

GENDER DIFFERENCES IN SOCIAL EMOTIONAL DEVELOPMENT AND PHYSICAL ACTIVITY LEVEL IN PRESCHOOL CHILDREN

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Abstract

Preschool period is a time of significant transition in a child's life. Children learn and master motor abilities that help them interact and communicate with their social environment. The purpose of this study was to investigate differences between genders, regarding social emotional development and physical activity level. In order to obtain necessary data parents of preschool children were asked to complete questionnaires assessing social emotional development of their children (ASQ:SE-2, Squires, Bricker, & Twombly, 2015) and a questionnaire about physical activity (NPAQ, Božanić, 2011) of their children. Obtained results show a statistically significant gender differences both in physical activity and social emotional development. Girls were assessed as having higher level of social- emotional development than boys. According to parental assessments, physical activity in general, was in favor of boys, who are more physically active than girls.

Key words: social emotional development, preschool children, physical activity, gender differences, NPAQ, ASQ:SE-2

Introduction

The most intensive period of children's development ranges from 3 to 6 years of age. Studies indicate that preschool period is the best time to stimulate child's development in motor, functional, social, cognitive and emotional developmental domain, enabling them to acquire healthy habits for the whole lifespan. Crucial factors in early development include physical movement, because children through first movement structure experience the world surrounding them. One of the first sensory systems that develop during the intrauterine development is the vestibular system, which controls the sense of movement and balance, and is thought to be the most important for daily functioning and the ability to move and act against the gravity (Hannaford, 2007). Human development involves a sequence of changes in the characteristics, abilities and behavior of the child. Under the influence of those changes the child grows and becomes bigger, more skillful and capable, more socialized, adaptable etc. (Starc et al., 2004). Without psychological maturity there are no preconditions for the emergence of any conduct, especially in early childhood (Čuturić, 2001). Vasta et al. (2004) reported the following domains of child's development: physical, emotional, social and cognitive. Psychomotor development includes a child's increasing ability for purposeful and harmonious use of own body to move in space which includes coordination of movements, handling objects, posture, movement and lateralization (Starc et al. 2004), in which preschool children progress very fast. Appropriate motor stimulation for preschool children includes a systematic sequence of activities which stimulate the development of basic motor skills. Activities should be organized through child's play which also promotes social, emotional and cognitive development of the child (Gallahue, Ozmun and Goodway, 2012; Lubans et al., 2010). Constant repetition of different motor movements and activities helps children develop their relationship with the environment, and compatibility of motion and movement, manipulation as well as, in learning how to control subjects and skills. Through mastering basic activities, children become prepared for easier adoption of knowledge and develop skills that will contribute to mastering everyday activities (Rečić, 2006). Mastering various skills usually refers to physical activity. Emotional development involves differentiation of feelings, learning the emotional significance of situations, and ways of expressing emotions and their control. Social development involves the development of behavioral patterns necessary for the establishment, maintenance and termination of social contact, therefore it is particularly important for preschool period in which child increasingly socialize with peers, since it leads to the development of independence and reduces the child's dependency on adults. Social-emotional development is a combination of social and emotional aspects of child's development, including intrapersonal and interpersonal processes, whereby the emotional development occurs under the influence of social constructs and refers to the child's capacity to develop self-confidence, trust and empathy, as well as skills in the use of language and cognitive curiosity. Emotions and social behaviors affect child's ability to persist in target activities, to ask for help when needed, to participate in relationships and gain the benefits of them. The first experiences are formed in interaction with the child's environment and in the social world. As a result of these experiences are emotions which motivate cognition and behavior and regulate physiological, cognitive and behavioral aspects of individual behavior in the environment (Goodyer, 1990; Vander- Zander 1993, according to Brajša- Žganec, 2003). Benefits of physical activity do not exclusively refer to the welfare of the children's health, but also to the well-

being in the following developmental domains: physical, psychomotor, emotional, social and cognitive area (Cardon et al., 2011; Cliff et al., 2011; Jones et al., 2011).

There is a growing body of evidence to support the positive association between physical activity and human development. Studies show that most preschool children, who participate in sports and are physically active in childhood, retain positive health and cultural habits in adulthood (Reilly et al., 2011). Physical activity is of great importance in the development and maintenance of human capabilities throughout life, which means that it is an important factor in achieving optimum state of health, and also works to reduce the risk of various diseases. At the age of 3-6 years, children adopt positive lifestyle habits for a healthy and active way of living, which are later transferred into adulthood (NASPE, 2002). An adequate form of physical activity for preschool children is play which has a great impact on promoting socio-emotional development as well. Enabling early start in developmentally appropriate physical activities for children will provide the foundation for managing a healthy lifestyle and the acquisition of more complex motor skills necessary in life, with the help of cubes, games and sports activities. It is important to teach children that movement is crucial, since movement will also provide an opportunity for the various options later in life. The purpose of this study was to investigate differences between social-emotional development level and physical activity level among boys and girls of preschool age.

Methods and procedures

The aims of this study were to check whether preschool girls and boys statistically significantly differ in their social-emotional development and in the level of their physical activity. The hypotheses are: girls and boys of the same age will statistically significantly differ regarding their social-emotional development level and the level of their physical activity.

In order to obtain necessary data, two questionnaires were administered to parents of preschool children who attend the program of preschool education in the city of Zagreb. The data about 449 children were collected. The distribution of gender was almost equal; 45% girls and 55% boys (N= 202 female and N= 247 male). Children's average age was 5,44 years (65 months). Parents were asked to complete paper-pen type questionnaires about socio-emotional development of their children, and a questionnaire assessing their child's physical activity level. Parents were provided with guidance and support from the research leaders.

Measures

The *"Ages and Stages Questionnaire: Social Emotional: Second Edition"* (ASQ:SE- 2) (Squires, Bricker & Twombly, 2015) was used to screen child's socio-emotional development in seven key domains: self-regulation, cooperation, communication, adaptive functioning, autonomy, affect and interpersonal interaction. The questionnaire is used to assess children from 1 month to 72 months of age (9 versions due to the age of the child). Social-emotional development is assessed on three levels. Low level indicates that the child's social-emotional development appears to be on schedule at the time of administration. Monitor level indicates a need for monitoring and may require follow-up actions. Refer level indicates a need for further evaluation and additional follow-up actions. Reliability of this screening instrument is .89, the internal validity of 0.84, validity 0.83, sensitivity 0.81 and specificity 0.83 (Squires, Bricker & Twombly, 2015).

The *"Netherlands Physical Activity Questionnaire"* (NPAQ) (Božanić, 2011) was used to assess the level of physical activity of children (activity/inactivity). Parents reported on questions according to the preference of certain activities in children. Some of the activities are closely related to physical activities such as sports, while some are closely associated with sedentary behavior, such as reading. Answers are reported on a 5 point Likert type scale. The final result of the questionnaire is numerical (ranges from 7- low level to 35 points- high level) and tells us on average, below-average and above average physical activity in children. Low level was set from 0 to 15 points, medium from 16 to 25 points and high level of activity from 26 to 35 points.

Results

Data were analyzed with SPSS program (SPSS, 2009). According to the obtained results the majority of children have normal level of socio-emotional development (89,3%), while 7,6% have monitor level, and 3,1% have refer level.

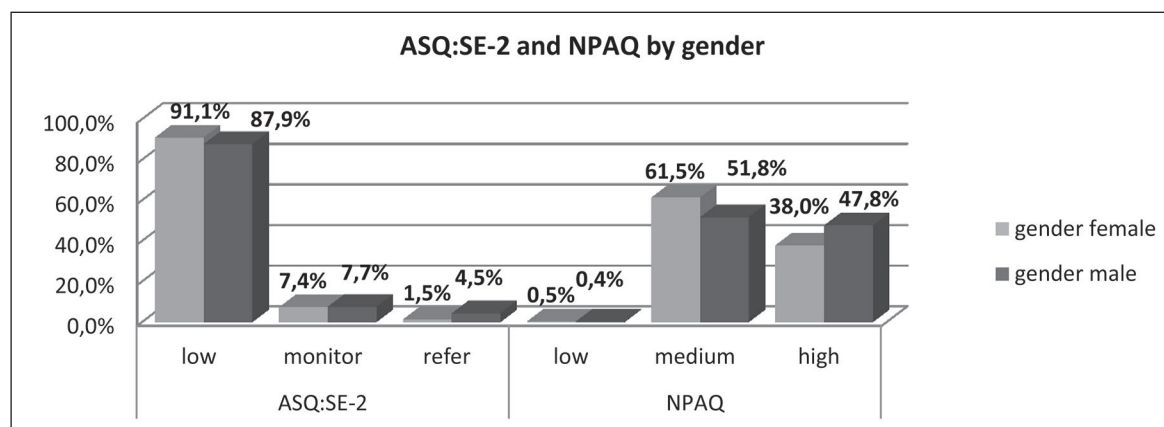


Figure 1: Distribution of results for ASQ:SE-2 and NPAQ by gender

Results also show that most of the children have medium (56,2%) and high level (43,4%) of physical activity, and low level of activity has only 0,4% of children.

Physical activity level of children was mostly medium or high. Mostly boys are on a refer level of social emotional development (4,5%), while 1,5% girls are on this level. Monitor level of social emotional development was almost equal between genders. Majority of girls were on typical level of social emotional development (91,1%). Refer level of social emotional development means that the development is not according to the child's age and should be accessed. Monitor level of social emotional development means that the level is not yet to be referred to, but needs to be constantly monitored. In majority, boys were assessed as having a high physical activity level (47,8%).

Table 1: Independent samples test between genders according to ASQ:SE-2 scores

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
ASQ:SE-2	Equal var assumed	9,848	,002	-1,536	447	,125	-,062	,040	-,141	,017
	Equal var not assumed			-1,583	442,215	,114	-,062	,039	-,139	,015

In order to check whether there is a statistically significant difference in the social emotional and activity level of girls and boys, independent samples t-test was conducted. A statistically significant difference in social emotional development between boys and girls was found in this study (Table 1.). The results indicate that girls have a higher level of social- emotional development then boys. There is also a statistically significant difference in physical activity level between boys and girls (Table 2.). Boys were, on the average, assessed by their parents as 10% more physically active than girls (Figure 1.).

Table 2: Independent samples test between genders according to NPAQ scores

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
NPAQ	Equal var assumed	7,853	,005	-2,064	445	,040	-,09868	,04782	-,19266	-,00471
	Equal var not assumed			-2,069	430,037	,039	-,09868	,04769	-,19242	-,00495

Discussion

Obtained results are expected in the cultural framework. Across the cultures boys are usually more involved in different kinds of physical activities while girls are dominantly more involved in sedentary activities. Although such results correspond with those obtained in previous studies (Grøntved et al., 2007; Telford et al., 2016), we do not know whether these differences are primarily caused by socio-cultural or biological factors. Previous studies have shown, for instance that the play of preschool boys usually involves a higher level of activity and that preschool boys tend to play in larger groups, take greater risks and have more bodily contact than preschool girls (DiPietro et al., 1981).

Conclusion

If we want to emphasize the importance of physical activity in children's development we should try to avoid social, cultural or other differences which impact their physical activity, and try to give children the freedom to play and be physically active. Based on our results, we recommend that an extra effort is to be given to encourage physical activity among girls from an early age. The focus should be on expanding the variety of activities that are offered in the child's environment. We need to pay attention to equality of support and opportunities for both boys and girls.

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