# MOTOR SKILL DEVELOPMENT IN PRESCHOOL CHILDREN WITH MENTAL AND DEVELOPMENTAL DISORDERS – THE DIFFERENCE AFTER A ONE YEAR COMPREHENSIVE EDUCATION PROGRAM

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The aim of this study was to reassess the motor skill performance of preschool children with mental and developmental disorders. The study follows the first part of the study which was completed in 2006 (Samoulidu, 2006).

In 2006, significant deficits in motor skills performance were found to exist in these children. There were 5 participants in this study – 4 boys and 1 girl. One participant from the last year's assessment did not participate as he left the special kindergarten during the year. As of February 2007, the participants had completed a one year comprehensive program at the special kindergarten. This program was guided by recommendations made by MABC (Movement Assessment Battery for Children results, Henderson & Sudgen, 1992). Scores presented therein showed that considerable development had taken place in the various areas of motor skill development as assessed by the MABC. This can be attributed in part to the school program. As well as motor skill improvements, the social and behavior patterns of the children also improved which was noted primarily during the qualitative observations. Positive development has taken place as a result of this early intervention. Further guidelines were given in order that this development may continue into the future.

*Keywords: Mental retardation, motor skill development, developmental disorders, autism, preschool age, early intervention, MABC (Movement Assessment Battery for Children).*

## INTRODUCTION

The prevalence of mental retardation (MR) "is generally estimated at 3% of the total population" (Sherrill 1998, 524) depending on the population and the classification system used. The variation and heterogeneity of the MR population is evident in the fact that there are over three hundred and fifty known causes (Eichstaedt & Lavay, 1992).

Approximately 40% of the diagnosed cases of MR have no clear epidemiology. The three primary causes of MR are Down's syndrome, which is the most common genetic cause, Fragile X, which is the most common inherited cause and fetal alcohol syndrome, which is the third most common cause. Diagnosis and classification of MR occurs in the main with reference to the DSM – IV or ICD – 10 guidelines (Sherrill, 2003).

Research has indicated time and again that motor skills and motor skill development in this population is impaired, in some cases quite significantly (Cowden & Eason, 1991; Cunningham, 1988; Eichstaedt & Lavay 1992; Winnick, 2005).

Berkeley et al. (2001) examined the locomotor and object control skills of children aged 6–8 years with autism and compared them to the norm values reported by Ulrich (1984) in the Test of Gross Motor Development (TGMD). Overall fundamental skill delays were demonstrated by 73% of all the participants – thus placing them in the poor or very poor TGMD performance categories. Similarly, Miyahara et al. (1997) administered the Movement Assessment Battery for Children (MABC, Henderson & Sudgen, 1992) to children with both autism spectrum disorders and learning disorders. It was found that 85% of these children displayed a lack of motor coordination.

Given the heterogeneity of the population, the level and degree of motor delay differs from child to child and also through the range of disorders. Progress in motor development has typically been measured in terms of achieving motor milestones which represent the usual sequence of emergence. The motor performance of children with mental retardation has often been compared to these milestones in order to establish the degree of the motor delay. Norm referenced assessment also serves as a comparative tool – using the results obtained from the assessment and comparing them to the norm values for that particular test.

One such assessment tool, and the tool which is used in this research, is the MABC (Henderson & Sudgen, 1992). This standardized assessment tool has been vali-

dated for use in the childhood population with mental retardation, developmental delay and children with autism in many countries around the world though it is based on USA norms (Chow et al., 2002). This process of validation has been successful in some European countries such as Norway (Sigmundsson & Pederson, 1992) and Sweden (Rosblad & Gard, 1998) but not in others, for example Spain (Ruiz et al., 2003). MABC also has been validated in China (Chow et al., 2006) but not in Japan, where the norms were found to be unsatisfactory (Miyahara et al., 1998). In the Czech environment the MABC instrument was first used in a clinical study (Samoulidu & Válková, 2007) in a diagnostic and follow up intervention program for preschoolers with mental retardation and developmental delay.

The main focus of this research was on the effect of an early intervention program on the motor skills of preschool children. The intervention lasted for one year and had two phases. The first one was a comprehensive education program, focused on the overall development of the children in many areas of their lives. Social, cognitive and motor developments were all included in this phase, which it took place from May 2006 to February 2007. Between February and May 2007, the second phase was initiated. This was a much more intensive program focused solely on motor skill development. Previous research supports and many professionals in the area are strong advocates of early intervention. In many cases, it is said that intervention cannot come early enough (Blackman, 2002; Casto & White, 1984; Connolly et al., 1993; Cowden & Easton, 1991; Goodway & Branta, 2003; Hamilton et al., 1999; Stedman, 1998). Mannisto et al. (2006) highlighted in particular the need for the intervention program to be structured to suit the individual for whom it is intended. Individuality of intervention is essential if is to be effective in the MR population as the variation of diagnosis is endless.

## METHODOLOGY

### The kindergarten

The children in this study come from a special public kindergarten in the city of Olomouc, the Czech Republic. Founded in 1991, this kindergarten caters to 20 children varying in age from 3 years to 7 years old. The kindergarten's space is comprised of two playrooms, a dining room, a sleeping room and a locker room, a room for social events and a garden and outdoor play area. There are three teachers on the staff and other assistants. These three teachers have MA level qualifications in special education and many years of experience in working with children with disabilities. This is essential given the diagnosis of many of the children in the kindergarten. This school caters to children with atypical diagnoses within the realm of intellectual disability. Many have multiple aspects to their diagnosis and combined intellectual and behavioral impairments.

### Participants

Following on from the first stage of this research (Samouilidou, 2006) there were 5 participants in this study, four male and one female who went through assessment in May 2006. One boy was excluded from the last year of the study as he did not attend the special kindergarten at that point in time. The following are the case profiles for the 5 children involved. Age in months is given as of February 2007, the characteristics are as they were recorded in 2006.

Case one: M. A.

This 76 month old male was diagnosed with atypical autism and specific developmental delay of speech and language. There remain suspicions about the cognitive ability of this child. He was enrolled at the school on 1. 3. 2004. The predominant characteristics of this child are impulsivity, impatience, disorganization, being easily distracted, confusion and loss of concentration arising during the course of an activity.

Case two: M. T.

This 68 month old male was diagnosed with childhood autism and mild mental retardation. Enrolled on 1. 9. 2005, the predominant characteristics of this child are hyperactivity, impulsivity, being easily distracted, getting easily upset at any failure to complete a task, having no comprehension of instructions and a general lack of the ability to concentrate.

Case three: S. L.

This 72 month old male was diagnosed with moderate mental retardation and significant behavior impairment. Enrolled on 14. 3. 2005, the predominant characteristics of this child are over activity, nervousness, passive behavior during activity and lack of persistence in the face of challenging tasks.

Case four: J. A.

This 86 month old male was diagnosed with Asperger syndrome and an imbalance in mental ability. Enrolled on 1. 9. 2004, the predominant characteristics of this child are passive behavior, disorganization, lack of persistence at any task and needing constant motivation and encouragement in order to complete tasks.

Case five: M. O.

This 56 month old female was diagnosed with expressive language disorder. Enrolled on 1. 9. 2005, the predominant characteristics of this child are passive behavior, disorganization, lack of will to participate, confu-

sion, becoming tired easily, requiring support and help essentially and displaying a lack of facial expression.

**Assessment**

The three stage measurement of motor skill development is undertaken using the Movement Assessment Battery for Children (MABC) (Henderson & Sudgen, 1992). The MABC is a standardized norm referenced test, based on US norms (Henderson & Sudgen, 1992; Van Waelvelde et al., 2007). This battery has been updated and revised several times (Chow et al., 2002; Miyahara et al., 1998; Rosblad & Gard, 1998; Van Waelvelde et al., 2007).

Contained in this battery are two components – the performance test and the checklist. Administering the test takes 20–40 minutes per person. Included in the accompanying manual are strict guidelines and instructions to follow in administering this test, thus ensuring that it 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 Sudgen when the battery was created in 1992. Though based on US 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 MABC. The assessment tasks are play like in nature and should lead to full cooperation from the child.

Each task on the MABC 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 obtained raw score is then computed and transformed into a scaled score, this being a six point scale ranging from 0–5. Five points denotes a task which has not been completed at all, or has been completed with difficulty. 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, a TIS of 13+ would indicate that the child lies in the 5$^{th}$ percentile, and is therefore a very impaired score. For the purpose of this study we will focus on the performance test, which in itself includes both quantitative and qualitative data. The battery has been purposely designed to identify deviant or impaired performance and will not provide information on the overall motor abilities of the child, if the skills are advanced for their age. Authors of this test have stated the purposes of its use as identification and screening, intervention planning, program evaluation and as a research tool (Wiart & Darrah, 2001). The performance test can be administered to children from the age of four up to the age of 12. In all, there are 32 items in the battery – subdivided into the four age categories. These age categories are called "ge bands" and are distributed as follows. Age band one (4–6 years), age band two (7–8 years), age band three (9–10 years) and age band four (11+ years). For the purpose of this study, age band one and two are used. With 8 tasks in each age band, these are again divided into three areas, each associated with a different area of motor development. All three areas are identical throughout the battery in order to allow for continuation from one age band to the next and to allow for the monitoring of progression as the child grows older.

The three areas are manual dexterity (MD), ball skills (BS) and static and dynamic balance (SDB) and the 8 tasks within the first two age bands are highlighted below.

| **Age band one** | **Age band two** |
|---|---|
| PC – posting coins (MD) | PP – placing pegs (MD) |
| TB – threading beads (MD) | TL – threading lace (MD) |
| BT – bicycle trail (MD) | FT – flower trail (MD) |
| CBB – catching bean bag (BS) | OBC – one hand bounce and catch (BS) |
| RBG – rolling ball into goal (BS) | TBB – throwing bean bag into box (BS) |
| OLB – one leg balance (SDB) | SB – stork balance (SDB) |
| JOC – jumping over cord (SDB) | JSq – jumping in squares (SDB) |
| WHR – walking heels raised (SDB) | HTW – heel to toe walking (SDB) |

**School program/intervention**

There were two stages to this intervention program. First, from 2006 up to February 2007, a general program was applied in place. This program was focused on the holistic development of each child as an individual. Individual Education Programs (IEPs) were in place and were assessed every two months. Social interaction, eye contact and one on one teacher – pupil attention created the key characteristic of this program in an attempt to develop some vital life skills and knowledge in the pupils. The successful attainment of goals was dependent on the task being undertaken in three situations. Firstly, it had to be demonstrated in the presence of a different teacher and a modified environment, secondly in the presence of the peer group and thirdly outside the school environment in the home. Only at this stage could the child move on to the next set of goals for the following two month period.

The second stage of the intervention took place from February until May 2007. This was the specific motor intervention, and it is after this stage that we see the biggest improvement in motor scores occurring. Sixty minutes of intensive motor skill training were undertaken each day, divided into two thirty minute segments. This first was concerned with fine motor skill and included tasks of art and crafts and self care. Modeling, lego, lacing, buttoning, preparation and serving of basic food and getting dressed are examples of how the activities varied. The following thirty minutes was concerned

with body awareness. Pupils were involved in games and dance activities, for example – identifying body parts, rhythm and various forms of locomotion. Parents were continuously kept informed about these school activities and though not recorded it can be presumed that they were undertaken in the home also.

## RESULTS

**TABLE 1**
TIS scores from 3 measurements

| Participants | TIS 2006 | TIS February 2007 | TIS May 2007 |
|---|---|---|---|
| MA | 19 | 20 | 14.5 |
| MT | 34.5 | 31 | 21 |
| SL | 11 | 10 | 3 |
| JA – AB1 | 28.5 | 22 | 12 |
| JA – AB2 | | 21 | 22 |
| MO | 34 | 20 | 14 |

Legend
TIS = Total Impairment Score

From the above table, TABLE 1, one can see the TIS scores from the three measurements of the 5 participants. All scores show a decrease in number, demonstrating an increase in skill level in the areas of the MABC test mentioned previously. There are two different results for J. A. He was first measured in the first age band in order to track his development, then in his current age band 2 in order to establish his position in relation to the norms.

TABLE 2 illustrates the scores from the individual items of the MABC for age band one. It contains the first measurement scores of 2006 with the final measurement of 2007.

**Case one: M. A.**

The comparison of measurement scores in the TABLE illustrates a decrease in the TIS to 14.5. M. A. lies on the 4$^{th}$ percentile for his age. This is due to the decrease in scores in two areas – MD and SDB, improvements of 2 and 2.5 respectively. BS has been maintained with prefect scores in two out of three measurements. In opposition to this, the TB task of MD has remained at the lower proficiency score of 5.

The qualitative observations in 2007 yielded the following results: When seated at a task, this participant is focused and exhibits very controlled and precise movement. This is the nature of the MD items of the battery. Contrary to this it appears evident from the data above that MD is the weakest area. The researcher has established a theory for this. The item BT has the best of the scores in this area, of 2 or 1. For this item, there is no time restriction; the score is based on the number of errors. The participant displays a high competency level in these tasks, a mature pincer grip and adherence to accuracy.

The items of BS posed no problems for this participant. As mentioned previously, it is at this stage of the assessment that the participant gets most distracted. The measurements in February 2007 were disrupted at this time as the participant was too distressed and distracted to participate immediately. Upon the intervention of the teacher, assessment was resumed shortly afterwards. In May 2007, no such behavior was observed and the par-

**TABLE 2**
Item scores of both first and last assessment – February 2006 and **May 2007**

| | PC | | TB | | BT | | CBB | | RB | | OLB | | JOC | | WHR | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA | 3 | **2.5** | 5 | **5** | 2 | **1** | 0 | **0** | 0 | **0** | 4 | **3** | 0 | **0** | 5 | **3** |
| MT | 4.5 | **2.5** | 5 | **5** | 5 | **5** | 5 | **2** | 2 | **0** | 5 | **2.5** | 5 | **0** | 3 | **4** |
| SL | 0 | **0** | 0 | **1** | 0 | **0** | 1 | **0** | 5 | **0** | 0 | **0** | 0 | **0** | 5 | **2** |
| JA | 4 | **2** | 5 | **5** | 0 | **0** | 5 | **0** | 5 | **5** | 4.5 | **0** | 5 | **0** | 0 | **0** |
| MO | 4 | **2** | 5 | **5** | 5 | **5** | 5 | **1** | 0 | **1** | 5 | **0** | 5 | **0** | 5 | **0** |

Legend
PC = posting coins
TB = threading beads
BT = bicycle trail
CBB = catching bean bag
RB = rolling ball into the goal
OLB = one leg balance
JOC = jumping over cord
WHR = walking with heels raised

ticipant remained focused and fully cooperative throughout. BS items were noted on both occasions as being very good throughout with only minor notes in relation to the participant adopting an individual technique to complete the task.

**Case two: M. T.**

There is a very significant difference in TIS from an original score of 34.5 to the latest measurement of 21. Therefore, as of the last measurement in May 2007, MT lies in the 3rd percentile for his age. Most notable is the 50% improvement in the area of SDB with the score being halved from 13 to 6.5. MD is the weakest area of performance with two of the tasks in this area, TB and BT, maintaining the lower proficiency score of 5. Improvements of notable stature can be seen in OLB, where the score has been halved and also in JOC where vast improvement has been recorded, transforming a score of 5 to 0.

When presented for assessment in May 2007, it was noted by the researcher that this participant was like "a different child". Behavior and mannerisms had altered completely. From the offset of measurement the participant was more relaxed, focused and most notably, there was the smile on his face. This was in stark contrast to the aggressive, teary eyed and tense child who had been measured 3 months previously. All of the items were completed with the aid of the teacher, as this was deemed the only way the participant could be measured.

MD is the weakest measured element of motor skill in this participant.

The TB item poses a lot of problems for this participant; in fact it is at this stage of both measurements that the participant becomes most distracted and distressed. The first attempt in both cases was an R or F, the second attempt is at least completed in February 2007 with only 7 beads successfully threaded in May 2007. In BT, he scores a persistent 5. This was due to the number of errors made by the participant, even given the assistance of the teacher. It can be noted that the line drawn does follow the direction of the trail even though quite vaguely.

**Case three: S. L.**

The TIS has decreased from 11 to 3. This places SL in the 65th percentile for his age. His BS score has gone from 6 to 0 – the most dramatic of all the changes. MD, having a score of 0 in 2006, had a score of 7 in February of 2007 and then a 1 in May 2007. BS and SDB tasks show scores of high proficiency as of May 2007. OLB and JOC items have maintained their 0 score right throughout the three measurements.

A good pincer grip was displayed at all times during the assessment. In the TB item, the time recorded in May 2007 was far quicker than the previous measurement. Hands were constantly changed during trials on both assessments. May 2007 saw a much more relaxed child. Posture was noted as being very good. Beads were guided down the thread; as opposed to in February 2007, when beads were released immediately upon threading. May 2007 also saw a more enthusiastic child. He was very happy with success and enthusiastic about completing a second trial, punching the air with his hands when completely successful. The last of the MD items, BT, yielded a similar result in February and May 2007. There was only 1 error difference, and it was a very slight deviation from the trail. He seems to go fast but still maintains control, not making errors. Again, he is very focussed, but not tense. He enjoys the success and the positive reinforcement from the assessor.

**Case four: J. A.**

TIS has decreased by more than 50% from 28.5 to 12, placing him on the 8th percentile for his age. The score in BS has also been halved from 10 to 5. Vast improvement is noted in the area of SDB from 9.5 to 0. Contrasting results have emerged within the MD category as BT was maintained at 0 while the TB was maintained at the lowest proficiency score of 5. Other items of interest were the CBB score from 5 to 0, OLB 4.5 to 0 and JOC 5 to 0. WHR has been consistently at 0, so no deterioration of that item has occurred.

Qualitative observations were noted as follows: The most persistent and prominent characteristics of this participant are apparent from the first two items of MD. Facial contortions, extreme tension in the upper body almost lifting the individual from the seat and short sharp breathing come to the fore when the participant is trying to do the item at speed. This occurs most often on the right rather than left side. Particularly in the PC item, this behavior leads to the misalignment of coins with the slot on occasion and towards the end a slump in energy expenditure and speed. A very effective pincer grip is used throughout the MD tasks. Measurement in May 2007 yielded some uncharacteristic behavior. The fingers seemed to be getting in the way, and the participant was fumbling with the thread and the beads. BT scores are persistently low. This task is completed without any problem. It was noted that the participant presses excessively hard on the paper.

The researcher noted the stark contrast in score from February 2007 to May 2007 in CBB. In February, the participant would catch the bean bag off balance with his leg lifted upwards and extreme tension in the upper body. The score of 0 in May 2007 was achieved by a more relaxed participant, bending the knees when catching and following the trajectory of the bean bag in the air. Failure to improve in the score of RB is primarily due to the incorrect technique adopted by the

participant. Even after instruction from the assessor, the participant seems to overestimate his own ability, rolling the ball from the front of the body with no pendular swing and a rotation of the wrist that results in the spinning of the ball. Errors are consistently to the right side of the goal and the hand of rolling is changed consistently during the trial.

**Case five: M. O.**

Dramatic improvement can be noted in TIS, from a score of 34 to 14, placing MO on the 9th percentile for her age. The improvement in SDB items is primarily responsible for this. The three items in this area have completely altered from a score of 5 to 0. The PC score has been halved and also the CBB has significantly improved from 5 to 1. Two items remain unchanged, that of BT and TB. The latter (TB) is not due to the lack of proficiency in skill but due to the speed at which the skill is executed.

As noted in the quantitative data, this improvement in TIS was very substantial. The researcher noted that the difference in the child between February and May 2007 was also quite significant. The timid, shy and passive child was replaced by a goal directed, efficient and focused child, who, though still timid to some extent, was the only child who was capable of being alone in the assessment room with the assessor and the researcher.

During the MD items, a very good pincer grip was displayed, though sometimes misaligning the coins with the slot. There was no significant discrepancy between the preferred and non preferred hand on this item. Between February and May 2007, MO has turned 5 so therefore the score category has changed. Also the item was completed in a slower time so these combined gave the lower proficiency score. The item itself was completed very efficiently and with controlled movement and a good pincer grip as above. Being the only female participant and considering the difference in diagnosis, it was noted how her behavior differed from her male counterparts. Once the beads were threaded, she did not worry so much about their exact alignment on the table whereas this had been the focus of the boys – to keep the beads neat and aligned at all times.

BS items have seen improvements, in particular the CBB. Labeled as I in February 2007, the participant in the latter measurement successfully caught 7 of 10 attempts. The bean bag is caught to the body mostly, and while not following the trajectory of the flight, she was very successful. SDB is the strongest element of this participant's performance. OLB was performed without fault on both legs – both evenly match for time, body control and posture. The JOC item saw a complete transformation of scores. In February 2007, this item was labeled as I for this participant. This was not the case in May 2007 as all three attempts were passed. There was some delay in initiating the movement, but with positive reinforcement and reassurance from the assessor it was completed with ease.

## DISCUSSION AND CONCLUSION

What has been undertaken by the special kindergarten is two types of intervention combined into one were undertaken by the special kindergarten. First, we have the long term approach, the general and comprehensive education program, broadly based and focused on the overall development of the child, encompassing all areas of development – social, motor and cognitive. Following that comes the more intensive specific motor intervention.

This phase is focused on the motor skills as assessed by the MABC – manual dexterity, ball skills and balance, among others. The positive development of participants is presented related to the differences between the one year intervention program (May 2006 – February 2007). Dramatic improvement was found after a short intensive program in the period from February 2007 to May 2007. Even children with autistic syndrome achieved very good progress. This is contrary to the research by Berkeley et al. (2001).

But the challenge would be to see if these can be retained by the participants after a long period of time. The program in the special kindergarten was instigated with the teacher as the primary agent of delivery, and in spite of taking place over a year long period it has had the same progressive results as other interventions in previous research (Mannisto et al., 2006; Mahoney et al., 2001).

Resulting from three MABC measurements, conclusive evidence supports the effectiveness of the one year education program which has been in place in this school. This verifies what is in the MABC manual (Henderson & Sudgen, 1992), which means that repeated assessment can present us with true information.

Evidence of development in all areas of motor skills as assessed by the MABC and also behavioral alterations across all cases makes for a very positive conclusion to this research. The challenge now is for this development to continue through sustained efforts at individualised programs for these five children and also for the rest of the children in the school.

There are some key limitations to this study. Due to the number of cases involved, each case has been taken as a single entity. Results from this study cannot be generalised to a larger population, and are specific to the children who were assessed. Another key issue, which is pertinent to all research in this field, is inher-

ent in the nature of assessment. It is very difficult to get the best from this population on a one off assessment day. It may be the case, that the measurements on any given day do not fully represent the capabilities of the child – as in 2006. Adding to this is the fact that the assessor was different in 2006 and in 2007. Though this is a standardised assessment, individual difference of interpretation of the assessor must be taken into account. The third most prominent limitation of this study is determining that the effects on motor skill development which we have seen are solely due to the intervention program. Other factors which may have influenced the results are maturation or parental/familial activities which may have altered over the past year (e.g. extra curricular activities).

Motor skill level improved quite dramatically and in quite specific areas in different cases. Unfortunately early intervention literature is mainly focused on cognitive, academic and social variables (Casto & White, 1984; Guralnick, 1991; Zigler & Muenchow, 1992).

This has lead the researcher to believe that the development is indeed due to the school program which has been in place in the last year combined with maturation and other influences. This is particularly true for the period between February and May 2007 due to the intensive nature of the program which was undertaken by the participants. Behavioral changes have also been significant, attributed also to the school program and the environment within the school which is in every way conducive to the overall development and well being of the child, not just solely focused on motor development.

Contemporary literature on the benefits of motor skill intervention is limited: considering motor skill intervention for specific populations, as past investigations concerning preschoolers with mental retardation or developmental disorders are really few (Connolly et al., 1993; Mahoney, Robinson, & Fewell, 2001; Goodway & Branta, 2003; Zittel & McCubbin, 1996).

The outcome of this intervention has been positive for all due to the hard work and dedication of the teachers and staff at the kindergarten. The future holds more challenges for the school, in that it must try and replicate what has happened with these five cases with the other children who pass through the school. Standardization of MABC in the Czech language and field usage is the final challenge of the presented study.

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## ROZVOJ MOTORICKÝCH SCHOPNOSTÍ U PŘEDŠKOLNÍCH DĚTÍ S MENTÁLNÍM A VÝVOJOVÝM HANDICAPEM – ROZDÍLY PO ROČNÍM KOMPLEXNÍM VÝUKOVÉM PROGRAMU

(Sourh anglického textu)

Cílem této studie bylo přehodnocení motorických schopností u předškolních dětí s mentálním a vývojovým handicapem. Studie navazuje na první část, která byla dokončena v roce 2006 (Samouilidou, 2006).

V roce 2006 byly u těchto dětí zaznamenány významné deficity v motorických schopnostech. Studie se zúčastnilo 5 dětí – 4 chlapci a 1 dívka. Loňského hodnocení se jeden z chlapců nezúčastnil, protože během roku odešel ze zvláštní školky. V únoru 2007 účastníci dokončili jeden rok komplexního programu ve zvláštní školce, který se řídil doporučeními MABC (Movement Assessment Battery for Children, Henderson & Sudgen, 1992). Uvedené výsledky prokázaly, že se dle hodnocení MABC projevilo významné zlepšení v různých oblastech rozvoje motorických schopností. Toto lze částečně přisuzovat školnímu programu. Kromě motorických schopností se zlepšilo i sociální cítění a chování dětí, což bylo zaznamenáno zejména během kvalitativních pozorování. Výsledkem tohoto včasného zásahu byl pozitivní vývoj. Aby tento vývoj mohl i nadále pokračovat, byly předány příslušné pokyny.

*Klíčová slova: mentální zaostalost, rozvoj motorických schopností, vývojové handicapy, autismus, předškolní věk, včasný zásah, MABC (Movement Assessment Battery for Children).*

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