GROSS MOTOR SKILLS CURRENT LEVEL ON CHILDREN LIVING IN TIRANA EVALUATED BY PARENT SELF REPORT QUESTIONAIRE (DCD)

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Abstract

The purpose of the study is to estimate the current level of gross motor skills of the children living in Tirana. The number of participants were 205 children (99 girls and 106 boys) between the ages 5 years to 8 years. The evaluation of gross motor skills was done by the developmental coordination disorder questionnaire (DCDQ) fulfilled by the parents or educators. The result of the study showed that 67.5 % of boys and 76.1 % of girls throw the ball in a controlled and accurate fashion while 55.5 % of boys and 61.3 % of girls have the skill to catch a small ball (5 scale= extremely like my child). Results show that 64.9% of children perform running easily while by gender only 65% of boys and 62.9 % of girls.

Keywords: DCD, evaluate, children, gross motor skill, level.

Introduction

According to Hall, D. 1988 developmental coordination disorder (DSD) refers to the difficulty in movement skills and motor behavior in children. They found difficulties in performing everyday tasks or learning new movements in the school, home or play environments. For many years DSD was considerate as “clumsy syndrome” by many different professionals but for (Polatajko, Fox & Missiuna, 1995) it was unacceptable because it was related more with children than with the movement. Children with DSD have a marked impairment in the development of motor coordination and significantly interfere even in their academic achievement and everyday life but also some of them are related to deficit hyperactivity disorder.

Even though children with DSD have difficulty with motor learning they still can learn different movements and tasks but usually required more practice and the quality will not be the best. Sometimes it is difficult to recognized Children with DSD in an early age because it is often identified in school age children. A major importance of DSD children is recognized in an early age because the sooner to be diagnosed the less likely is to associated with social, emotional problems (Schoemarker, Hijlkema, & Kalverboer, 1994). Moreover, the sooner we understand that the child is with DSD the less is the effort to improve this motor impairment.

Hoare, 1994 pointed out that not all children with DSD show the same clinical symptoms this is because there are different subtypes of DSD even though the common fact

is difficulty in academy achievement, daily living skills and lack of movement. When It is said daily activities include eating (using the spoon, fork, knife etc..), wearing clothes (buttoning one's coat, zip etc..) or self-care. Those tasks are for preschool children because the child who has reached the school, handwriting is a big problem according to (Benbow, 1995). Child with DSD apart from motor impairment often suffer by low self-esteem because skills in sport and game is considered as a predictor of social status in childhood (Rose, Larkin & Berger, 1997). It must be considerate that children with DSD suffer also by bulling, lack of friend and support thus they are less happy than the other children (Rose, Larkin & Berger, 1994). They are more prone to social problem and lack in cognitive and perceptual skills (Ozols & Rourke, 1985). The tool used to asses DSD is a standardized test of fine and gross motor coordination and no other specific tests recommended by (WHO, 1996). There are many factors influencing the prevalence rate such as difference in type, symptoms, methods of assessment and cultural differences. Although, there are many obstacles in evaluating the prevalence of children with DSD still it is important to make a general assessment. There are some studies in Albania that shows results about children suspected or with DSD but still they are not enough to make a general conclusion about the prevalence of DSD in children in Albania. The aim of this study is to find out the prevalence of children aged 5-7 years-old that are at risk or suspected to development coordination disorder by questionnaire (DCDQ) reported by teacher, parent-referred child in Tirana.

Methodology

Participants of the study were children aged 5 years 0 months to 7 years 11 months reported or presented by their parents/ educators. In the study are included elementary school and kindergarten located in Tirana. The number of participants was 205 children (99 girls and 106 boys) Parents were required to be transparent and reliable during the fulfilling of the questionnaire (DCD). The valid number of boys is 106 and the missing child evaluation is 1.

The missing number of girl's questionnaire evaluation is 2 and the valid number is 99 (table 1).

Table 1. Participation by age and the valid/missing number of boys and girls

	5 years 0 months to	7 years 11 months	
boys	N	Valid	106
		Missing	1
girls	N	Valid	99
		Missing	2

Protocol of the questionnaire

The tool used to assess children's gross motor skills was part of Developmental Coordination Disorder Questionnaire. DCDQ is a brief parent questionnaire designed to evaluate children, aged 5 to 15 years. It is a parent/ educator report measure that screens for

motor coordination difficulties. For the purpose of this study were analyses only five questions for evaluation gross motor skills as follows;

1. Throw ball task
2. Catches ball task
3. Hits ball task
4. Jumps over task
5. Runs task

Statistical Analysis

The data used to assess the DCDQ were insert using Microsoft excel than converted to SPSS database. Data were presented in percentage divided in boys, girl and in total regarding to their different physical tasks. Descriptive statistics for mean percentage by gender were performed using SPSS software 21.0 version.

Results

Table 2 show answers from parent of the question "Your child throws a ball in a controlled and accurate fashion" in a scale (1-5). Results show that 4.2 % of boys and 0.9% of girls do not throw the ball in a controlled and accurate fashion. Data show that 67.5 % of boys and 76.1 % of girls throw the ball in a controlled and accurate fashion (5 scale= extremely like my child).

The results from table 3 show that 2.5% of boys and 4.2 % of girls do not catch a small ball. Data show that 55.5 % of boys and 61.3 % of girls have the skill to catch a small ball.

Table 2. The percentage of boys and girls throwing a ball in a controlled and accurate fashion by the parent questionnaire

	Total	Boys	Girls
Not at all like my child	2.8	4.2	0.9
A bit like my child	0.4	0	0.9
Moderately like my child	8	10	6
Quite a bit like my child	16.8	18.3	16.2
Extremely like my child	72	67.5	76.1

Table 3. The percentage of boys and girls that catches a small ball

	Total	Boys	Girls
Not at all like my child	3.6	2.5	4.2
A bit like my child	3.2	4.2	2.5
Moderately like my child	8.8	11.8	6.7
Quite a bit like my child	25.9	26.1	25.2
Extremely like my child	58.6	55.5	61.3

In total 3.4 % of boys and 5.1 % of children do not hit a ball with a bat or racquet accurately (4.4% of children). In total 44.2 % of children (table 4) hit a ball with a bat or racquet accurately (44.1% of boys and 44.9% of girls)

Data from the table 5 show that 3.4% of boys and 3.5% of girls do not have the skill to jump over an obstacle. In total 65.2 % of children (table 5) jump over obstacles easily (63% of boys and 65.2% of girls)

Only 2% of children do not perform runs task while the percentage of boys is 0.9% and the percentage of girls is 3.4% (table 6). Results show that 64.9% of children perform running easily while by gender only 65% of boys and 62.9 % of girls.

Table 4 The percentage of boys and girls hitting a ball with a bat or racquet accurately

	Total	Boys	Girls
Not at all like my child	4.4	3.4	5.1
A bit like my child	2.4	1.7	2.5
Moderately like my child	19.7	24.6	15.3
Quite a bit like my child	29.3	26.3	32.2
Extremely like my child	44.2	44.1	44.9

Table 5. The percentage of boys and girls jumping easily over obstacles

	Total	Boys	Girls
Not at all like my child	3.2	3.4	3.5
A bit like my child	2.4	2.5	2.6
Moderately like my child	7.7	7.6	7.8
Quite a bit like my child	21.5	23.5	20.9
Extremely like my child	65.2	63	65.2

Table 6. The percentage of boys and girls in running task

	Total	Boys	Girls
Not at all like my child	2	0.9	3.4
A bit like my child	4.9	6	4.3

Moderately like my child	10.6	13.7	7.8
Quite a bit like my child	17.1	14.5	20.7
Extremely like my child	64.9	65	62.9

Discussion

Many studies have showed a higher prevalence of DSD in boys than in girls (Kadesjo & Gillberg, 1999; Taylor, 1990) Those studies reported a high difference between girls and boys where boys have a high prevalence of DSD compare to girls (Taylor, 1990). Another result has reported Maeland, 1992, where the distribution of the data between boys and girls are more equal. These differences are because of the fact that boys are concentrated more in gross motor activities while girls performed more activities that require the use of finer coordination. Eventually boys are characterized by poor fine motor coordination and the opposite happen with the girls.

It is a well-knowing fact that children with DSD have low self-esteem and Short & Crawford (1984) pointed out that this problem is increased more at age of 5 and 7 years old. According to Juel Jarani et al., 2018 children aged 6.1-6.5 year old practice less sport compare to the other children. This is an important age for DSD children to practice sport because by this way they can improve their physical skills.

The limitation of the study consists on the few number of children participated. Estimating the prevalence of DSD is not very easy because there are no clear definitions and diagnostic criteria for DSD. For further studies it is important to have a large number of participants and also it is recommended to be located in many cities or better in the whole country.

Conclusion

The preschool child must practice gross motor skills in order to participate fully in school in future. Such activities as ball skills, climbing, locomotor skills, pumping a swing are all important for a preschool child. Parents and educators are responsible in making the day of their children diverse and full of different activities. Most of the cases children are frustrated to master their inability and this lead to abandonment their task. According to Ahern, 1995 a parent has reported his reaction's child was giving up after a failure. Some others parent reported that their child avoids doing new things that seems to be difficult for them or need more time for an easy task. In those cases, parents and educators must put more effort and time into teaching their child with DSD and must be very patient. Presence of motor impairment in child is associate with academic, cognitive, and behavioral problems at later ages thus it is recommended to take care of their mental health also (Fox and Lent, 1996)

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