Palacky University in Olomouc
Faculty of Physical Culture

ADAPTED PHYSICAL ACTIVITY

MASTER THESIS

Balaban Ljiljana
2011

Palacky University in Olomouc

Faculty of Physical Culture

DIFFERENCE OF MOTOR SKILLS DEVELOPMENT BETWEEN ONE GRADE SCHOOL CHILDREN ASSESSED BY JANDA'S METHODS AND ABC – MOVEMENT METHODS

Author: Balaban Ljiljana

Master in Adapted Physical Activity

Promoter: Prof. Hana Valkova

Olomouc 2011

Bibliographical identification

Author's first name and surname: Ljiljana Balaban

Title of the master thesis: Difference of motor skills development between one grade school children assessed by Janda methods and Movement Assessment Battery for Children (MABC) methods

Faculty of Physical Culture, Palacky University in Olomouc

Promoter: prof. Hana Valkova

The year of presentation: 2011

Abstract: To compare M – ABC test of Henderson with Janda´s test from aspect of school maturation. To formulate advantages disadvantages of both of them for using in school practice.

The purpose of this study was to compare the differences in the tests Janda's test (1962) and Movement Assessment Battery for Children test Henderson & Sugden (1992) between participants of different age and gender and determine correlation between the two tests and subtests. Participation included 28 children 13 girls and 15 boys. The age rang was from 72 to 84 months. All of them were attending first grade public elementary school. Descriptive statistics - T - test and correlation is used for statistical analyze. The results showed case six years old participants showed a better result then seven years old participants. A result estimates the abilities of participants of different gender showed no

Expectations were that the seven years old participants should have better results but in this case six years old participants showed a better result. Justification for such facts can be found in small number participants statistically significant difference between boys and girls.

Explanation for this fact also can be found in small number participants

Key Words: Motor skills, Motor development, Maturation to going to school, Movement Assessment Battery for Children (M – ABC), Janda's Test.

I agree with lending of this thesis within the library service.

Bibliografická identifikace

Jméno a příjmení autorky: Ljiljana Balaban

Název diplomové práce magisterské: Diference ve vývoji motorických dovedností dětí prvního stupně hodnocené testem Jandy a baterií hodnocení pohybu dětí (M- ABC)

Fakulta tělesné kultury Univerzity Palackého v Olomouci

Vedoucí práce: prof. Hana Valkova

.

Rok obhajoby magisterské práce: 2011

Abstrakt:

Smyslem studie bylo srovnat rozdíly motorických dovedností hodnocené testem Jandy (1962) a baterií hodnocení pohybu dětí (M – ABC) Henderson & Sugden (1992) mezi účastníky rozdílného věku a pohlaví a určit korelace mezi testy a subtesty. Šetření se zúčastnilo 28 dětí, 13 dívek a 15 chlapců ve věku od 72 do 84 měsíců. Všichni navštěvovali první stupeň základní školy. K vyhodnocení byla užita deskriptivní statistika, T-test a korelace. Očekávali jsme lepší výsledky u sedmiletých, avšak výsledky byly lepší u šestiletých. Rozdíly podle pohlaví se take neprokázaly. Zjištění tohoto faktu si vysvětlujeme malým počtem účastníků.

Klíčová slova: motorické dovednosti, motorický vývoj, zralost pro školu, baterie hodnocení pohybu dětí (M-ABC), Jandův terst

Tato magisterská práce je součástí projektu Centra podpory integrace, CZ 1.07/1.2.00/098.0117, podporovaného Evropskými sociálními fondy a rozpočtem České republiky.

Acknowledgements

First and foremost I offer my sincerest gratitude to my supervisor, Prof. Hana Valkova, who has supported me throughout my thesis with her patience and knowledge. I attribute the level of my Masters degree to her encouragement and effort and without her this thesis, too, would not have been completed or written. I would like to thank the Mr. Irena Stojković for their help and assistance throughout the thesis process.

I owe a big gratitude to psychology Gordana Kecman and teacher Mira Protić from school Dositej Obradovć, who was helping me very much, before and during my data collection.

Most importantly, to all the children for their cooperation and to their parents for their positive attitude and for giving their permission for this project.

I would like to thank my family for all their support and understanding throughout the past year, without them I could not have completed this course successfully.

Declaration

I hereby declare that I have completed this Master thesis independently under the supervision of Prof. Hana Valkova. I have provided all literal sources and met all principles of scientific ethics.

In Olomouc June 2011

TABLE OF CONTENTS

1 INTRODUCTION

Development of children is the result of a complex interaction between hereditary, growths, maturation, environmental domains and has a biological and behavioral context. Biological development involves the differentiation of cells that enables them to perform specialized functions or to refine functions that already exist. Behavioral development relates to the evolution of intellectual, psychological, and sociological attributes. Motor development of children could be defined in terms of progressive changes in motor performance, resulting from growth, maturation, and biological and behavioral development. It is known that mental, social, educational, and emotional maturities are positively related, and personality traits are related to academic and physical achievement (Ismail, & Gruber, 1971; Eunicke – Morell, 1989; Vernon, & Mori, 1992; Etnier et al., 1997; Dolenec, 2001; Dolenec et al., 2002; Pistotnik et al., 2002; Dolenec et al., 2004). Most motor skills and habits that make mobility a man in its unity develops and acquires only a period of three to ten years of life, and in particular may be development their beneficial effect in preschool children from 4 – 7 years of life.

In this period the structure is built motor space based on genetic and environmental factors that affect the overall growth and development of children. (Bala, Kiš & Popović, 1996). Motor functioning of young children is of general type. (Ismail and Gruber, 1971; Bala, 1981; Ni ćin; Kalajdžić & Bala, 1996), which means that in this age group has not yet differentiated motor ability (children react whole body overall motor rhythm). Also an important feature of Reception age is emphasized striking integrity of the development (Ismail & Gruber 1971), the where the domain of children's development (physical, motor, cognitive, etc.) are closely linked. Motor abilities of children are, in general, steadily improved during the preschool period.

The purpose of this study was to compare the differences in the tests Janda's test (1962) and Movement Assessment Battery for Children test Henderson & Sudgen (1992) between participants of different age and gender and determine correlation between the two tests and subtests.

This information could be valuable not only to teachers, but for coaches as well and all others who work with children and youth. Conclusion obtained in this study can be used as guidelines in creating the curriculum of physical education.

2 LITERATURE REVIEW

Key Words: Motor skills, Motor development, Maturation to going to school, Movement Assessment Battery for Children (M – ABC), Janda's Test.

2.1 PARENTAL SCHOOL INVOLVEMENT IN RELATION TO CHILDRE'S GRADES AND ADAPTATION TO SCHOOL

2.1.1 Patterns of Family – School Contact in Preschool and Kindergarten

Kindergarten constitutes children's first experience with formal schooling, and research demonstrates that supportive family relationships can help children negotiate cultural and academic discontinuities upon school entry (National Education Goals Panel, 1998).

Policy makers, educators, and researchers agree that family-school partnerships enhance children's educational experience that these relationships are important as children transition from preschool to kindergarten, and that school psychologists are in a unique position to influence the nature and quality of a family's participation in school (Christenson, in press; Epstein, 1987; Henderson & Berla, 1994; Kellaghan, Sloane, Alvarez & Bloom, 1993).

Family involvement operates at many levels within families, schools, and communities. Epstein (1996) categorizes family involvement into six types: parenting – schools assist families with child – rearing skills; communicating – schools communicate with families about school programs; volunteering – schools recruit family members as volunteers; learning at home – schools involve families in academic activities at home; decision making schools include families as participants in school decisions, governance, and advocacy; and collaborating with community – schools coordinate the work and resources of community agencies and resources to strengthen school programs. Family – school contact and communication between teachers and family members lay the foundation for these six types of family involvement.

Kindergarten constitutes children's first introduction to formal schooling, and teacher – family communication can help children adjust to their new school environment. Although many children have had social experience prior to kindergarten entrance, the explicit academic and social goals of the kindergarten environment are quite different from those of home or preschool and, as a result, both children and families experience the shift as a transition (Connors & Epstein, 1995; Pianta & Kraft – Sayre, 1999). Family – school relationships at this time establish families' and schools' shared responsibility for children's education (Epstein, 1992), introduce families to school culture, and buffer stress by offering stability while teacher, children, and curricula are changing (Pianta & Walsh, 1996).

The typical preschool mission is to provide families with day care support and help children with social and emotional development whereas the typical kindergarten mission is to provide children with academic skills and prepare them for subsequent years of schooling (Love, Logue, Trudeau, & Thayer, 1992; Shipley & Oborn, 1996).

2.1.2 Parent – school relationships and children's academic and social outcomes in kindergarten and school

Two dimensions of parent – school relationships – parent involvement in school activities and perceived teacher responsiveness to children and parents – hold particular promise of enhancing pre-kindergarten effects on children. Providing parental school – involvement opportunities is the most common way schools attempt to facilitate relationships with parents, whereas the construct of teacher responsiveness reflects a more recent interest in how schools embrace parents and students.

Parent – school relationships exist in a family context that may contribute to associations between parent – school relationships and children's outcomes. Maternal education level and involvement in children's learning at home are two potentially influential elements of family contexts. Some pre-kindergarten studies (e.g., Castro, Bryant, Peisner – Feinberg, & Skinner, 2004; Fantuzzo, Tighe, & Childs, 2000), but not others (e.g., McWayne, Campos, & Owsianik, 2008; Waanders,

Mendez, & Downer, 2007), have found higher levels of school involvement among parents with higher levels of education.

Research also indicates that maternal education level is associated with the quality of young children's learning at home (Magnuson, Sexton, Davis – Kean, & Huston, 2009). Parental home involvement is a strong predictor of children's developmental outcomes (Hong & Ho, 2005; Magnuson et al., 2009; Sénéchal, 2006) and, importantly, has been found to co-vary with dimensions of parent– school relationships (Waanders et al., 2007).

The pre – kindergarten year may be an optimal period to promote parent – school relationships. Parents may develop or refine knowledge and skills in how parents and school personnel can work collaboratively to support children's learning during the pre – kindergarten year and beyond (Epstein, 1996). For pre – kindergarten classrooms in public schools, the transition to pre – kindergarten includes the beginning of a parent – school relationship that may span 7 or more years in the same school building. Parent – school relationships may be especially beneficial in the early childhood years for promoting early academic and social skills that are predictive of later school success. For example, studies indicate that preschool literacy and language skills are key to subsequent reading ability (National Early Literacy Panel, 2008) and that pre - kindergarten social competencies, including attention skills (Duncan et al., 2007) and behavioral regulation (Bronson, 2000), are associated with early and subsequent school success (Miles & Stipek, 2006). Longitudinal research also indicates that parenting practices in the early childhood years are powerful predictors of later school-related outcomes (Hart & Risley, 1985).

Their multidimensional view of parental school involvement, defined as the dedication of resources by the parent to the child within the educational domain, has three components: behavioral, cognitive – intellectual, and personal. Behavioral involvement includes overt participation in school activities (e.g. communicating with teachers, attending school functions); cognitive – intellectual involvement involves exposure of the child to cognitively stimulating activities and materials (such as books and current events), and the personal dimension incorporates the child's affective experience that the parent cares about school and enjoys interactions with the child around school.

2.1.3 School psychological counseling

More than ever, children between birth and the age of 5 years are exposed to educational experiences before formal schooling in some type of structured setting (Lombardi, 2003; National Institute for Early Education Research, 2003).

School psychologists can assist parents and early educators in taking a deliberate and intentional role in facilitating development by strategically planning learning experiences for young children

These practical experiences afford school psychologists a better understanding of the unique culture of each early education program, which is essential to forming effective partnerships (Donahue et al., 2000). They also allow school psychologists to make modifications to consultation procedures to best meet the needs of a particular setting.

Perhaps one of the more significant modifications that school psychologists make in providing consultative services in early education settings is an increased emphasis on working with families. Engaging families in their child's education at the earliest point possible is particularly critical in early childhood, given parents' role as the primary educator and socialization agent.

Although home - school collaboration interventions (e.g., daily report cards, school – to – home notes) have been demonstrated to be effective in improving academic and social outcomes (Cox, 2005), consistent with early intervention, school psychologists in early education settings need to go beyond this perspective and advocate for a more family-centered approach that emphasizes support to families as a goal in itself, not just as a way to directly influence the child's educational functioning. As such, in a family – centered approach, school psychologists can involve families as key decision makers and consider their needs beyond their child's education (McWilliam et al., 1999) To that end, Carlton and Winsler (1999) advocate for a comprehensive outreach program between school systems and area pre- schools to promote school readiness in which school psychologists would act as a liaison between the two. Such a system would assist in making kindergarten teachers aware of the needs of incoming children and planning appropriate instruction. A model of education that focuses on quality experiences before kindergarten and promotes seamless service as children transition from preschool to kindergarten settings is one that

can benefit all children (Karweit, 1994). Such a model would include an integrated curriculum that links instructional goals from one setting and grade to another, assessment data documenting progress and response to intervention as children gain skills and transition between settings and grades, and an articulated teaching pedagogy reflective of best practices in related disciplines, such as school psychology and special education.

2.1.4 Perceived teacher responsiveness

Parent – school relationships entail more than the frequency and type of visits a parent makes to the school. In specifying a model of relationships among children, families and schools, Pianta and Walsh (1996) draw on the work of Hinde (1987) to argue that, over time, interactions form stable patterns that involve expectations and "a quality separate from the interactions themselves" (Pianta & Walsh, 1996, p. 66). Moreover, perceptions of participants in a relationship may affect the future course of interactions (Hinde, 1997). In general, teachers show responsiveness to children and parents when they "meet families where they are" (Christenson, 2004, p. 93). Especially influential was Bronfenbrenner's (1979) theoretical perspective on family–school relation – ships as a system that enhances child development when there is two – way communication, a balance of power, and multiple linkages (i.e., more than one person who is active in both settings). Eventually the practice standards in early education adopted this view by recommending that teachers establish "reciprocal relationships with families" (Copple & Bredekamp, 2009, p. 22). A notable change in practice standards developed by the National Association for the Education of Young Children occurred in 1997 when the phrase "and parents" was added to the following revision of a guideline originally issued in 1986: "teachers and parents will share their knowledge of the child and understanding of children's development and learning…" (Bredekamp & Copple, 1997, p. 22, italics added).

2.2 CROSS – CULTURAL COMPARISION

2.2.1 Culture

Culture can be defined in a variety of ways, but for the purpose of this article, culture is defined as the values, norms, and traditions that affect how individuals of a particular group perceive, think, interact, behave, and make judgments about their world (Chamberlain & Medeiros – Landurand , 1991). In some ways this involves a group's preferred way of understanding and interacting. In other ways, a group's ways of seeing and doing have become arbitrary over time and are simply maintained because they were the ways of our parents and grandparents. If we are not forced to question why we maintain these ways, it is likely that we will continue them. What we learn through our culture becomes our reality, and to see beyond that is often difficult. Our perceptions of the ways others think and act depend on our cultural perspective, which depends, in part, on our understanding that cultural differences do exist among groups. Another aspect of cultural perspective pertains to how we view our own cultural ways of thinking and doing in relation to the cultural ways of others.

Recognizing the different ways culture can influence important aspects of the educational process is paramount if educators are to respond in a culturally relevant way. Communications, cognition, language, behavior, affinity toward the individual or the group, and relationship with authority figures are several important domains where culture can influence teacher – student and teacher–parent interactions (Betsinger, Garcia, & Guerra, 2000).

Cultures also differ in their expectations about the roles and responsibilities of families.

Early Years 125 Wollons (2000, p. 4) noted that 'Cultural borrowing is both common and complex' and indeed striving to retain one's national identity in the process of educational diffusion is an issue that many educators are trying to resolve. Instead of looking at the ways children in different cultures learn as dichotomous, more and more academics are wondering if an optimal balance can be reached between them.

Cross – cultural research, however, suggests that individuals who were fostered by different cultures may have different thinking styles or habits that shape their cognitive processes in different ways.

The basic design of cross-cultural comparison allows us to find differences between cultures; however, it makes it difficult to discover what causes these differences since matching of samples on all relevant attributes is practically impossible.

2.2.2 Cross – cultural comparison in Physical Education

Speakman (1985) used a Delphi procedure for a cross-cultural comparison of the 22 purposes identified in the Purpose Process Curriculum Framework to determine if the purposes were true and appropriate for different cultures.

The respondents' rating of the purposes reflects the objectives in their programs of physical education. The American emphasis is on health, fitness, and a lifelong commitment to physical activity. This is evidenced in elementary, secondary, and higher education physical education programs with such activities as jogging, aerobic dance, jump-rope marathons, and lifetime sports and recreational programs. This emphasis is reflected by the American respondents' high rankings of circular – respiratory efficiency, joy of movement, and participation.

The Japanese objectives in physical education emphasize motor ability, improved health, cooperation with others, and the significance of sports in human life (Ichimura, 1966). These objectives are reflected in the Japanese respondents' high ratings of mechanical efficiency, circular – respiratory efficiency, teamwork, and movement appreciation.

Physical education in England has always emphasized the social dimension of movement activities. Traditionally, physical education was fostered for the qualities of courage, team spirit, and fair play that it encouraged through an emphasis on team sports. More recently there has been a shift toward physical health and fitness.

This allows for cross – cultural comparison of physical education curricula that extends beyond the description of program content and activities to an examination of the selected purpose priorities underlying those programs. Such comparisons may indicate that nations have more commonalities in physical education than had been suggested by descriptive studies.

2.2.3 Cross – cultural differences the Western and the Asian preschools

This cross – cultural comparison of two preschools has examined the factors that contribute to 'best' practice in early childhood programmes. Besides the structural and pedagogical perspectives, social and cultural values are important determinants of programme quality (Sheridan & Schuster 2001). The primary consideration here is context. Each programme must resonate with the multiple environmental contexts in which it is situated in order to achieve a proper expression of goals, objectives and pedagogy. Enabling children to print is important for the Hong Kong preschools, but not for the schools in Toronto. Context can also influence learning priorities, such as the timing for learning basic skills.

Alexander (1999) claimed that one reason for making cross – cultural comparisons in pedagogy is to differentiate the aspects of teaching that are generic from those which are culture – specific.

Besides the structural and pedagogical perspectives, social and cultural values are important determinants of program equality (Sheridan & Schuster 2001). Tobin (1999) asserted that comparative classroom ethnography will lead us to reflect on assumptions that are taken for granted in our own culture. Similarly LeVine & White (1986) saw the cultural inventions of other countries as mirrors that can help us look for new possibilities in our children. Gardner (1989) asked how to balance creativity and basic skills. Freeman (1998) asked how to achieve a balance between an exploratory approach to art activities and a disciplined and scheduled approach. Forman (2003) asked whether the image of the child as an inventor could be balanced with the image of the child as a competent listener. All these queries were raised after their visits to preschools in China, when they were confronted with cultural – specific practices that were radically different from their own, and yet were equally successful.

However, suggests that individuals who were fostered by different cultures may have different thinking styles or habits that shape their cognitive processes in different ways (Nisbett, 2003; Nisbett, Peng, Choi, & Norenzayan, 2001). It would not be surprising to find that people with different cultural backgrounds perform differently on various attribution tasks.

For example, it has been found that East Asians on an average generate more situational inferences than Westerners when making attributions (Choi & Nisbett, 1998; Miller, 1984; Morris & Peng,

1994) and are more sensitive to the diagnosticity of socially – constrained behaviors when deciding whether the behavior corresponds to the actor's true attitude (Miyamoto & Kitayama, 2002).

2.2.4 Bosnia and Herzegovina

2.2.4.1 Geographic position

Bosnia and Herzegovina is located in the Southeast Europe, on the Balkan Peninsula. Its surface is 51,129 km2. The state borders follow the flows of the rivers – Drina in the east (border with the Republic of Serbia), Sava in the north and Una in the west (border with the Republic of Croatia). In the south and the southwest the border is defined by mountain chains, while the border with the Republic of Montenegro, in the southeast does not follow clear natural relief boundaries. B&H has 26 km of the coastline on the Adriatic Sea (Neum). The term Bosnia is an old geographical name of the land, which is still used today as a short name for Bosnia and Herzegovina (B&H). It is used throughout the text as such, denoting the entire state and legal entity, without any attempt to add emotional undertones or other qualifications to it.

2.2.4.2 Brief Historical overview

In *De administrando imperio* which was written by the Byzantium emperor Konstantin Porfirogenet in the 10th century. The first known Bosnian ruler was Viceroy (*Ban*) Borić who ruled in the first half of the 12th century. The first independent ruler was Viceroy Kulin (1189 - 1203).

Between 1189 and 1463 Bosnia was an independent country, first as Ban's Province (*banat*) and later as a kingdom ruled by local rulers. After the king Tvrtko I was crowned in 1376 Bosnia became a kingdom and kept its status until it was conquered bythe Ottoman Empire. By conquering Bosnia in 1463, Sultan Mehmed II Fatiha abolished Bosnia's sovereignty and included it in the Ottoman Empire. The Austro – Hungarian occupation in 1878 caused another civilization change after four centuries. By inclusion into the Austro – Hungarian Empire Bosnia entered the European and Christian cultural circle becoming a part of the modern European political system. Modern Bosnian and Herzegovinian nations developed from the religious communities defined in the millet system of the Ottoman Empire.

The bridge of Mehmed – Pasha Sokolović in Višegrad, on the river of Drina. It was built in 1577 and represents one of the most grandiose architectural works made from 15th do 19th centuries in Bosnia and Herzegovina. After the First World War (1918) Bosnia becomes a part of The Kingdom of Serbs, Croats and Slovenians which was later called Kingdom of Yugoslavia. In 1941 Bosnia was occupied by Germany and it became a part of the so – called Independent State of Croatia. Bosnia reclaims its statehood in 1943 at the First meeting of the B&H Anti-Fascist Council of National Liberation (ZAVNOB&H) in Mrkonjić Grad. In 1945 Bosnia enters the Federative Peoples Republic of Yugoslavia, and Socialist Federative Republic of Yugoslavia since 1963). After the referendum on its independence in 1992 Bosnia proclaims its state independence as the Republic of Bosnia and Herzegovina. In 2005 the status of Bosnia and Herzegovina is defined by the Dayton peace treaty and the Constitution which came from it.

2.2.4.3 Bosnian Culture

The culture and identity of any ethnic group including Bosnians, Serbs or Bosnian Croats should be viewed through the context of specific historical changes, events and influences. The common Bosnian, Serbs and Croatian cultural features grow out from the common historical development and experience which is based on the Slavic ethnic heritage and the influence of the Germanic cultural circle.

However, the crucial influence on the Bosnian culture was exerted by the oriental culture of the Ottoman Empire which left its mark throughout several centuries of Islamization (many people converted to Islam) and also had an indirect influence on the development of art, culture and language. The house in Travnik in which the Nobel Prize Winner, Ivo Andrić was born. The cultural heritage of Bosnia, cultural convictions and social practices are based on a pluralistic, multi – confessional but integrated cultural tradition in which various religions and ethnicities are culturally interdependent. Tone Bringa, author of Being Muslim the Bosnian Way, writes, "Neither Bosniak, nor Croat, nor Serb identities can be fully understood with reference only to Islam or Christianity respectively but have to be considered in a specific Bosnian context that has resulted in a shared history and locality among Bosnians of Islamic as well as Christian backgrounds" (Bringa; 1995). Peoples that inhabit today's territory of Bosnia and Herzegovina have a rich native culture and tradition which includes folk and oral literature, music, dances, art, clothing, folk life… Their different regional forms are a consequence of co – existence and intermingling of various cultural influences of the Slavic, Mediterranean, Balkan, Oriental and Middle – European cultural circles. As patriarchal type of culture is traditional in B&H, all of the ethnic communities share its basic norms, filtered through the prism of religion. In this traditional culture, most likely because of the border position of Bosnia in the Ottoman Empire, a tradition of heroism and courage was nurtured as a desirable ideal and a role model for young people. Folk and traditional music and costumes of Bosnia and Herzegovina give evidence about the interrelationship of ethnicities living on these lands. Except for strictly religious contexts, all forms of this music (dancing, singing and playing music) coexist and share common traits in different ethnic groups living in the same geographic region.

In addition to border – heroic culture, Bosnian towns were centers of urban – mercantile culture, which was under a strong oriental influence as manifested by values oriented toward enjoyment of life, as well as by music and other forms of art. Sevdalinke, sad love songs of oriental atmosphere, were widespread in the cities, and they kept their popularity up to the present day.

The analyses have shown that sevdalinka (tur. sevda, love) is not a copy of the Turkish love song, but a very different special sort of art tradition, incorporating both Western and Eastern elements, resulting from Slavic and Oriental emotional mixture. The song in all likelihood came from the Sephardic Jews that settled in Bosnia after being exiled from Spain in 1492.

The cities develop characteristic filigree, goldsmith and brass-working tradition which made B&H internationally recognized. In Bosnia and Herzegovina and in other countries there are many cultural clubs and folklore societies that nurture traditional Bosnian cultural heritage.

2.2.4.4 Religion, Beliefs and Values

The biggest religious community in BIH is the Muslim community, next is Serbian Orthodox, then Roman Catholic and the smallest is Jewish community. In comparison to other world religions, the differences between Judaism, Christianity and Islam look insignificant, while similarities prevail. These three religions share historic and geographic aspects, and are theologically related. Both Christianity and Islam are revealed religions, which are characterized by a range of similarities manifested mostly through an attentive care to spiritual life and growth by living a conscientious and irreproachable life, regular prayer, fasting, pilgrimage, and asking for forgiveness of sins.

Besides, active participation in the community life, care for others, voluntary financial assistance of the community and the poor are present in both religions. One of the main commandments to both groups of believers refers to love, respect and obedience to parents and the parental duty to monitor and direct their children to the right path in life. However, within the present context it is important to emphasize only some of these differences, particularly those that potentially influence an individual's physical and mental health and refer to relationships in family and community. It is considered that the majority of members of the Serbian Orthodox religion came into Bosnia in greater numbers after the Ottoman conquest. They were mostly nomads with developed cattle breeding and inhabited mountain areas of B&H. However, as the center of the Serbian Orthodox Church (Peć Patriarchy) was in the Ottoman Empire, it had somewhat more favorable position, than the Catholic Church, the center of which was outside its borders.

In the ninetieth and twentieth century, the Serbian Orthodox Church in B&H shared the destiny of its people which suffered tremendous casualties during the Second World War. The Roman Catholic Church has the longest tradition in B&H, since the times of the medieval Bosnian state.

The official Roman Curia represented by Dominicans did not succeed in imposing Roman Catholicism as the official religion in B&H, and after the expulsion of the Dominicans the medieval Bosnian Church (which was considered heretic by the Roman Catholic Church) dominated between 12 and 14 century until the Turkish invasion. The Jewish community in B&H descends from the immigration of Sephardic Jews from Spain after the fall of Granada in 1492. In spite of being numerically small and of urban character, it left many traces in Bosnian culture and history.

2.2.4.5 Language Communication, Society life and customs

There are three official languages in B&H: Bosnian, Croatian and Serbian which are all used in official communication. There are two official alphabets: Cyrillic and Latin script, which dominates in everyday use. The Bosnian language is open and multicultural and has a large and increasing number of loans from other languages, particularly Arabic, Turkish, and Persian. In nonverbal communication handshake represents the introductory part.

When it was included in the Ottoman Empire, the Bosnian state was organized politically as other parts of the Empire. The system of religious communities (millets) that had a very large autonomy (including the judicial system) formed the foundation on which today's Bosnian nationalities developed. They can be viewed primarily as religious nationalities because of their ethnic and linguistic relatedness. As they share the same language (with some dialectal differences) the largest ethnic groups in Bosnia are distinguished by religion which is the main marker of group distinctiveness, and for most of them the significance of religious adherence as a symbol of ethnicity outweighs the importance of religious belief and dogma. Since the middle of the nineteenth century national mass movements found their roots in binding together national and religious affiliation. Nationalities today are a reality for B&H and they form the foundation of Bosnian diversity. However, in spite of their connections to their respective "homelands", both Serbs and Croats share with Bosniaks a strong feeling of belonging to the local identity. In B&H there is a well developed institution of komšiluk (neighborhood) through which neighbors help and protect each other, sharing

both good and bad things throughout their life. For instance, it is customary to go to neighbors houses to mourn or to celebrate events. Despite different religions, it is common for Muslims to visit Christians for Christmas as for Christian neighbors to visit Muslims for Bajram. Rough living conditions (both natural and social) have contributed to the feeling of solidarity amongst Bosnians, regardless of ethnicity, greatly affected the development of the local community. Bosnians are known as sociable and hospitable people. They enjoy in entertaining guests and visiting friends. The term raja (tur. poor people) today bears a meaning of group of friends, crowd or bunch, and is a vital part of the Bosnian life and worldview. For Bosnian emigrants in other countries, like Croatia, this need for socializing is often limited and less intense due to a different way of life, work and family priorities, which is often very hard for some of them to bear.

2.2.4.6 Institution Types and Credentials

School Education

Primary education lasts for nine years. The pupils enroll in primary education when they are between 5 and 6 years old. Secondary education is provided by general, vocational and technical secondary schools. Pupils graduating from general secondary schools, art schools and theology schools obtain the Diploma to graduates of secondary school and can enroll in any faculty or academy by passing the qualification examination prescribed by the institution. Vocational secondary schools offer courses lasting for three years and including a period of practical instruction. Technical secondary schools offer courses lasting for four years. Pupils graduating from technical secondary schools obtain the Diploma and can enroll in any Faculty or Academy by passing the qualification examination prescribed by the Institution.

Higher Education

The Republic of Bosnia and Herzegovina has eight universities: the University of Sarajevo, the University of Banja Luka, the University of Tuzla, the University of Džemal Bijedić (East Mostar), the University of Mostar (West Mostar), the University of Bihać, the University of Zenica and the University of East Sarajevo. All higher education activities are subject to national (Republic Srpska) or cantonal (in the Federation of B&H) laws on higher education.

Types of higher education institutions:

- University
- Faculty
- Academy

School leaving and higher education credentials:

- Diploma (Gymnasium Art School and Religious School)
- Diploma (Vocational School)
- Diploma (Technical School)
- Diploma of Higher Education
- Master
- Doctor

Structure of education System

Duration of compulsory education:

- Age of entry: 6
- Age of exit: 15

Structure of school system:

- *Primary*

Type of school providing this education:Primary school

Length of program in years:9

Age level from: 6to:15

- *General Secondary*

Type of school providing this education: General Secondary School, Art School and Theology School (Gymnasium Art School and Religious School)

Length of program in years: 4

Age level from: 15 to: 19

Certificate/diploma awarded: Diploma (Secondary School Diploma)

- *Specialized Secondary*

Type of school providing this education: Vocational and Technical

Age level from: 15 to: 19

Certificate/diploma awarded: Diploma

Main laws governing higher education:

- Decree: Law on Higher Education and Law on Public Institutions of Zeničko-dobojski kanton Year: 2005
- Decree: Law on Higher Education of Hercegbosanska županija Year: 2000
- Decree: Law on Higher Education of Kanton Sarajevo + Amendment 22/05 Year: 2000
- Decree: Law on Higher Education of Posavka županija Year: 2000
- Decree: Law on Higher Education of Tuzlanski kanton + Amendements 15/0; 5/05 Year: 1999
- Decree: Law on Higher Education of Zapadno-hercegovačka županija Year: 2004
- Decree: Law on University (Republic Srpska) + Amendments 12/93; 14/94; 99/04 Year: 1992
- Decree: Law on University of Bihać - Sanski Kanton Year: 1998

Academic year:

Classes are held from October to June

Long vacation from: 1 Jul to: 30 Sep

Languages of instruction: Bosnian, Serbian, Croatian

Stages of studies:

University level studies:

University level first stage: First degree: Diploma Higher education:

Courses leading to the Diploma Higher education last from three to six years.

University level second stage: Second degree: *Magister*

Courses leading to the Magister require two years' further study and the defense of a thesis.

University level third stage: Third degree: Doctoral Studies

The Doctorate (PhD) is the highest scientific degree. It is the result of independent research. The public defense of a doctoral thesis is required.

Teacher education:

- Primary teachers (from first to ninth grade) are fished education in Pedagogical Academies) or the Faculty of Philosophy of the University of Banja Luka – Teacher Department.
- Secondary teachers are university graduates or graduates from Pedagogical Academies

National Bodys

Responsible authorities:

1. Ministry of Civil Affairs of Bosnia and Herzegovina, Division of Education, Science, Culture and Sports Administrative officer: Esma Hadžagiæ, Minister Assistant
2. Federal Ministry of Education and Science ; Head: Zijad Pašić, Minister WWW: http://www.fmon.gov.ba/
3. Ministry of Education and Culture of the Republic Srpska :Head: Antun Kasipović, Minister
4. Government of Brćko District, Department of Education Administrative officer: Vukašin Panić, Head, Department of Education
5. Unsko-sanski kanton, Ministry of Education, Science, Culture and Sport; Head: Šefik Mršić, Minister
6. Posavska županija, Ministry of Education, Science, Culture and Sport; Head: Stipo Ivanković, Ministe
7. Tuzlanski kanton, Ministry of Education, Science, Culture and Sport; Head: Zlata Žigić, Minister
8. Zenićko-dobojski kanton, Ministry of Education, Science, Culture and Sport; Head: Sreto Tomašević, Minister
9. .Bosansko-podrinjski kanton - Goražde, Ministry of Education, Science, Culture and Sport; Head: Osman Somun, Minister
10. .Srednjobosanski kanton, Ministry of Education, Science, Culture and Sport; Head: Branko Golub, Minister
11. .Hercegovaćko-neretvanska županija, Ministry of Education, Science, Culture and Sport; Head: Jago Musa, Ministe
12. Zapadno-hercegovaćka kanton, Ministry of Education, Science, Culture and Sport; Head: Jozo Marić, Ministe Kanton Sarajevo, Ministry of Education and Science; Head: Emir Turkušić, Minister

There is no institutional obstacle for women to attain the same level of education as men, yet it is common for men to have a higher education than women. Today in B&H, a developed structure of educational institutions exists, from preschool education to college institutions. However, education is not unified on the whole territory of B&H, but there are different national programs of the main nationalities that insist on national interpretation of history and the learning of the particular language as a national language.

3 PSYCHOMOTOR DEVELOPMENT

The primary contribution of movement programs for young children is in the development of psychomotor competencies. Psychomotor development is at the very heart of the movement education program and should be viewed as an avenue by which both cognitive and affective competencies can also be enhanced. Psychomotor development refers to learning to move with control and efficiency through space. With preschools and primary – grade children the term "movement abilities" refers to the development and refinement of a wide variety of fundamental movements. These movement abilities are developed and refined to a point that children are capable of operating with considerable ease and efficiency within their environment. As they mature, the fundamental abilities that were developed when they were younger are applied to a wide variety of games and sports that, hopefully, are engaged in as a part of their daily life experiences. The term "physical abilities" refers to the young child's ever increasing ability to function and operate within the environment with regard to his or her level of physical fitness and motor ability. Children's physical abilities are influenced by a variety of health – and performance – related factors that in turn influence their movement abilities. David L. Gillahule, *Motor development and movement experience*, (1976).

3.1 Gross and Fine motor skills

Motor skill is a skill that requires voluntary body and/or limb movement to achieve its goal. (Magill, 2001, p4). A gross motor skill is a motor skill that recognizes the use of large musculature to achieve the goal of the skill. A fine motor skill is a motor skill that requires of small muscles to achieve the goals of the skill, typically involving hand – eye coordination and requiring a high degree of precision of hand and finger movement. Known causes of low motor skills are attitudinal and environmental influences, delayed development of the Central Nervous System (CNS) or minimal neurological dysfunction. In many cases, it is the result of combined influences. (Eichstaedt

& Kalalian, 1987) Children with low motor skills often experience difficulties in achieving even basic skill performance levels, yet acquisition of basic skills is essential. Such skills are the foundation of efficient movement.

3.2 Movement Abilities

Movement behavior may be categorized intro three broad and sometimes overlapping categories. These categories represent the primary focus of the motor development specialist when working with children in a movement education program.

The first and most basic of these movement categories is referred to as stability. Stability abilities are those developing patterns of movement that permit young children to gain and maintain a point of origin for the explorations that they make thought space. Stability abilities are sometimes referred to as non locomotors movements because they involve such stationary activities in which a premium is placed on maintaining equilibrium such as with inverted supports (tip – up , tripod or headstand) and rolling movements (forward, backward or sideward rolls).

At the time when stability abilities are developing, fundamental locomotors abilities are also being enhanced. Locomotion involves projection of the body intro external space by altering its location in either a vertical or horizontal plane. Such activities as running, jumping, skipping, and galloping are commonly thought of as locomotors in nature. It is through locomotion that children are able to effectively explore the world about them.

The third aspect of developing movement abilities in young children involves the development of fundamental manipulative abilities. Gross motor manipulation involves imparting force to objects such as in throwing, striking, trapping, and stacking toys. It is through the manipulation of objects that children are able to come intro actual physical contact with objects in their world. (David L. Gillahule, (1976) *Motor development and movement experience*. New York: John Wiley and Sons

Fine motor skills are the collective skills and activities that involve using the hands and fingers (Amundson & Weil, 2001; Case – Smith & Shortridge, 1996). That is, fine motor skills are those skills that require the small muscles of the hand to work together to perform precise and refined movements

3.3 Phase of Motor Development

The movement education of preschool and primary – grade children involves the development of fundamental, locomotors, manipulative and stability movement abilities. Upon closer examination of movement behavior throughout the life cycle, we find that these three categories permeate human movement from infancy through adulthood. That is, locomotors, manipulative and stability movement activities are experienced at all levels in the total life experience which may be classified motorically intro development stages. These developmental stages correspond roughly with the phase of development outlined in the following paragraphs (See Figure 1.1.). The Reflexive movements of the fetus and newborn are considered to represent the first phase of motor development. Reflexive behaviors are sub cortically controlled.

Figure 1.

APROXIMATTE AGE (IN YEARS)	PHASE OF MOTOR DEVELOPMENT	CORRESPONDING DEVELOPMENTAL STAGE
-5 to 1	Reflexive behavior	Utero infancy
0 – 2	Rudimentary movement abilities	Infancy
2 – 7	Fundamental movement abilities	Early childhood
7 – 10	General movement abilities	Middle childhood
11 – 13	Specific movement abilities	Later childhood
14+	Specialized movement abilities	Adolescence and adulthood

Rudimentary movements begin developing in the infant from shortly after birth to approximately 2 years of age. They involve locomotors activities such as creeping, crawling, and walking. They include manipulative experiences such as reaching, grasping, and releasing objects

and also involve the stability movements of gaining control of the head, neck, and trunk along with learning how to sit and stand unassisted.

The third phase of motor development is referred to as the fundamental abilities phase. This phase was discussed briefly in the preceding paragraphs and is the primary concern of this book. Developing fundamental movement abilities involves attaining acceptable levels of performance in » variety of basic movement skills beginning around the second year of life and continuing through the preschool years and primary grades to about age 7 years. This age range encompasses the period of time commonly referred to as early childhood.

Boys and girls in the intermediate grades (third, fourth, and fifth grades) are generally considered to be in middle childhood.

This stage of development gives rise to a fourth phase of motor development, namely the general movement abilities phase. General movement abilities closely resemble the fundamental movement abilities of the preceding phase because they involve many of the same movement. A fifth phase of development is the specific movement abilities phase which correspond with the developmental stage of later childhood and preadolescence (sixth, seven and eight grades).

This phase of motor development is similar to the previous one except that the child is developmental mentally more mature and more capable of coping with the physical and psychological demands brought about through greater emphasis on for skills and accuracy in the performance of more advanced lead-up games and the official sport itself. (David L. Gillahule, 1976. *Motor development and movement experience*. New York: John Wiley and Sons).

3.4 Physical and motor abilities

The physical development aspect of the psychomotor domain may be classified as either physical ability.

Physical abilities

- Muscular strength
- Muscular endurance
- Circulatory – Respiratory endurance
- Flexibility

A physical ability is a relative term that may refer to such things as spiritual, emotional, and social fitness as well as physical fitness. Hence physical fitness is generally considered to be the ability to perform one's daily tasks without undue fatigue. It also is a state in which ample reserves of energy should be available for recreational pursuits and to meet energy needs. It also is a state in which ample reserves of energy should be available for recreational pursuits and to meet energy needs.

Motor Abilities

- Speed
- Coordination
- Agility
- Power
- Balance

Motor ability is generally thought of as one's performance abilities as influenced by the factors of speed, agility, balance, coordination, and power.

Although this often does occur, it is probably due to the individual's personal motivation, numerous activity experiences, and several specific sport aptitudes rather than transfer or carryover of skills from one activity to another. In an effort to avoid confusion between the terms "motor ability" and "general motor ability" we will instead refer to the factors of speed, agility, balance, coordination, and power as elements of "motor fitness."

3.5 Motor Development and Education of Children Age 3 – 6 Years

In the fourth year of life the child is beginning to overcome clumsiness, his/her motions become more exact, and his/her ability for intentional activities further increases. Children like rhythmic activities, are more independent, are not afraid to jump from a height of 30 – 40 cm, and are able to achieve a certain level of performance. The main goal of motor education is to develop skill, adequate body posture, and a well-balanced gait. It is recommended to start children on some sports activities (of course very carefully chosen for young children), for example, skiing and swimming. Up to 6 years of age, these abilities improve further.

This period is defined as the golden age of motorics (Wolanski & Pařízková 1976), when the level of spontaneous motor activity is higher than later on. It is therefore very important to make use of these tendencies for Physical Activity and interest in suitable motion games. When proper motor habits and skills are introduced in time and when a certain level of cardio respiratory efficiency, speed, endurance, and muscle strength is achieved, a good basis for later performance and interest in exercise is created. Preschool children have at their disposal good prerequisites for aerobic endurance training and also natural movements involved in spontaneous playing rather than striving to reach maximal performance. Young child can achieve a heart rate >200 per minute during activity (Kučera et al., 1975). The preschool child loves to play; hence it is desirable to profit from this by playing games that focus on the continuing development of adequate gait, fast runs, courageous jumps, skillful crawling, throwing, and so forth. Stimulation of motor and fitness development has to be adequate with regard to age and individuality of the particular child, which requires proper physiological and psychological knowledge.

The overall physical activity of children in preschool children is higher than later, as shown repeatedly by longitudinal measurements (Pařízková & Hainer 1990, Sigmund et al., 2008), and therefore it is desirable to profit from this natural characteristic from the point of view of later development. Child care during daytime can be very important (Bower et al., 2008).

A higher level of physical activity can improve cardiorespiratory endurance or reduce fatness from preschool years, but significant effects may not be immediately apparent (Grund et al. 2000, Al – Nakeeb et al. 2007, Weymans & Reybrouck 1989): physical activity cannot achieve such an intensity as possible in later age, and for a time duration that is indispensable for the manifestation of

significant changes in the parameters usually followed up. When the child has no siblings, parents should participate; this is sometimes difficult because of time constraints. Children should also have the company of other children, which teaches them to adapt to peers. At preschool age, the need for the company of children increases and mutual relationships are established among children on the basis of games. Observations on how the child plays can help define his/her personality and his/her later relationship with other activities (Berdychová 1975 – 1985, 1978, 1993). Studies in other preschool children confirmed the positive results of early intervention in increasing PA and exercise (Iurko et al., 1993, Kuchma et al., 2006; Krombholz 2006). Muscular strength and muscular endurance can be improved during childhood years: introduction of a higher repetition moderate resistance training program can be used, starting at 5 years of age (Feigenbaum et al., 1999).

3.6 Physical Activity, Energy Expenditure and Physical Fitness in Young Children

Exercise is a PA that is planned, structured, repetitive, and purposeful. Physical fitness is a set of attributes that relate to the ability of people to perform physical activity and exercise; health-related physical fitness includes components of physical fitness that are associated with aspects of health (McArdle et al., 1991) – a status of full mental, physical, and social well – being (WHO 1985).

Physical fitness is also defined as a complex of prerequisites that allows an organism to react in an optimal way to various environmental stimuli. As mentioned above, this is an essential component of health. Therefore, its examination is also essential for the evaluation of the health status of any human being generally and of course not only in relation to eventual sports activity and performance (Tomkinson et al. 2007a, b).

The level and character of Physical activity belong to the individual characteristics of any human subject, and are usually higher during growth – especially during preschool age – than during later periods of development, and were shown to be related to many other characteristics, for example, EE

(energy expenditure, energy output) (Montgomery et al., 2004, 2005), body composition, and aerobic fitness (Pařízková, 1977).

Influence of Exercise

Children who enrolled regularly in physical education had, as a rule, significantly higher values of height, weight, and other morphological characteristics. In contrast to the biggest children, for example, from the capital or from families with highest per capita income or born first, exercised children also had best results in motor performance.

Better results of physical performance were apparent in older preschool children after a longer exposure to exercise. When we wanted to examine the possible differences between physically active and inactive children at a younger age, that is, 4 – 5 years, we had to compare those who were spontaneously very active or generally inactive. This differentiation was made possible by a longitudinal follow-up of a smaller subgroup of 4.6 – year – old children during the whole year by teachers and parents, with the help of special questionnaires prepared by us for this purpose.

Children who were spontaneously most active during the whole year of observation tended to be taller, heavier, and leaner (more mesomorphic), with a slightly higher dietary intake and better results in the step test. These differences, however, were not significant. Only the serum level of HDL – cholesterol was significantly higher in very active children compared to inactive ones (Pařízková et al., 1986a). The results seem to indicate that a genotype characterized by high spontaneous physical activity (or a subject with induced high activity) has significantly higher HDL along with a trend for larger body size, less depot fat, higher food intake, and higher cardiorespiratory and motor fitness, which already manifests itself at preschool age. It may be assumed that the introduction of adequate exercise in less active preschool children may result in similar favorable characteristics as those in older age.

Thus, exercise and motor stimulation proved to be beneficial for young children as for older ones. Therefore, a system of motor stimulation for infants (Koch 1977, 1978) and special physical education for preschool children and parents has been developed and introduced on a massive scale in the Czech Republic for more than 50 years (Berdychová 1970 – 1985, 1993). Similar systems

have already been used in many other countries, but they are still less frequent. Selected activities and exercises were described for systematic physical education in young children. It was revealed that such a system during infancy already had a positive influence on child development, manifested not only in motor but also in social and psychological development. As described above, the influence of exercise on preschool children was found to be beneficial, provided it was individually adjusted and included exercises suitable only for this early period of growth. During more recent periods, there is an increasing amount of research data reconfirming this positive effect of increased physical activity and exercise. The early introduction of an adequate regimen concerning both activity and diet since the beginning of life is a desirable start for its continuation until adult and advanced age. It is at present recommended to be more physically active, as the role of exercise can protect against overweight and obesity with accompanying co morbidities during the complete lifespan.

Life and motion cannot be separated – motor activity and exercise can be used as a part of general education, which goes beyond motorics. Education, in any respect, has to be individualized and adjusted to the particular character of the child: as J.A. Comenius (1646–1650) reminds us “some need a bridle, the others spurs . . . .”

4 AIM AND OBJECTIVES

4.1 Aims

1. To compare motor abilities through motor skill performance of preschoolers in Bosnia and Herzegovina measured by Janda's test (1962) and Movement Assessment Battery for Children test Henderson & Sugden (1992) related to:

- Different age (six – seven)

- Different gender

2. To compare correlation between Janda´s test and M-ABC test related to subtest characteristics

4.2 Design and strategy of theses research

- Quantitative (we operate with quantity of data from 28 participants)
- Analytic – synthetic (data are analyzed, assessed, summarized)
- Comparative (comparison related to age, personal diagnoses of disability)

4.3 Research Questions

1 Are there significant differences of scores between respondents in term of gender and age?

2. Does exist the correlation between Janda's test (1962) – and Movement Assessment Battery for Children test Henderson & Sugden (1992)?

3. What are the advantages, disadvantages of each test from the aspect using in the school practice?

5 METHODS

5.1 The School

The children in this study are from one of the oldest public school, located in the city Banja Luka Republic of Srpska – Bosnia and Herzegovina. In 1958 the school was named after national hero Kasim Hadžić however in 1993 it was named after a great Serbian man of letters and educator Dositej Obradović.

Today school "Dositej Obradović" attended by approximately 550 students and has47 employees. Children attend school when turn 6 years, after consultations with the psychologist and systematic medical examination. Education in elementary school lasts' 9 years, after that the students chose one of the high schools. Classes last 45 min. the number of pupils in a class is 20 to 25. During the first four grades of elementary school children are taught by one teacher and after that in the fifth grade pupils have one teacher for every subject. In the latest period, a reduction of the number of students has been noticed. Physical education classes are carried out in a school hall or in an open sports court.

5.2 Participants

Participation included 28 children 12 girls and 16 boys. The age rang was from 72 to 84 months. All of them were attending first grade public elementary school.

Figure 2

No of 7 YEARS GIRLS - 12	No of 7 YEARS BOYS - 8	No of 6 YEARS BOYS - 7	No of 6 YEARS GIRLS 1

Parents of the children were informed about research and they gave their approval for children to participate in whole research procedure.

School pedagogy Gordana Kecman was organizing meeting for teachers, parents and me. I'm present my project and we are discuss about tests, equipment for testing, place for testing and ethical conditions. Parents are gave me their approval, that was verbal agreement.

5.3 Instrument of assessment

5.3.1 M – ABC test

The instrument used for assessment of motor skills of children was Movement Assessment Battery for Children (M-ABC, Henderson and Sugden, 1992) and Janda Test.

According to the authors, the test is not time consuming and children are likely to participate in the test. To assess one child with this test it 40 takes 20 to 40 min. Included in the accompanying manual are the standardized guidelines and instructions to follow in administering this test. This ensures that the test is used in a standard way throughout the assessment and that the scores obtained can be reliably be compared to those norms obtained by Henderson and Sugden when the battery was created in 1992. Though based on United Kingdom (UK) norms, this battery has been validated for use in many European and Asian countries. As is the nature of any motor assessment, the aim is to replicate the full ability of the child in the assessment context. Due to this, it is important to try and maintain as natural an environment as possible in order for the child to perform. This is very much the case with the M-ABC. The assessment tasks are play-like in nature and should lead to full cooperation from the child.

Each task on the M – ABC is scored in either total seconds taken to complete the task, e.g. threading beads, or counting the number of successful attempts out of total trial numbers, e.g. rolling a ball into a goal area. The M – ABC is organized into three domains or performance areas, covering manual dexterity (3 items), ball skills (2 items), static balance (1 item) and dynamic balance (2 items). A special feature of the M – ABC test is the organization in four different age bands for age groups between 4 and 12 years.

Children can score between 0 and 5 on each item, so that the total score will range from 0 to 40, with increased impairment associated with higher scores. The Total Impairment Score (TIS) is the sum of all the scaled scores and this is then expressed as a percentile of the norm. For example, TIS of 13+ would indicate that the child lies in the 5th percentile, and is therefore has a very impaired score. For the purpose of this study, the performance test was used. This allows for both quantitative and comments/observations gathered and identified in this study as qualitative data. This instrument is not still translated in Bosnian language, so it was used in English language.

5.3.1.1 Description of test items as found in the MABC manual (Henderson&Sugden)

Each class had following structure:

Manual Dexterity 1 – Positing Coins (PS)

The aim of his item is to post 12 coins intro the box as fast as possible. The child is assessed on both hands. At a signal, the child drops the first coin through the slot in the bank box and continues one at a time. The time is stopped when the final coin hits the end of the box. The child is give one practice attempt on each hand, putting just 6 coins intro the box.

Manual Dexterity 2 – Threading Beads (TB)

The aim of this iteme is to thread 6 or 12 beads onto the lace as quickly as possible. The child chooses the hand which will hold the lace, and the other hand grasps the beads. At the signal the child begins to thread the beads, the assessor stops timing when the final bead has been moves past the tip of the lace and released. One practice attempt is given, threading 3 beads.

Manual Dexterity 3 – Bicycle Trail (BT)

The aim of this item is for the child to draw a continuous line following the trail from bicycle to house without crossing the boundaries. The child is allowed to lift then pen, but most start again from the same point. This item is not measured in time, but in errors made. Small adjustments can be made to the paper of up to 45 degrees. Only the preferred hand is tested. One practice attempt is given with only part of the trail being completed.

Ball Skills 1 – Catching Bean Bag (CBB)

From a distance of 6 feet, the aim of this activity is for the child to catch the bean bag as often as possible from ten attempts. The assessor tosses the bean bag so it reaches the level of the participant's hands and the child catches the bean bag with two hands. 5 practice attempts are given to the child, with technique being corrected at this stage where necessary.

Ball Skills 2 – Rolling Ball intro Goal (RB)

From a distance of 6 feet, the aim of this activity is to score as many goals as possible from ten attempts. The goals are placed 16 inches apart. The child begins from behind a start line and chooses the and with which to throw. The child must roll the ball along the floor between the goals to score. Only one hand is tested. 5 practice attempts are given and then 10 attempts. No assistance may be given during attempts.

Static Balance 1 – One – leg Balance (OLB)

The child should stand in a clear space away from furniture. The child stands on one leg with arm held freely by the sides for up to 20 seconds. The free leg should be bent backwards at the knee. Both legs are tested, with the time of the balance recorded and scored. One practice attempt is given for a maximum of 10 seconds. No assistance may be given during trials.

Dynamic Balance 1 – Jumping over Cord (JOC)

The child stands next to the wooded pastes. A pin is placed in the hole that is closest to the lower border of the knee cap. From a stationary position with the feet together, the child jumps over the cord. At age 4, child may land in any position. At age 5 and 6, the child must land feet together. The child is given one practice attempt. There are 3 formal trials and no assistance can be given during these.

Dynamic Balance 2 – Walking Heels Raised (WHR)

The aim of this item is for the child to walk with heels of the ground along a line on the floor of 15 feet. The child must not step off the line and fifteen steps sre required to successfully complete the task. The child is allowed and practice attempt of just 5 steps. Three formal trials are given, with no need to complete all three if the first is flawless.

5.3.2 Janda Test (1981)

Based on the previous research developed a way of addressing the assessment of physical fitness (comprehensive motor skills) children 3 to 12 years. The basic methodology is expected indicative became Monometric scale Ozerecký (MSO). Because the feasibility and accuracy of description of all tasks (MSO) crafted for different age group were in dispute, (MSO) has been modified and supplemented with new tasks in the test. (Tables of psychomotor development from birth to 6 years)

All selected tasks were evaluated in accordance with the task. A description of each task is such that the criteria for assessment is suitable for the majority even if it is agreed that the research will be conducted on more examines. A new methodology for measuring motor skills has been changed, in order to simplify implementation and obtain evaluation results as objective as possible. The principle is based on the improvement of certain motor tasks evaluated on the basis of the task type for each age category, and divided intro 6 aspects that is motoric components

Complete description, explanation of subtests

Physical test contains:

Static Coordination

Dynamic Coordination

Total Dynamic Coordination

Speed of Movement of the Hands

Current Movement

Mimicry

Figure 3.Description Janda Sub – tests

PHYSICAL COMPONENTS	6 YEARS	7 YEARS
STATIC COORDINATION	Squat, hands on hip *	Position, bent at the tips of their toes hands back, head lifted
DYNAMIC COORDINATION	Catching the ball at a distance of 1.5 m	Catching the ball at a distance of 1.5 meters. Out of 5 throws catch 3 with both hands
TOTAL DYNAMIC COORDINATION	with feet to themselves, tips of toes in line	While jumping , clap your hands 3 times in front of the body
SPEED OF MOVOMENT OF THE HANDS	In the book, turn one page after another, at least 10 sheets per 15 sec.	Divided 32 cards evenly into 4 groups of up to 40 s.
CURRENT MOVOMENT	Sitting on a chair leg assign a specific rhythm by legs while the index finger follows it then repeat the movement with of the right foot for 10 s	The same as for 6 years but in duration 20 s
MIMICRY	Scowls, create vertical wrinkles between the eyebrows ***	Arbitrarily close one eye, another must be clearly open ***

* release the task for 10 s and without hesitation

*** At mimicry movement should be no indication of delight

5.4 Data assessment

Basic matrix for data input was made in SPSS 16.0 for Windows.
First: Descriptive statistics – T – Test (Independent Samples T Test) and Correlation is used for data preparation

Second: To analyze the data we used Statistical Package for Social Sciences (SPSS Inc), Version 15.0, for Windows.

The t-test assesses whether the means of two groups are *statistically* different from each other. This analysis is appropriate whenever you want to compare the means of two groups, and especially appropriate as the analysis for the posttest-only two-group randomized experimental design.

Correlation is a measure of the relation between two or more variables. The measurement scales used should be at least interval scales, but other correlation coefficients are available to handle other types of data. Correlation coefficients can range from -1.00 to +1.00. The value of -1.00 represents a perfect *negative* correlation while a value of +1.00 represents a perfect *positive* correlation. A value of 0.00 represents a lack of correlation.

6 RESULTS

6.1 Descriptive statistics

Table 1 - *Survey of participants by genderr*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	F	13	46,4	46,4	46,4
	M	15	53,6	53,6	100,0
	Total	28	100,0	100,0	

Table 2 - *Survey of participants by age*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6	8	28,6	28,6	28,6
	7	20	71,4	71,4	100,0
	Total	28	100,0	100,0	

From the total number of the study group we had 15 male and 13 female athletes.

6.2 Statistic of relation

6.2.1 Results of T – Test

Table 3 – Independent Samples Test (T – Test)

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig	t	df	Sig. (2-tailed)
Manual Dexterity	Equal variances assumed	,318	,578	,479	26	,636
	Equal variances not assumed			,524	15,871	,608
Ball Skills	Equal variances assumed	,086	,771	,741	26	,465
	Equal variances not assumed			,671	10,770	,516
Static Dynamic Balance	Equal variances assumed	1,398	,248	,216	26	,830
	Equal variances not assumed			,235	15,599	,817
Total Impairment score	Equal variances assumed	,839	,368	,324	26	,748
	Equal variances not assumed			,354	15,768	,728
Static Coordination	Equal variances assumed	2,888	,101	1,160	26	,257
	Equal variances not assumed			1,832	20,108	,082
Dynamic Coordination	Equal variances assumed	281,763	,000	2,523	26	,018
	Equal variances not assumed			4,015	19,419	,001
Total Dynamic Coordination	Equal variances assumed	1,276	,269	-,485	26	,632
	Equal variances not assumed			-,453	11,359	,659
Speed of Movement of the Hands	Equal variances assumed	7,419	,011	-1,829	26	,079
	Equal variances not assumed			-1,547	9,688	,154
Current Movement	Equal variances assumed	,053	,820	,079	26	,938
	Equal variances not assumed			,080	13,295	,938
Total Impairment score Janda Test	Equal variances assumed	1,099	,304	-,207	26	,837
	Equal variances not assumed			-,248	19,931	,806

Independent Samples T Test compares the mean scores of two groups on a given variable. Compare the mean scores of subtests on a given variable Janda and M – ABC test The t-test (or student's t-test) gives an indication of the separateness of two sets of measurements, and is thus used to check whether two sets of measures are essentially different. We are chosen “The Independent Samples T Test” compared to the mean scores of two groups on a given variable.

The columns labeled "Levene's Test for Equality of Variances" tell us whether an assumption of the t-test has been met. The t-test assumes that the variability of each group is approximately equal if this value is less than or equal to ≤ (p0.05) level for the test (usually .05), then we can reject the null hypothesis that the variability of the two groups is equal, implying that the variances are unequal. In oposite cause if is value greater then level for the test (usualy .05) then we should use the top row of the output (the row labeled "Equal variances assumed ").

Based on the results of our Levene's test, we know that we have approximately equal variance, so we will read the top line, with the exception in the case Dynamic Coordination where the result appears (sig. = .00 , p < 0.01) then we follow the bottom column “Equal variances not assumed”. Statistically significant difference was found in the Dynamic Coordination (r= .001, p < 0.01)

Table 4 – Survey of participants by age span

	Age	N	Mean	Std. Deviation
Manual Dexterity	6	8	6,0625	2,61093
	7	20	5,4500	3,20731
Ball Skills	6	8	1,3750	1,59799
	7	20	,9500	1,27630
Static Dynamic Balance	6	8	2,1875	1,79160
	7	20	2,0000	2,16430
Total Impairment score	6	8	9,1875	4,03500
	7	20	8,5500	4,92550
Static Coordination	6	8	27,6725	,56464
	7	20	25,5300	5,15326
Dynamic Coordination	6	8	27,6725	,56464
	7	20	20,0360	8,45809
Total Dynamic Coordination	6	8	21,8112	8,37398
	7	20	23,3365	7,17928
Speed of Movement of the Hands	6	8	19,8113	8,76523
	7	20	25,0270	5,94044
Current Movement	6	8	23,6400	7,13654
	7	20	23,4000	7,33734
Total Impairment score Janda Test	6	8	132,6000	14,37430
	7	20	134,3615	22,10043

The age span of our study group is, from 6 – 7 years, as it represented in the Table 4. We have 28 participants, twenty participants seven years old and eight participants six years old. The instrument used for assessment of motor skills of children was Movement Assessment Battery for Children (M-ABC, Henderson and Sugden, 1992) and he consist Manual Dexterity, Ball Skills, Static Dynamic Balance while Janda Test consists of Static Coordination, Dynamic Coordination, Total Dynamic Coordination, Speed of Movement of the Hands and Current Movement.

In Table 4 we can see the results of achievement in tests at six years old and seven years old participants. Six years old participants show better results in Manual Dexterity, Ball Skills, Static Dynamic Balance, Static Coordination, Dynamic Coordination, and Current Movement then seven years old children. Seven years old children show better results in Total Dynamic Coordination and Speed of Movement of the Hands.

Table 5. Survey of participants by gender span

	sex	N	Mean	Std. Deviation
Manual Dexterity	1,00	15	5,3000	2,73731
	2,00	13	6,0000	3,37886
Ball Skills	1,00	15	,9333	1,43759
	2,00	13	1,2308	1,30089
Static Dinamic Balance	1,00	15	2,0667	2,05171
	2,00	13	2,0385	2,09624
Total Impairment score	1,00	15	8,4333	3,85388
	2,00	13	9,0769	5,52587
Static Coordination	1,00	15	26,4093	4,44564
	2,00	13	25,8338	4,60100
Dynamic Coordination	1,00	15	24,2413	6,99930
	2,00	13	19,8831	8,54678
Total Dynamic Coordination	1,00	15	24,5053	6,73967
	2,00	13	21,0492	7,98096
Speed of Movement of the Hands	1,00	15	23,3913	7,38445
	2,00	13	23,7046	7,06893
Current Movement	1,00	15	22,1627	7,80241
	2,00	13	24,9754	6,27396
Total Impairment score Janda Test	1,00	15	134,5680	16,84163
	2,00	13	133,0392	23,72934

From the total number of the study group we had 15 boys and 13 girls.

The instrument used for assessment of motor skills of children was Movement Assessment Battery for Children (M-ABC, Henderson and Sugden, 1992) and he consists Manual Dexterity, Ball Skills, Static Dynamic Balance and Janda Test cosist Static Coordination, Dynamic Coordination, Total Dynamic Coordination, Speed of Movement of the Hands and Current Movement

Table 6. Independent Samples Test (T – Test)

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Manual Dexterity	Equal variances assumed	,272	,607	-,606	26	,550
	Equal variances not assumed			-,596	23,122	,557
Ball Skills	Equal variances assumed	,005	,943	-,570	26	,573
	Equal variances not assumed			-,575	25,938	,571
Static Dinamic Balance	Equal variances assumed	,026	,873	,036	26	,972
	Equal variances not assumed			,036	25,268	,972
Total Impairment score	Equal variances assumed	2,285	,143	-,361	26	,721
	Equal variances not assumed			-,352	21,044	,728
Static Coordination	Equal variances assumed	,004	,948	,336	26	,739
	Equal variances not assumed			,335	25,158	,740
Dynamic Coordination	Equal variances assumed	5,210	,031	1,484	26	,150
	Equal variances not assumed			1,462	23,266	,157
Total Dynamic Coordination	Equal variances assumed	3,057	,092	1,243	26	,225
	Equal variances not assumed			1,227	23,668	,232
Speed of Movement of the Hands	Equal variances assumed	,186	,670	-,114	26	,910
	Equal variances not assumed			-,115	25,716	,910
Current Movement	Equal variances assumed	4,127	,053	-1,040	26	,308
	Equal variances not assumed			-1,057	25,878	,300
Total Impairment score Janda Test	Equal variances assumed	2,127	,157	,199	26	,844
	Equal variances not assumed			,194	21,287	,848

Independent Samples T Test compares the mean scores of two groups on a given variable. Compare the mean scores of subtests on a given variable Janda and M – ABC test

In T – Test (Independent Samples Test) comparison of results based on different sex were not found statistically significant differences.

6.2.2 Correlations

Correlation is a statistical measurement of the relationship between two variables. Possible correlations range from +1 to –1. A zero correlation indicates that there is no relationship between the variables. Perfect positive correlation (a correlation co – efficient of +1) implies that as one security moves, either up or down, the other security will move in lockstep, in the same direction. Alternatively, perfect negative correlation means that if one security moves in either direction the security that is perfectly negatively correlated will move in the opposite direction.

At the table below we can see corelation between M – ABC Test, Henderson and Sugden, 1992 consisting Manual Dexterity, Ball Skills, Static Dynamic Balance and Janda Test consisting Static Coordination, Dynamic Coordination, Total Dynamic Coordination, Speed of Movement of the Hands and Current Movement.

Table7. Correlations

		Static Coordination	Dynamic Coordiantion	Total Dynamic Coordination	Speed of Movement of the Hands	Current Movement	Total Impairment score Janda Test
Manual Dexterity	Pearson Correlation	-,112	,001	,200	,073	-,280	-,063
	Sig. (2-tailed)	,569	,997	,308	,711	,149	,751
	N	28	28	28	28	28	28
Ball Skills	Pearson Correlation	,125	,156	,095	,036	-,086	,115
	Sig. (2-tailed)	,526	,427	,630	,855	,663	,561
	N	28	28	28	28	28	28
Static Dynamic Balance	Pearson Correlation	,015	-,256	-,022	-,030	-,531(**)	-,392(*)
	Sig. (2-tailed)	,940	,189	,911	,880	,004	,039
	N	28	28	28	28	28	28
Total Impairment Score	Pearson Correlation	-,024	-,065	,192	,091	-,439(*)	-,143
	Sig. (2-tailed)	,905	,744	,327	,645	,019	,469
	N	28	28	28	28	28	28

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

In table 7 above, we can see correlation has been found between Current Movement and Static and Dynamic Balance (r= -531**; p<0, 01), Current Movement and Total Impairment Score (r= -439*; p<0, 05), Total Impairment Score Janda Test and Static Dynamic Balance (r= -392*; p<0, 05).

In Correlations has been found negative correlation, which means that the abilities are associated negatively, the inverse proportion. When one ability is increasing, correlated one is decreasing. Tests measure different abilities, but they do match at certain sub – tests.

7 DISCUSSION

In order to understand better the role of body composition in the entire anthropological status and motor performance, it is important to distinguish between the terms growth, maturation, and development of children. Growth refers to an increase in the size of the body and occurs as the result of increasing the number of cells, increasing the size of cells, or increasing in intercellular substances. The relationship between size and most physiological attributes significant in physical activities during childhood is positive, as the obtained results of this research show. Maturation is the process of attaining the mature state, noting that the different body systems achieve mature state at different times. Maturational rate does not necessarily parallel chronological age and is largely determined by biological inheritance**.**

Authors (Bala, Sabo, Popović 2005) have reached the following conclusions: correlation analyses pointed to a tendency of general motor and cognitive development in preschool children just about to enrol in the first class, i.e. the development of abilities which define the readiness for beginning school. That tendency is present in boys, as well in girls.

This point to importance and need of the motor ability development in the entire development of preschool children. Children with better motor abilities can better adapt to different problem situations, activities, and tasks at the beginning and during their schooling.

Benefits of M - ABC test from the aspect of school maturity are:

- Age appropriate for preschool children
- International normative data is available
- Quantitative and qualitative assessment
- Highly suitable for impairment detection
- Usable in educational setting

Cross cultural validity has been supported by a number of studies and resulted in the Movement – ABC test being translated in several languages (e.g. Chinese, Dutch, Danish, Swedish, Italian and Japanese [Barnet & Peters, 2004; Chow et al., 2001; Chow et al., 2006]). The revised version (Henderson et al., 2007) includes the following main points: encountered in school and at home.

Disadvantages M - ABC test from the aspect of school maturity:

- No information of skill mastery above skill level
- Rather low efficiency (unfavorable proportion of items tested versus assessment time)

I recommend using both tests because in that case we can get more information and more complete picture of participants abilities. To extend this study I propose to examine predictive power of both tests, their ability to predict the success of learning new motor skills.

8 CONCLUSION

Related to assessment 15 boys and 13 girls we found that the abilities participants of different ages we can see that six years old participants show better results in: Manual Dexterity, Ball Skills, Static Dynamic Balance, Static Coordination, Dynamic Coordination, and Current Movement. Seven years participants show better results in Total Dynamic Coordination and Speed of Movement of the Hands.

Expectations were that the seven years old participants should have better results but in this case six years old participants showed a better result. Explanation for such facts can be found in small number participants.

Similar situation is with assessing the abilities of participants of different gender. In this study we have not found a statistically significant difference between boys and girls. Explanation for this fact also can be found in small number participants.

In Correlations has been found negative correlation, which means that the abilities are associated negatively, the inverse proportion. When one ability is increasing, correlated one is decreasing. Tests measure different abilities, but they do match at certain sub – tests. I recommend using both tests because in that case we can get more information and more complete picture of participants abilities. To extend this study I propose to examine predictive power of both tests, their ability to predict the success of learning new motor skills.

9 SUMMARY

Early movement successes for young children are related to performing activities of daily living without assistance or with minimum assistance, recreational opportunities, and overall wellness, growth, and development. As children are provided with frequent opportunities to participate in everyday fun and engaging physical activities, they gain foundational skills that lead to success in task-specific skills. The combined benefits from physical activity can improve a child's self-concept, self – esteem, and socialization skills, which are aspects of the affective developmental domain.

The child may develop peer relationships, learn to control aggressive behaviors, practice conflict resolution, and engage in leadership activities through play and recreation.

The aim was to compare motor abilities through motor skill performance of preschoolers in Bosnia and Herzegovina measured by Janda's test (1962) and Movement Assessment Battery for Children test Henderson & Sugden (1992) related to age and gender.

Participation included 28 children 13 girls and 15 boys. The age rang was from 72 to 84 months. All of them were attending first grade public elementary school

Basic matrix for data input was made in SPSS 16.0 for Windows.

First: Descriptive statistics – T – Test (Independent Samples T Test) and Correlation is used for data preparation Second: To analyze the data we used Statistical Package for Social Sciences (SPSS Inc), Version 15.0, for Windows.

From this study we can conclude that there are no differences in performing motoric skills between boys and girls. But when we take age as a condition we can see that 6 years old participants showed better results then 7 years old participants in most tasks. All of children showed enjoyment during of participating in physical activity. Also when we talk about the connection between tests (Janda – M-ABC), we conclude that the tests in some segments matched, which shows us the correlation. From the point of application in measure motor skills suggest the use of both tests. M-ABC for basic screening with international verified norms, Janda for more detailed diagnostics of more factors, without international norms.

Advantage in this study is the data obtained in with every subtest is that they can be used in future work in physical education in terms of upgrading and improving some skills (abilities). Person can do exercises that influence that skill and in that way improve Disadvantage in this study is the small number of respondents

10 SOUHRN

Pohybová úspěšnost v raném dětství je ve vztahu k prováděným pohybovým aktivitám běžného denního života bez podpory nebo s minimem podpory včetně obecného růstu a vývoje. Pokud děti mají zajištěné četné příležitosti zúčastnit se každodenní zábavy a her s pohybem, získávají základní dovednosti vedoucí k úspěšnému zvládnutí specifických dovedností. Prospěšnost z účasti v pohybových aktivitách může zlepšit sebevědomí i sebehodnocení dítěte, sociální dovednosti, což jsou důležité oblasti osobnostního vývoje.

Dítě může rozvinout vztahy s vrstevníky, naučit se kontrole agresivního chování, řešení konfliktů a zvládnout vůdčí roli prostřednictvím her a pohybové rekreace.

Cílem práce bylo srovnat výsledky pohybových dovedností předškolních dětí v Bosně a Hercegovině, měřené testem Jandy (1962) a testovou baterií hodnocení pohybu dětí (M-ABC) Henderson & Sugden (1992) ve vztahu k věku a k pohlaví. Šetření se účastnlo 28 dětí (13 dívek a 15 chlapců) ve věkovém rozpětí od 72 do 84 měsíců. Všichni navštěvovali elementární třídu ve veřejné škole.

Základní zpracování dat se uskutečnilo v systému SPSS 16.0 Windows. První rovina zpracování: deskriptivní statistika – (T-test) a korelační vztahy. Druhá rovina: analýza prostřednictvím "Statistical Package for Social Sciences (SPSS Inc), Version 15.0, for Windows".

Z výsledků můžeme dedukovat, že nejsou významné rozdíly v motorických dovednostech mezi dívkami a chlapci. Z hlediska věku šestileté děti vykazovaly lepší výsledky než děti sedmileté ve většině úkolů daných sub-testů. Děti obecně se účastnily testování s radostí. Z hlediska srovnání testů (Janda – M-ABC) některé ze segmentů jsou srovnatelné, což potvrzují korelační vztahy.

Z hlediska aplikace v praxi lze doporučit obě baterie, M-ABC pro základní screening, Janda pro detailnější hodnocení vice faktorů. M-ABC má mezinárodně ověřené normy, Janda nikoliv.

Přínosem studie je získání porovnatelných dat v každém sub – testu což může být využito v procesu zlepšování motorických dovedností. Limitem studie je malý počet dětí.

11 REFERENCES

Al – Nakeeb, Y., Duncan, M.J., Lyons, M., et al., Body fatness and physical activity levels of young children, *Ann. Hum. Biol.*, 34, 1, 200

Alexander, R. 1999. Culture in pedagogy, pedagogy across cultures. In Learning from comparative educational research, Vol. 1: Contexts, classrooms and outcomes, ed. R. Alexander, P.

Amundson & Weil, 2001; Case-Smith & Shortridge, (1996). *Fine Motor Development and Early School performance*

Amundson, S.J., & Weil, M. (1996). *Prewriting and handwriting skills*. In: J. Case – Smith. A.S. Allen, & P. Nuse Pratt (Eds.), Occupational therapy for children. (pp524-541) St Louis: C.V. Mosby

Bala, G. (1981). *Struktura i razvoj morfoloških i motoričkih dimenzija dece SAP Vojvodine*. Novi Sad: Fakultet fizičke kulture

Bala, G., Kiš, M. i Popović, B. (1996). Trening u razvoju motoričkog ponašanja male dece. *Godišnjak*, 8, 83-87, Beograd: Fakultet fizičke kulture

Barnett, A. and Peters, J. (2004) Motor proficiency assessment batteries. In: *Developmental motor disorders: A neuropsychological perspective.* Eds: Dewey and Tupper. New – York: Guilford, 67-109.

Berdychová, J. (1969). *Mother, Father Exercise with Me.* Prague: Olympia.

Berdychová J., Mother, *Father Exercise with Me At Home, in the Open Air, in Sokol*, Sokolvzlet, Prague, 1993 (in Czech).

Betsinger, A. M., Garcia, S. B., & Guerra, P. L. (2000). Research report for the organizing for diversity project. Austin, TX: *The Southwest Educational Development Laboratory.*

Bower, J.K., Hales, D.P., Tate, D.F., et al., The childcare environment and children's physical activity. *Am. J. Prev. Med.*, 34, 23, 2008.

Bredecamp , S., & Copple, C. (Eds.). (1997). Developmentally appropriate practice in early childhood programs serving children from birth through age 8. Washington, DC: *National Association for the Education of Young Children.*

Bringa, T. 1995. Being Muslim the Bosnian Way: *Identity and Community in a Central Bosnian* Village, Princeton University Press

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design.* Cambridge, MA: Harvard University Press.

Bronson, M. B. (2000). Self – regulation in early childhood: Nature and nurture. New York: Guilford.

Carlton, M. P., & Winsler, A. (1999). School readiness: The need for a paradigm shift. *School Psychology Review*, 28, 538-352

Case – Smith, J., & Shortridge, S. D. (1996). The development process prenatal to adolescence. In J. Case-Smith, A. S. Allen, & P. N. Pratt (Eds.). *Occupational therapy for children* (3rd ed., pp. 46-66). St. Louis: Mosby.

Casto, G., & White, K. (1984). The efficacy of early intervention programs with environmentally at risk infants. *Journal of Children in Contemporary Society*, 17, 37-50.

Castro, D., Bryant, D. M., Peisner – Feinberg, E. S., & Skinner, M. L. (2004). Parent involvement in Head Start programs: The role of parent, teacher, and classroom characteristics. *Early Childhood Research Quarterly, 19,*

Chamberlain, P., & Medeiros – Landurand, P. (1991). Practical considerations for the assessment of LEP students with special needs. In E. V. Hamayan & J. S. Damico (Eds.), Limiting bias in the assessment of bilingual students (pp. 122–156). Austin, TX*: PRO-ED*

Choi, I., & Nisbett, R. E. (1998). Situational salience and cultural differences in the correspondence bias and actor – observer bias. *Personality and Social Psychology Bulletin, 24(9), 949–960.*

Christenson, S. L. (2004). The family – school partnership: An opportunity to promote the learning competence of all students. *School Psychology Review, 33, 83−105.*

Christenson, S. L., Rounds, T., & Gomey, D. (1992). Family factors and student achievement: An avenue to increase students' success. *School Psychology Quarterly,* 7(3), 178-206.comparative educational research, Vol. 1*: Contexts, classrooms and outcomes, ed. R.*

Connors, L. J., & Epstein, J. L. (1995). Parent and school partnerships. In M. Bornstcin (Ed.), *Handbook of parenting: Vol. 4. Applied and practical parenting* (pp. 437-458). Mahwah, NJ: Erlbaum Pianta, R. C., & Kraft – Sayre, M. (1999). Parents' observations about their children's transitions to kindergarten. *Young Children, 54(3),* 47-52.

Copple, C., & Bredekamp, S. (2009). Developmentally appropriate practice in early childhood programs, 3rd ed.Washington, DC: *National Association for the Education of Young Children.*

Cowden, J.E., Sayers, L.K., & Torrey, C.C. (Eds). (1998). Pediatric adapted motor development and exercise. Springfield, IL: Thomas.

Cox, D. D. (2005). *Evidence* – based interventions using home – school collaboration. School *Psychology Quarterly, 20, 473-497*.

David L. Gillahule, *Motor development and movement experience*, (1976). New York : John Wiley and Sons

Dolenec, M. (2001). Analiza povezanosti nekaterih motoričnih in psiholoških razsežnosti otrok, starih 7 do 11 let. [Correlation between selected motor and psychological dimensions of children 7 to 11 years of age. PhD Thesis]. *Doktorska disertacija*. Ljubljana: Fakulteta za šport.

Dolenec, M., Karacsony, I., & Burnik, S. (2004). Correlation between speed and personality dimensions of boys 7 to 11 years of age. *Kalokagathia, 42, (1-2), 13-19.*

Dolenec, M., Pistotnik, B., & Pinter, S. (2002). Correlation between coordination and cognitive abilities of girls 7-11 years of age. In: Milanović, D. (Ed.), Prot, F.: *3rd International scientific conference Kinesiology new perspectives,* Opatija, Croatia. Kinesiology: New perspecties: Proceedings book, pp. 105-108. Zagreb: Faculty of kinesiology, University of Zagreb.

Donahue, P. J., Falk, B., & Provet, A. G. (2000). Mental health consultation in early childhood. Baltimore, MD: *Brookes Publishing*.

Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P., et al. (2007). School readiness and later achievement. *Developmental Psychology, 43, 1428−1446*

Eichstaedt, C. B. & Kalakian, L.H. (1987). Developmental/Adapted Physical Education – Making Ability Count. *McMillian Publishing Company,* New York, USA.

Epstein, J. L. (1987). Parent Involvement: What research says to administrators. *Education and Urban Society, 19(2),* 119-136.

Epstein, J. L. (1992). School and family partnerships. *In M. C. Alkin (Ed.),* Encyclopedia of educational research *(6th ed., pp. 1089-1151).* New York: Macmillan.

Epstein, J. L. (1995). School/family/community partnerships: Caring for the children we share. *Phi Delta Kappan, 76, 701−712.*

Epstein, J. L. (1996*).* Perspectives and previews on research and policy for school, family, and community partnerships. *In A. Booth, & J. F. Dunn (Eds*.), Family – school links: *How do they affect educational outcomes (pp. 209−246).* Mahwah, NJ: Erlbaum.

Epstein, J. L., Sanders, M. G., Salinas, K., Simon, B., VanVoorhis, F., & Jansorn, N. (2002). School, *family and community partnerships: Your handbook for action (2nd ed.).* Thousand Oaks, CA: Corwin Press.

Etnier, J.L., Salazar, W., Landers, D.M., Petruzzello, S.J., Han, M., & Nowell, P. (1997). The influence of physical fitness and exercise upon cognitive functioning: a meta analysis. Journal *of Sport and Exercise Psychology, 19, 249-27*

Eunicke – Morell, C. (1989). Untersuchung sum Zusammenhang von Motorik und Intelligenz. *Motorik,* 12 (2), 57-65

Fantuzzo, J.W., Tighe, E. & Childs, S. (2000). Family involvement questionnaire: A multivariate assessment of family participation in early childhood education. *Journal of Educational Psychology, 92, 367-37*

Feigenbaum, A.D., Westcott, W.T., Loud, R.L., et al., The effects of different resistance training protocols on muscular strength and endurance development in children, *Pediatrics, 104, e5,1999,*

Forman, G. 2003. The Asian image of the child. *Innovations in Early Education: The International Reggio Exchange 3, no. 4: 3–8.*

Freeman, N.K. 1998. Look to the East to gain a new perspective, understand cultural differences, and appreciate cultural diversity. *Early Childhood Education Journal 26, no. 2: 79–82.*

Gallahue, D. L. 1976. *Development and movement experience*. New York : John Wiley and Sons

Gardner, H. 1989. Learning Chinese – style. Psychology Today 23, no. 12: 54 – 56, Pro Quest database.http://proquest.umi.com/pqdweb?did51778710andsid52andFmt56andclientId *542705andRQT5309andVName5PQD (accessed January 10, 2007).*

Goals 2000: Educate America Act, H.R. 1804, 103d Congress, *2nd Session (1994).*

Grolnick, W. S., & Slowiaczek, M. L. (1994). *Parents'* involvement in children's schooling: A multidimensional conceptualization and motivational model. *Child Development, 65, 237−252.*

Grund, A., Dilba, B., Forberger, K., et al., Relationship between physical activity, physical fitness, muscle strength and nutritional state in 5 – to 11 – year – old children, *Eur. J. Appl. Physiol., 82, 425, 2000.*

Gudykunst, W. B., & Kim, Y. Y. (1997*). Communicating with strangers: An approach to intercultural communication.* Boston: McGraw – Hill.

Guralnick, M.J. (1991). The next decade of research on the effectiveness of early intervention. *Exceptional children, 58, 174-183.*

Hangi, A. (1906.): Život i običaji muslimana u Bosni i Hercegovini. Sarajevo: *Naklada Danijela &Kajona*

Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experiences of young American children.* Baltimore: Brookes

Henderson, A. & Berla, N. (Eds.). (1994). *A new generation of evidence: The family is critical to student achievement.* Washington, DC: National Committee for Citizens in Education

Henderson, A., & Mapp, K. (2002*). A new wave of evidence: The impact of school, family, and community connections on student achievement.* Austin, TX: Southwest Educational Development Laboratory.

Hinde, R. A. (1987). *Individuals, relationships, and culture*. New York: Cambridge University Press. Hinde, R. A. (1997). Relationships: A dialectical perspective. East Sussex, UK: Psychology Press.

Hinde, R. A. (1997). *Relationships: A dialectical perspective*. East Sussex, UK: Psychology Press.

Hong, S., & Ho, H.-Z. (2005). Direct and indirect longitudinal effects of parental involvement on tudent achievement: Second-order latent growth modeling across ethnic groups. *Journal o Educational Psychology, 97, 32−42.*

Hoover-Dempsey, K.V., and Sandler, H.M. (2005). The Social Context of Parental Involvement: A Path to Enhanced Achievement. Final Performance Report for OERI Grant # R305T010673:Presented to Project Monitor, Institute of Education Sciences, U.S. Department of Education,

March 22, 2005.Ichimura, S. (1966). Physical *education in Japan. Monographs of the Phi Epsilon Fraternity of Physical Education,* 1. Speakman, M.A. (1985). A cross-cultural comparison of purposes for moving. Unpublished doctoral dissertation. University of Georgia.

Ismail, A.H., & Gruber, J.J. (1971). *Integrated development - Motor aptitude and intellectual performance.* Columbus: Charles E. Merrill Books.

Iurko, G.P., Terenteva, G.V., Ivanova, O.G., et al., *Increasing of functional abilities of preschool children by means of physical training,* Vestn. Ross. Akad. Med. Nauk, 6, 7, 1993 (in Russian).

Jacobson, L. (2003). NYC puts 1,200 *new parent liaisons in schools*. Education Week, 23(3),5.

Kareweit, & B. A. Wasik (Eds.), *Preventing early school failure: Research, policy, and practice* (pp. 78 – 101). Boston, MA: Allyn & Bacon

Karweit, N. L. (1994). Can *preschool alone prevent early learning failure*? In R. E. Slavin, N.L.

Kellaghan, T., Sloane, K., Alvarez, B., & Bloom, B. S. (1993). *The home environment and school learning: Promoting parental involvement in the education of children.* San Francisco: Jossey – Bass.

Koch, J., *The Education of the Infant in the Family*, Avicenum, Prague, 1977 (in Czech). Koch, J., Total Baby Development, Wallaby Pocket Books, New York, 1978.

Krombholz, H., *Physical performance in relation to age, sex, birth, order, social class, and sports activities of preschool children,* Percept. Mot. Skills, 102, 477, 2006.

Kučera, M., Berdychová J., Javurek, J., Pařízková J., and Zika, K., *Somatic development of children in early years of life, in Report on State Plane of Research*, Faculty of Pediatrics, Charles University, Prague, 1975.

Kuchma, V.R., Vishnevskaia, T.I., and Makarova, A.L., *Impact of present – day forms of organization of physical education on the health status of preschool children*, Gig. Sanit., 3, 50, 2006 (in Russian).

LeVine, R.L., and M.I. White. 1986. *Human conditions: the cultural basis for educational developments.* New York: Routledge & Kegan Paul.

Lombardi, J. (2003). Time to care: *Redesigning childcare to promote education, support families, and build communities.* Philadelphia: Temple University Press.

Love, J. M., Logue, M. E., Trudeau, J. V., & Thayer, K. (1992). *Transitions to kindergarten in American schools* (Contract No. LC 88089001). Portsmouth, NH: U. S. Department of Education.

Magill, R.A. (2001). *Motor Learning* – Concepts and Applications, 6thedition, McGraw – Hill, New York.

Magnuson, K. A., Sexton, H. R., Davis-Kean, P. E., & Huston, A. C. (2009). *Increases in maternal education and young children's language skills.* Merrill – Palmer Quarterly, 55, 319−350.

Mathews, Donald K. *Measurement in Physical Education,* Philadelphia: Saunders, 1973, p.5.

McArdle, W.D., Katch, F.I., and Katch, V.L., *Exercise Physiology, Energy, Nutrition and Human Performance,* 3rd edition, Lea & Febiger, Philadelphia/London, 1991.

McWayne, C. M., Campos, R., & Owsianik, M. (2008). A multidimensional, multilevel examination of mother and father involvement among culturally diverse Head Start families. *Journal of School Psychology, 46, 551−573.*

McWilliam, R. A., Maxwell, K. L,, & Sloper, K. M. (1999). Beyond "involvement": Are elementary schools ready to be family centered? *School Psychology Review, 28, 378-394*

Miles, S., & Stipek, D. (2006). Contemporaneous and longitudinal associations between school behavior and literacy achievement in a sample of low – income elementary school children. *Child Development, 77, 103−117*

Miller, J. G. (1984). Culture and the development of everyday social explanation. *Journal of Personality and Social Psychology, 46(5), 961–978.*

Miyamoto, Y., & Kitayama, S. (2002). Cultural variation in correspondence bias: The critical role of attitude diagnosticity of socially constrained behavior. *Journal of Personality and Social Psychology, 83(5), 1239–1248.*

Montgomery, C., Reilly, J.J., Jackson, D.M., et al., Relation between physical activity and energy in a representative sample of young children, *Am. J. Clin. Nutr.80, 591, 2004.*

Montgomery, C., Reilly, J.J., Jackson, D.M., et al., Validation of energy intake by 24 – hour multiple pass recall: Comparison with total energy expenditure in children aged 5 – 7 years, *Br. J. Nutr., 93, 671, 2005.*

Morris, M. W., & Peng, K. (1994). Culture and cause: American and Chinese attributions for social and physical events. *Journal of Personality and Social Psychology, 67(6), 949–971.*

National Early Literacy Panel (2008). Developing early literacy: Report of the National Early Literacy Panel.

National Education Goals Panel (1998). Ready schools. Washington, DC: National Education Goals Panel. Epstein, J. L. (1996). *Advances in family, community, and school partnerships.* New Schools, New Communities, 12(3), 5-13.

Nićin, Đ., Kalajdžić, J . , & Bala, G. (1996). Motor behaviour of preschool children. *Poster. 4 th International Congress on Physical Education & Sport,* Komotini, Grčka.

Nisbett, R. E. (2003). The geography of thought: How Asians and Westerners think differently.... and why. New York: The Free Press. Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review, 108(2), 291–310.*

Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review, 108(2), 291 – 310*

Odom, S.(1988). Developmental intervention for infants with handicaps. *Journal of Special Education, 22, 11-24.*

Orr, R. (1990). A follow up evaluation of community based infant stimulation programs. *Journal of Special Education, 14, 52-62.*

Pařízková J. and Hainer, V., Exercise in growing and adult obese individuals, in Current Therapy in Sports Medicine-2, *J.S. Torg, R.P. Welsh, and R.J. Shephard, Eds, H.B.C. Decker, Inc, Toronto, p. 22, 1990.*

Pařízková J., Body Fat and Physical Fitness. Body Composition and Lipid Metabolism in Different Regimes of Physical Activity, *Martinus Nijhoff B.V., Medical Division, The Hague,1977.*

Pařízková J., *Body Fat and Physical Fitness. Body Composition and Lipid Metabolism in Different Regimes of Physical Activity*, Martinus Nijhoff B.V., Medical Division, The Hague, 1977.

Pašalić, M.: Kulturne tekovine Bosne i Hercegovine. http://www.bosnafolk.com/

Pianta, R. C., & Walsh, D. J. (1996). *High – risk children in schools: Constructing sustaining relationships*. New York: Routledge.

Pianta, R., & M. Kraft-Sayre. 1999. Parents' observations about their children's transitions to kindergarten. *Young Children 54 (3): 47–52.*

Pistotnik, B., Dolenec, M., & Pinter, S. (2002). Analiza povezanosti koordinacijskih in kognitivnih sposobnosti dečkov, starih 7 do 11 let. [Correlation between coordination and cognitive abilities of boys 7 to 11 years of age]. In*: Pišot, R. (Ed.)*.

Sabo, E. (2003). Struktura motoričkog prostora i razlike u motoričkim sposobnostima dečaka predškolskog uzrasta pri upisu u osnovnu školu [Structure of motoric space and differences in motoric abilities of the pre – school boys at the enrolment in elementary school]. *Fizička kultura, Beograd, 56(1-4), 10-17.*

Sabo, E. (2004). Uticaj dužine boravka u dečjem vrtiću na spremnost dečaka za polazak u školu [Impact of time spent in nursery school towards boy's maturity for entering primary school]. *Pedagoška stvarnost*, Novi Sad, *50(3-4), 301-310.*

Samouilidou, A. & Válková, H. (2007). Acta Univ. Palacki. Olomuc., *Gymnica., vol. 37, no.1*

Sayers, L.K., Cowden, J.E., Newton, M., Warren, B., & Eason, B. (1996*). Qualitative analysis of a pediatric strength intervention on the developmental stepping movements of infants with Down syndrome. Adapted Physical Activity Quarterly, 13, 247-268.*

Sénéchal, M. (2006). Testing the home literacy model: Parent involvement in kindergarten is differentially related to grade 4 reading comprehension, fluency, spelling, and reading for pleasure. *Scientific Study of Reading, 10, 59−87.*

Sheridan, S., & Schuster, K-M. (2001) Evaluations of pedagogical quality in early childhood education: A cross-national perspective. *Journal of Research in Childhood Education, 16, 109-124.*

Shipley, G. L., & Oborn, C. S. (1996, April). A review of four preschool programs: A preschool model that works. *Paper presented at the annual meeting of the MidWestern Educational Research Association,* Chicago, IL.

Sigmund, E., Miklanková L., Sigmundová D., et al., The commencement of children to first grade elementary school from viewpoint of physical activity.*Med. Sport Boh. Slov., 17, 65, 2008.*

Speakman, M. (1985). Cross – cultural comparison of purpose for moving. *Unpublished doctoral dissertatio ,* University of Georgia.

Stedman, D.J. (1998). The essential value of early education. *Australian Journal of Special Education, 12, 4-9.*

Štemberger, V., Krpač, F., Filipčič, T.: Otrok v gibanju: *Zbornik prispevkov: Proceedings, pp. 337 341.* Maribor: Pedagoška fakulteta.

T., Sloane, K., Alvarez, B., & Bloom, B. (1993). *The home environment and school learning.* San Francisco: Jossey – Bass. Kellaghan,

Tobin, J. 1999. *Method and meaning in comparative classroom ethnography*. In Learning from comparative educational research, Vol. 1: Contexts, classrooms and outcomes, ed. R.

Tomkinson, G.R. and Olds, T.S., Secular changes in aerobic fitness test performance of Australasian children and adolescents, *Med. Sport Sci., 50, 168, 2007b*.

Tomkinson, G.R. and Olds, T.S., Secular changes in pediatric aerobic fitness test performance: *The global picture, Med. Sport Sci., 50, 46, 2007a.*

Vernon, P.A., & Mori, M. (1992). *Intelligence, reaction times, and peripheral nerve conduction velocity.* Intelligence, 16, 273-288.

Waanders, C., Mendez, J. L., & Downer, J. T. (2007). Parent characteristics, economic stress and neighborhood context as predictors of parent involvement in preschool children's education. *Journal of School Psychology, 45, 619−636 413−430.*

Weymans, M. and Reybrouck, T., Habitual level of physical activity and cardiorespiratory endurance capacity in children, *Eur. J. Appl. Physiol. Occup. Physiol., 58, 803, 1989.*

White, K., & Castro, G. (1985). *An integrative review of early intervention efficacy studies with at risk children: implication for the handicapped* Analysis and Intervention in Developmental Disabilities, 5, 7 – 31.

Wolanski, N. and Pařízková J., *Physical Fitness and the Development of Man,* Wydawnictwo Naukowe, Warszava, 1976 (in Polish).

Wolery, M. (2000). *Recommended practices in child – focused interventions*. In S. Sandall, M. McLean, & B. Smith (Eds.), DEC recommended practices in early intervention/early childhood special education (pp. 29-37). Longmont, CO: Sopris West

Wollons, R., ed. 2000. Kindergartens and cultures: the global diffusion of an Idea. New Haven, CT: *Yale University Press. young children, Ann. Hum. Biol., 34, 1, 2007*.