The aim of the paper was to determine whether there were interactions or differences between gender, age, level of education of parents regarding safety concerns, restrictions, freedom and encouragement of physical activity in play of toddlers of different genders and ages. The following hypotheses were tested based on the goal of the study:

H1 A significant gender difference related to parents´ encouragement and limitations of physical activity in play for all toddlers, overall and in interaction with a child's gender, was expected

H2 A significant gender difference related to parents´ encouragement and limitations of physical activity in play for all toddlers, overall and in interaction with a child's age, was expected

H3 A significant educational level difference related to parents´ encouragement and limitations of physical activity in play for all toddlers, overall and in interaction with a child's gender, was expected

H4 A significant educational level difference related to parents´ encouragement and limitations of physical activity in play for all toddlers, overall and in interaction with a child's age, was expected

H5 a significant age difference related to parents´ encouragement and limitations of physical activity in play for all toddlers, overall and in interaction a child'sgender, was expected

H6 A significant age difference related to parents´ encouragement and limitations of physical activity in play for all toddlers, overall and in interaction with a child's age, was expected.

2 METHODOLOGY

2.1 Subjects

The non-random sample consisted of parents of children aged 0-48 months. The survey was completed by 333 parents (142 M - 42.6%; 191 F - 57.4%) with the average age of 33.9 years (*SD* = 4.62; min = 22; max = 53). When it comes to the level of education, 153 parents (45.9%; 77 fathers, 76 mothers) had a secondary school degree, and 180 parents (54.1%; 65 fathers, 115 mothers) had a university degree. The chi-square independence test (Yates correction) showed that there was

a statistically significant difference between the gender of the parents and their level of education χ^2 (1, n = 333) = .143, p = .012, fi = 0.143, but with very small effect according to Choen's criterion. Parents were divided into three age groups: up to 31 years (N = 104), 32-35 (N = 110) and more than 36 years (N = 119).

The study was carried out on 333 children (166 boys - 49.8%; 167 girls - 50.2%) with the average age of 34 months (SD = 11,294; min = 2; max = 48). Children were divided into three age groups: up to 24 months (N = 66), 25-36 months (N = 92) and 37-48 months (N = 175).

2.2 Measure

Following the aim of this study, the statements from the survey of Iveković (2017) were used. 27 items were used, and a 5-point Likert scale was applied (1 – completely incorrect; 5 – completely correct).

The socio-demographic data consists of gender, age, parents level of education and the gender and age of the child.

2.3 Procedure

All kindergartens in the Virovitica-Podravina County were contacted by phone during 2018. After they received information about the aim and method of conducting the research, they were asked if they wanted to participate in the research. Five kindergartens voluntarily decided to participate in the research. With a prior agreement with the kindergarten directors, surveys were delivered to each kindergarten. The surveys were accompanied by written instructions for parents on how to fill the survey. The written instructions stated that participation in the research was voluntary and the participants were told that they had the right to withdraw from the further procedure at any time, without explanation. Educators in kindergartens distributed surveys to parents in their educational groups. After the parents filled out the surveys, they returned them to the educators. The educators then sent the completed surveys by post.

2.4 Data Analysis

After a preliminary analysis on 27 items, 6 items were discarded because they were shown to have very little association with the remaining set of items. 21 items were retained and further analysis was performed on them. A factor analysis, Keiser-Meyer-Olkin test (,820) and Bartlett sphericity test ($\chi 2 = 1889{,}697$, $df = 210$, $p = {,}000$) were performed. Factor analysis was used to determine the existence of factors or subscales. The Cronbach's alpha coefficient, descriptive statistics and the Kolmogorov-Smirnov test were calculated for each new set of items (Table 2). A two-way analysis of the variance of the independent samples was used, whereby the value of the Levene's test, the *F* value, the degrees of freedom (*df*), the significance level (*p*) and the magnitude of the effect (partial eta square) were calculated. A two-way analysis of the variance was used to examine whether there were differences between socio-demographic variables on the newly formed factors or subscales and whether there wass interaction between sociodemographic variables. The chi-square test ($\chi 2$) was used to determine statistically significant differences in the frequencies of the samples and subsamples of the subjects.

For statistical data processing, the IBM SPSS 20 program was used.

3 RESULTS

3.1 Validity Results on The Modified survey for the assessment of parents' protection understanding of children during physical activity (Leljak, 2012 according to Jurenac, 2015)

The factor analysis on 21 items has been resulted with two factors "***Freedom and encouragement of physical activity in play***" comprising 8 items and "***Concern for safety and restriction of physical activity in play***" comprising 7 items (Table 3). Both factors explained 35.2% of the total variance. In Table 3, it can be seen that the two items ("I don't mind the child getting dirty when playing outside on the playground", "The child should be allowed to climb on their own and slide down the slide without anyone's help") which constitute the factor F*reedom and encouragement physical activities in play,* have a slightly lower factor weight (lower than 0.50). Both items were retained in further analysis because they were found not to significantly impair the reliability and internal consistency of the scale

of Fr*eedom and encouragement physical activity in play*, moreover, their removal reduced the overall level of reliability of the scale. Checking the assumption homogeneity of regression, was found that it was disturbed ($F(16, 299) = 1{,}751$, $p = {,}037$) and therefore no further calculation of the correlation coefficient between the two factors was performed. This shows that there is no correlation between the two factors, respectively, each scale measures something else. The values of the Cronbach's alpha coefficient are greater than 0.70 on each scale indicating acceptable reliability and internal consistency of each scale or factor (Table 2).

Table 2. Parameters of the new two sets of items that make up the factor of freedom and encouragement of physical activity in play and concern for safety and restriction of physical activity in play

Factor	N	Min	Max	M	SD	KST (p)	Skew	Kurt	α
Freedom and encouragement (8 items)	333	24	40	35,68	3,864	,000	-1,002	,514	,762
Concern for safety and restriction (7 items)	333	7	34	18,08	5,250	,000	,307	-,286	,755

Legend: *N* = number of subjects, Min = minimum score, Max = maximum score, *M* = mean, *SD* = standard deviation, KST = Kolmogorov-Smirnov normality test, Skew = measure of asymmetry, Kurt = measure of flatness, α = Cronbach's alpha coefficient

Table 3. Factor weights of single survey items

Particles	Values after rotation		Values before rotation		Variability
	Fac 1	Fac 2	Fac 1	Fac 2	
The child should be encouraged to run on different surfaces and to be as agile as possible.	**,618**	-,378	**,706**	,163	**,525**
The child should be allowed to climb onto the chair on their own.	**,617**	-,198	**,579**	,291	**,419**
The child should be encouraged to engage in various physical activities in order to be as agile as possible.	**,609**	-,113	**,514**	,346	**,384**

The child should be allowed to get out of bed on their own.	**,606**	-,154	**,541**	,314	**,391**
Proper development of the child requires free play and physical activity.	**,559**	,174	**,277**	,516	**,343**
The child should be allowed to play freely in the yard.	**,540**	-,175	**,508**	,253	**,322**
I don't mind the child getting dirty when playing outside on the playground.	**,487**	-,174	**,469**	,217	**,267**
The child should be allowed to climb and go down the slide on their own, without anyone's help.	**,474**	-,370	**,598**	,068	**,362**
Taking your child to the playground is beneficial, because the playground is a fun and safe place for children to play.	,457	,255	,148	,502	,274
The child should be allowed to climb to the top of the climber on the playground, if the child wants to.	,450	-,430	,622	,008	,387
There is no need to worry about the child's bruises on the hands and feet caused by play, this is normal.	,440	-,385	,584	,033	,342
The child should be allowed to crawl freely around the house / apartment.	,370	-,093	,329	,193	,145
The parent should engage in physical outdoor activities that the child performs (e.g. running, jumping, climbing on a climber…)	-,344	-,332	-,013	-,478	,229
Life is too dangerous to encourage a child to do risky things (e.g. To independently climb a slide…)	-,058	**,697**	-,530	**,457**	**,489**
It is not okay for a child to play with a ball in the yard because they could run out into the street while catching the ball.	-,081	**,631**	-,500	**,394**	**,405**
It is not okay for a child to jump on the bed because they could fall and injure themselves.	-,129	**,583**	-,500	**,326**	**,356**
The child should not be taken to a playground where the swing or see-saw is broken because the child could injure themselves.	,030	**,583**	-,387	**,437**	**,340**

It is not okay for a child to play on an asphalt playground as they could fall and hurt their knees.	-,202	**,568**	-,542	**,264**	**,364**
When a child falls while running or walking they should always be helped to get up.	-,108	**,561**	-,470	**,324**	**,326**
One should not let a child go outside and play when it is cold because they could catch a cold.	-,220	**,547**	-,540	**,236**	**,348**
We do not need to worry about children scratching their knees or elbows, it‘s part of play.	,421	-,454	,619	-,030	,383

Rotation: varimax, principal components method

The chi-square test showed that there was a statistically significant difference between the frequencies of fathers and mothers ($\chi2(1)= 7,210$, $p= ,000$) and the frequencies of children distributed within certain age groups ($\chi2(2)= 58,396$, $p= ,000$). It was found that there was a statistically significant difference between the frequencies of boys with respect to the gender of the parents ($\chi2(1)= 6,169$, $p= ,013$) and the frequency of boys ($\chi2(2)= 27.482$, $p= ,000$) and girls ($\chi2(2)= 33,677$, $p= ,000$) within age groups of children. The rest of the sample and subsample of respondents was uniform.

3.2 Results on Overall Interaction Effects for Both Subscales

Table 4 shows that the homogeneity of variance is impaired on the scale of C*oncern for safety and restriction of physical activity in play* in the interaction of parental age and the child's gender and on the scale of F*reedom and encouragement of physical activity in play* in the interaction of the parents' education levels and the child's gender, the parents' age and the child's gender, the parents' education level and the child's age, the parents' age and the child's age, i.e. the variance of both scales is not equal in these groups, so it has been given a stricter level of significance $p= 0.01$ with the aim of evaluating the results of the analysis of separate main effect and interaction effect. In Table 4, it can be seen that the implementation of a two-way ANOVA did not reveal statistically significant effect of the interaction of different categories of respondents on any scale (factor).

Table 4. Values of Levene's test of equality of variance and two-way ANOVA for independent samples between different categories of respondents on the scales of fFreedom and encouragement of physical activity in play $_{(FEPP)}$ and Concern for safety and restriction of physical activity in play $_{(CSRPP)}$

Different categories interactions	Levene's test				Two-way ANOVA		
	F	df 1	df 2	p	F (df)	p	Partial η^2
Parents' gender * child's gender $_{(FEPP)}$	2,288	3	329	,078	1,728 (1)	,190	,005
Parents' gender * child's gender $_{(CSRPP)}$	,473	3	329	,702	,103 (1)	,748	,000
Parents'education level * child's gender $_{(FEPP)}$	3,846	3	329	**,010#**	,791 (1)	,374	,002
Parents'education level * child's gender $_{(CSRPP)}$	1,534	3	329	,205	,175 (1)	,676	,001
Parent age * child's gender $_{(FEPP)}$	3,726	5	327	**,003#**	,163 (2)	,850	,001
Parents'age * child's gender $_{(CSRPP)}$	2,314	5	327	,044	1,934 (2)	,146	,012
Parents' gender * child's age $_{(FEPP)}$	1,985	5	327	,080	,477 (2)	,621	,003
Parent gender * child's age $_{(CSRPP)}$	1,219	5	327	,300	,378 (2)	686	,002
Parents'education * child's age $_{(FEPP)}$	3,487	5	327	**,004#**	,499 (2)	,608	,003
Parents'education * child's age $_{(CSRPP)}$	1,748	5	327	,123	,237 (2)	,789	,001
Parents' age * child's age $_{(FEPP)}$	2,559	8	324	**,010#**	,373 (4)	,828	,005
Parents' age * child's age $_{(CSRPP)}$	1,682	8	324	,102	,657 (4)	,622	,008

Legend: *df*-degrees of freedom, *p*- significance level, #($p \leq 0,05$), η^2- eta square

3.3 Results of Diferences for Both Subscales Between the Socio-demographic Variables

The differences between the sociodemographic variables of parents and children are analyzed below. Testing has been performed with a two-way analysis of the variance. Tables 5, 6 and 7 show the calculated mean values and standard deviations of subgroups of parents and children on both subscales.

3.3.1. Differences – Parents' Gender and Children's Gender

The results showed that there is a statistically significant difference between mothers and fathers on the subscale of Freedom and encouragement of physical activity in play (F (1,329) = 4,764, p =,030) and on the subscale Concern for safety and restriction of physical activity in play (F (1,329) = 8,614, p = ,004) therefore hypothesis *H1* has been accepted. The actual difference between the means on the firts (M_F=35,15 *vs* M_M=36,08; partial η2 = ,014) and on the other subscale is very small (M_F=19,06 *vs* M_M=17,35; partial η2 =,026).

Table 5. Mean values (*M*) and standard deviations (*SD*) - categories of parents with regard to the gender of the child on the scale of Freedom and encouragement of physical activity in play and on the scale of Concern for safety and restriction of physical activity in play

Parents Categories	Freedom and Encouragement			Concern for Safety and Restriction		
	Total	Boys	Girls	Total	Boys	Girls
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Fathers	35,15 (4,091)	34,99 (4,419)	35,29 (3,798)	19,06 (5,026)	18,84 (5,305)	19,27 (4,791)
Mothers	36,08 (3,645)	36,47 (3,710)	35,66 (3,546)	17,35 (5,306)	16,96 (5,406)	17,76 (5,194)
Parents SSE	34,98 (4,273)	34,93 (4,622)	35,02 (3,965)	20,18 (5,164)	19,78 (5,707)	20,54 (4,634)
Parents UE	36,28 (3,376)	36,60 (3,434)	35,94 (3,298)	16,29 (4,635)	16,14 (4,648)	16,45 (4,642)
Up to 31 years	34.91 (4.561)	34,94 (5,201)	34,88 (3,835)	18,35 (5,438)	17,92 (5,996)	18,78 (4,810)
32-35 years	36,09 (3,481)	36,34 (3,330)	35,88 (3,618)	17,33 (5,262)	16,14 (4,371)	18,32 (5,753)
36 years and older	35,98 (3,447)	36,29 (3,381)	35,64 (3,518)	18,54 (5,037)	18,79 (5,472)	18,25 (4,530)

Legend: HSE – secondary school level of education; FE – university level of education

Mothers of toddlers (boys and girls) give significantly more freedom in performing physical activities in play than fathers, but they will also significantly encourage toddlers (boys and girls) in more physical activities in play in relation to fathers. The difference is not statistically significant, but it can be observed that parents will generally give more freedom and will encourage more physical activities in the play of boys than girls (M_M= 35,87, SD_M= 4,065 vs M_F = 35,50, SD_F= 3,655) (Table 5).

The comparison of the mean values shows that fathers are significantly more concerned about the safety of toddlers than mothers. That means that fathers will significantly more restrict toddlers' physical activity in play than mothers. Although the difference is not statistically significant, parents are generally more concerned about the safety of girls than of boys. Because of this, they will restrict girls' physical activity in play more than that of boys (M_M= 17,72, SD_M= 5,428 vs M_F= 18,44, SD_F= 5,085) (Table 5).

3.3.2. Differences – Parents' Gender and Children's Age

The results showed that there was a statistically significant difference between mothers and fathers (F (1, 329) = 7,316, p = ,007, partial η^2= ,022) and the child's age (F (2,329)= 3,950, p = ,020, partial η2= ,002) on the subscale Concern for safety and restriction of physical activity in play. Compared to mothers, fathers were significantly more concerned about the safety of children in all age groups (up to 24, 25-36, 37-48 months) and significantly limit physical activity in play for children in all age groups.

The results showed that there is no statistically significant difference between mothers and fathers (F (1, 329) =2,989, p=,085) and the child's age (F (2, 329) =2,734, p=,066) on the subscale Freedom and encouragement of physical activity in play. Based on the obtained results, the hypothesis *H2* was partially accepted.

3.3.3. Differences – Parents' Educational Level and the Child's Gender

The results showed that there was a statistically significant difference between parents with different levels of education on the subscale of Freedom and encouragement of physical activity in play (F (1,329) = 9,432, p = ,002) and on the subscale Concern for safety and restriction of physical activity in play (F

(1,329) = 51,485, p = ,000), therefore hypothesis *H3* has been accepted. On the first subscale, the actual difference between the means is very small (M_{HSE}=34,98 *vs* M_{FE}=36,28; partial η2 = ,028) while on the other subscale difference between the means is large (M_{HSE}=20,18 *vs* M_{FE}=16,29; partial η2 = ,135).

Parents with secondary school level and university level education differ significantly from each other in terms of how much freedom they will give and how much they will encourage physical activity in the play of their toddlers. Parents with university level education will give toddlers (boys and girls) significantly more freedom in performing physical activities in play and will encourage toddlers' (boys and girls) physical activity in play significantly more, compared to parents with a secondary school degree (Table 5).

Parents with a university level of education are significantly less concerned about their child's safety and will place significantly fewer restrictions on toddlers (boys and girls) during physical activity in play, compared to parents with a secondary school level of education (Table 5).

3.3.4. Differences – parents' educational level and the child's age

The results showed that there was a statistically significant difference between parents with different levels of education on the subscale of fFreedom and encouragement of physical activity in play (F (1,329) = 5.996, p = ,015) and on the subscale Concern for safety and restriction of physical activity in play (F (1,329) = 41,000, p = ,000), therefore hypothesis *H4* has been accepted. On the first subscale,the actual difference between the means is very small (partial η2 = ,018) while on the other subscale difference between the means is medium (partial $\eta 2$ = ,111).

Table 6. Mean values (*M*) and standard deviations (*SD*) - categories of parents with regard to children of different ages on the scale of Freedom and encouragement of physical activity in play

PARENTS CATEGORIES	Freedom and encouragement			
	Total	Up to 24 months	25-36 months	37-48 months
	M (SD)	M (SD)	M (SD)	M (SD)
Total	35,68 (3,864)	34,67 (4,100)	36,16 (3,433)	35,82 (3,938)
Fathers	35.15 (4.091)	34,61 (4,326)	35,44 (3,932)	35,22 (4,108)
Mothers	36.08 (3.645)	34,71 (3,952)	36,70 (2,939)	36,23 (3,779)
Parents SSE	34.98 (4.273)	34,29 (4,100)	35,62 (4,024)	34,94 (4,451)
Parents UE	36.28 (3.376)	35,00 (4,130)	36,57 (2,899)	36,61 (3,234)
up to 31 years	34,91 (4,561)	33,32 (5,229)	35,81 (4,199)	34,96 (4,447)
32.-35 years	36,09 (3,481)	35,56 (4,022)	36,45 (2,743)	36,15 (3,605)
36 years and older	35,98 (3,447)	34,75 (2,552)	36,23 (3,277)	36,23 (3,699)

Legend: SSE – high school level of education; UE – faculty level of education

Parents with a secondary school and university level of education differ statistically significantly in how much freedom they will give and how much they will encourage physical activity in play. Parents with a university level of education give significantly more freedom and will significantly more encourage physical activities in play of children in all age groups than parents with a secondary school level of education (M_{FE}= 36,28, SD_{FE}= 3,376 vs M_{HSE}= 34,98, SD_{HSE}= 4,273) (Table 6).

Parents with a secondary school and university level of education differ statistically significantly in how much they are concernedabout their children's safety and how much they will restrict their children's physical activities in play. Parents with a university level of education will be significantly less concerned about the safety of children in all age groups and will significantly less restrict children physical activity in play of all ages in relation to parents with a secondary school level of education (M_{FE}= 16,29, SD_{FE}= 4,635 vs M_{HSE}= 20,18, SD_{HSE}= 5,164) (Table 7).

It was found that there is a statistically significant main effect of the child's age on concern for the safety and restrictions of physical activity in play (F (1,329) = 3,758, p = ,024, partial η2= ,022). The age of the child affects concern for safety and restrictions of physical activity in play. Parents with a secondary school and university level of education will have greater concerns for safety and they will increasingly limit children's physical activities in play as the child gets older.

Subsequent comparison using the Bonferroni test showed that the mean value in the age group of children up to 24 months was statistically significantly different from that in the age group 37-48 months (*M*=17,00, *SD*=5,057 vs *M*=18,78, *SD*=5,505; *p*= ,035). Parents with a secondary school and university level of education are significantly more concerned about the safety of children ages 3-4 and will significantly more limit their physical activities in play than they will forchildren under the age of 2 (average difference= -1.78, 95% *CI*: -3.47 to -.09).

Table 7. Mean values (*M*) and standard deviations (*SD*) - categories of parents with respect to children of different ages on the scale of concern for safety and restriction of physical activity in play

PARENTS CATEGORIES	Concern for safety and restriction			
	Total	Up to 24months	25-36months	37-48 months
	M (SD)	M (SD)	M (SD)	M (SD)
Total	18,08 (5,250)	17,00 (5,057)	17,51 (4,715)	18,78 (5,505)
Fathers	19.06 (5.026)	17,45 (4,478)	18,82 (4,850)	19,89 (5,221)
Mothers	17.35 (5.306)	16,60 (5,553)	16,55 (4,414)	18,01 (5,591)
Parents SSE	20.18 (5.164)	18,71 (5,028)	19,67 (5,085)	20,98 (5,158)
Parents UE	16.29 (4.635)	15,49 (4,642)	15,92 (3,736)	16,80 (5,063)
up to 31 years	18,35 (5,438)	17,32 (5,869)	17,42 (5,271)	19,24 (5,323)
32.-35 years	17,33 (5,262)	15,56 (5,124)	17,42 (5,182)	18,19 (5,251)
36 years and older	18,54 (5,037)	18,65 (3,602)	17,70 (3,631)	18,87 (5,861)

Legend: SSE – high school level of education; UE – faculty level of education

3.3.5. Differences - Parents' Age and the Child's Gender and Age

The results showed that there was no statistically significant difference between parents of different ages (*F* (2,329)= 3,072, *p* = ,048) and the child's gender (*F* (1,329) = 0.835, *p* = ,362) on the subscale of Freedom and encouragement of physical activity in play and between parents of different ages (*F* (2,329) = 2,015, *p* = ,135) and thr child's gender (*F* (1,329) = 2,097, *p* = ,149) on the subscale Concern for safety and restriction of physical activity in play.

The results showed that there wad no statistically significant difference between parents of different ages (*F* (2,329) = 3,161, p = ,044) and the child's age

(F (2,329) = 3,642, p = ,027) on the Subscale of freedom and encouragement of physical activity in play and between parents of different ages (F (2,329) = 1,715, p =,182) and the child's age (F (2,329) = 3,009, p =,051) on the subscale Concern for safety and restriction of physical activity in play.

The hypotheses *H5* and *H6* where rejected given the obtained results.

4 DISCUSSION

4.1 The Role of Parents' Gender in Limiting and Encouraging Physical Activity in Play and the Child's Gender and Age

The results of this study show that mothers will offer toddlers more freedom and will encourage physical activity in play more than fathers, but they will also worry less about safety and will less restrict children's physical activities in play in relation to fathers. The results obtained are somewhat surprising for several reasons. First, research has found that there is a difference between fathers and mothers in their involvement in physical activities in the play of infants and young children, with fathers being much more engaged than mothers in these two segments (Bretherton, Lambert & Golby, 2005; Paquette, 2004). Hence, according to the cited literature, mothers spend more time caring for children, and fathers in physical play with infants and toddlers. Second, research has found that fathers are more likely to encourage physical play with infants and toddlers than mothers (Bretherton, Lambert & Golby, 2005). Third, according to the literature, fathers are considered "risk catalysts" which means that they encourage children to push their own boundaries, to learn to take risks, to take initiative in unfamiliar situations, to explore and overcome obstacles (Paquette, 2004; Bokony & Patrick, 2009). Therefore, a possible reason for the results obtained in this way would be that mothers from the Virovitica-Podravina county (VPC) generally take more care of toddlers, but also spend more time on physical activities in play with children. If mothers care more about their children and spend more time with their children on physical activities in play, they are more likely to know their abilities and limitations better, which may make them more able to judge which activities the child can perform and which activities should better be limited. It is possible that mothers, compared to fathers, consider toddlers to be more motorically capable, and because of that, mothers will encourage them more and limit their physical activities in play less. It is obvious that mothers from the

VPC county treat infants and toddlers differently and will perceive them differently during physical activities in play than fathers.

Although no statistically significant difference was found, parents will generally give more freedom and encourage more physical activity in play to boys than girls under 4 year of age. The results obtained in this study agree with the other authors (Brustad, 1993; Beets, Cardinal & Alderman, 2010; Hinkley, 2011). In addition to parents giving girls less freedom and encouraging physical activity in play less, they will be more concerned about the safety of girls and will place more restrictions on them during physical activity in play than on boys under 4 years of age. A possible reason for the difference could be found in the fact that fathers and mothershave different approaches to play (see Paquette, 2004; Sanderg & Pramling-Samuelsson, 2005; Bokony & Patrick, 2009) and conduct different games with boys and girls at the earliest age (see Bokony & Patrick, 2009; Lindsey, Mize & Pettit, 1997; Paquette, 2004). Due to the above two reasons, parents from the VPC likely perceive the physical activity in the play of boys and girls aged 0-4 differently, so they will treat them differently. This is confirmed by other literature (Campbell & Eaton, 1999; Granie, 2010; Hesketh, Hinkley & Campbell, 2012; Hinkley, 2011; Lindsay et al., 2014; Moser & Reikerås, 2014; Thomas & French, 1985; Trost and et al., 2003) which states that parents perceive differently toddlers and preschool aged children with regard to play and physical activity. As they are perceived differently, they are also treated differently (Hyun & Tyler, 1999).

It is necessary to say that a paradox exist among parents. Sando et al. (2017) found that boys were more prone to injury than girls aged 0–6, but as can be seen from the results of this research, parents will restrict physical activities in play for girls under 4 years more than they will for boys. It is very likely that parents perceive girls as the weaker, gentler and more vulnerable gender, or parents may not trust girls' judgements as much (they are not aware of their abilities) as they trust that of boys.

The age of the child significantly impacts the concern for safety and the restrictions of physical activity in play. The older the child, the more parents will worry about their safety and play, and the physical activities will be restricted more. Consequently, the older the children are, parents will set more and more rules for them. Parents will be most concerned about the safety of children aged 37-48 months (3-4 years) and will limit their physical activities in play the most, while they will be least concerned about the safety of children up to 24 months and will limit their physical activities

in play the least. A possible reason for such results can be found in the statistically significant inequality of the number of children within each age group, but also in the fact that these are two different independent scales that measure two different things. Furthermore, parents are most concerned about the safety of children aged 37-48 months (3-4 years) and will limit their physical activities in play the most because they are obviously worried that they could suffer a more serious injury compared to younger children. Research shows that the highest incidence of injuries among children is between the ages of 3 and 5 years, and the lowest in children aged 0-3 years (Sando et al., 2017). Analysis of the number of injuries in children aged 0-3 years and those aged 3-6 years shows that there is no statistically significant difference in the total number of injuries, but there is a difference in the number of injuries with respect to the degree of severity of the injury (Sando et al., 2017: 9). In children aged 3-6 years, there is a relatively higher percentage of more serious injuries (e.g. bone fractures and fall injuries), while milder injuries (e.g. scratches, cuts, bruises) are more present in children aged 0-3 years (Sando et al., 2017: 7). Children aged 3-4 are much more motorically mature than younger children and have a lot more motor experience, which ultimately allows them to engage in riskier activities, i.e. activities that can lead to more serious injuries. It is very likely that the parents who participated in this study wanted to prevent the occurrence of more serious injuries in children aged 3-4. Therefore, parents express greater concern for the safety of children aged 3-4 and will restrict their physical activities in play more than that of younger children.

4.2. The Role of Parents' Age in Limiting and Encouraging Physical Activity in Play and the Child's Gender and Age

Although the difference is not statistically significant, parents of all age groups (up to 31 years, 32-35 years, 36 years and older) will give more freedom and will encourage more physical activities in the play of boys than girls. Younger parents will be more concerned about safety and will be more restrictive toward physical activities in the play of girls, while older parents will be more concerned about safety and will be more restrictive toward physical activity in the play of boys.

Although no statistically significant difference has been found, parents in each age group will be most concerned about safety and will limit physical activities in play for children at the age of 37-48 months the most.

4.3. The Role of Parents' Educational Level in Limiting and Encouraging Physical Activity in Play and the Child's Gender and Age

The results show that parents with a university level of education will give toddlers more freedom, encourage them more to engage in physical activity in play, are less concerned about safety, and have less restrictions on physical activity in play compared to parents with a secondary school level education. Čokorilo and Jakšić (2009) found that there is a tendency for positive correlations with regard to higher levels of parental education in encouraging children to engage in physical activity, and according to the same authors this means that parents with higher levels of education encourage their children to exercise more than those with a lower level of education. The results of previous research coincide with the results of this research. Indicators of parental education lead to the conclusion that the higher the parent's level of education is, the more they will encourage toddlers to physical activities in play, and at the same time they will worry less about safety and limit physical activities in play less. Parents with a university level of education will create more desirable conditions for toddlers for performing physical activities in play compared to parents with a secondary school education level. It can be said that parents with a university level of education will differently perceive and treat children during physical activities in play in relation to parents with a secondary school level of education

Parents of different levels of education will be significantly more concerned about the safety of children ages 3-4 and will limit their physical activities in play significantly more than than that of children under the age of 2. The greater possibility of severe injuries in children aged 3-4 is a possible reason why parents of different levels of education are most concerned about the safety of children of that age and why they will most restrict physical activities in play for children of this age, in comparison with children aged 0-3 years.

5 CONCLUSION

The aim of the paper was to determine whether there are interactions or differences between gender, age, level of education of parents regarding safety concerns, restrictions, freedom and encouragement of physical activity in the play of toddlers of different genders and ages. It can be concluded that parents' gender and their level of education can significantly affect how much freedom they will give to toddlers and how much they will encourage physical activity in play, but also how much they will be concerned about their safety and how much they will limit physical activity in play. Given that parents have a different approach to physical activity in play and conduct different games with boys and girls, the following could be suggested - which parents probably already do unconsciously - that the choice of play and physical activities in play is decided once by the father and once by mother; for children to go out to play only with their father and then only with their mother. This approach will certainly expand the child's experiences of physical activity in play.

Regardless of the level of education and age, parents will be most concerned about the safety of children between the ages of 3 and 4. During this period, children become more independent, more motorically "bold". According to their parents' perception, children between the ages of 3 and 4 engage in much riskier activities than younger children. Kindergarten educators who take care of children between the ages of 3 and 4 in their groups can, through lectures, workshops or parent meetings, effect a change in the perception and attitudes of parents towards physical activities in the play of children in this age group.

Education focused on the motor development of children during physical play should be conducted especially with parents with a secondary school level education, while parents with a university level of education should be taught about the ways (with which activities) they can encourage their children's motor development during physical activity.

The research has certain limitations. One of the limitations is that in the instructions for filling in the survey to parents did not indicate that the answers referref to only one child. It is possible that the parents who participated in the study, had more than one child under the age of 48 months and that the children were of different genders. This could have led to parents giving an answer for one child on one item and for another child on another item. Furthermore, as an

increasing number of children with disabilities are integrated into educational groups, it is necessary to determine which parents or children they are. The limitation of this research is that it has not been determined who the parents of children with disabilities are, i.e. which children they are, and therefore this could have affected the final results on certain items. Children without disabilities and children with disabilities are two different populations, so the answers - the attitudes - of parents are very likely different. Therefore, these two populations of parents (children) should be analyzed separately and compared with each other in future research to determine if there are differences between them. The next limitation is that the level of education of the parents was not precisely defined. No precise answer was given as to whether they had completed, for example, secondary school or university or had just started it. It is possible that the parents "embellished" their answers by thinking about what they started, and not about their completed level of education. It should be noted that the surveys were completed by parents whose children attended kindergarten, which means that they are very likely employed. There are probably very few parents who have lost their employment while their child was attending kindergarten. Thus, the differences found between boys and girls relate in a large number of cases to employed parents. Parental employment / unemployment could possibly affect their attitudes.

CONFLICT OF INTEREST STATEMENT

The author(s) declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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