

# Primary teachers knowledge about psychomotor disturbances occurring in children

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## Abstract:

**Objective:** An attempt to determine the level of knowledge of teachers in the symptoms, diagnosis and treatment of psychomotor disorders of schoolchildren. **Materials and methods:** 174 teachers of physical education and integrated education in primary schools were tested. The study used questionnaire technique. **Results:** As the most common disorders in the population of school-age children surveyed teachers list ADHD (30%) and dyslexia (30%). Only 34% of respondents correctly determined epidemiology of psychomotor disorders and listed their symptoms. Over 80% of respondents claimed that they had never worked with children exhibiting psychomotor disorders. The majority of respondents (98%) did not participate in training on working with children with developmental disabilities. **Results:** The state of knowledge of psychomotor disorders of the surveyed teachers is low. Teachers have difficulty not only in defining the epidemiology of various disorders but also in correct definition of symptoms full spectrum.

## Keywords:

psychomotor disorders, teacher, diagnosis, symptoms.

**Новак Агата, Романовська-Толочко Анна, Книск Моніка. Знання учителів початкової школи на тему психомоторних порушень у дітей.** **Цель:** попытка определить уровень знаний учителей о симптомах, диагностике и лечении психомоторных нарушений у школьников. **Материалы и методы:** были протестированы 174 преподавателя физического воспитания и интегрированного обучения в начальных школах. В исследовании использовались методика опроса. **Результаты:** наиболее распространенные нарушения у детей школьного возраста, опрошенные учителя назвали ADHD (30%) и дислексию (30%). Только 34% респондентов правильно определил эпидемиологию психомоторных расстройств и смогли перечислить их симптомы. Более 80% респондентов заявили, что они никогда не работали с детьми с психомоторными расстройствами. Большинство респондентов (98%) не принимали участия в тренинге по работе с детьми с отклонениями в развитии. **Выводы:** Уровень знаний психомоторных нарушений опрошенных учителей низок. Преподаватели имеют трудности не только в определении эпидемиологии различных расстройств, но и в правильном определении полного спектра симптомов.

психомоторные расстройства, учитель, диагностика, симптомы.

**Новак Агата, Романовська-Толочко Ганна, Книск Моніка. Знання вчителів початкової школи на тему психомоторних порушень у дітей.** **Мета:** спроба визначити рівень знань вчителів про симптоми, діагностику та лікування психомоторних порушень у школярів. **Матеріали і методи:** були протестовані 174 викладача фізичного виховання та інтегрованого навчання в початкових школах. У дослідженні використовувалася методика опитування. **Результати:** найбільш поширені порушення у дітей шкільного віку, опитані вчителі назвали ADHD (30%) і дислексію (30%). Тільки 34% респондентів правильно визначив епідеміологію психомоторних розладів і змогли перерахувати їх симптоми. Більше 80% респондентів заявили, що вони ніколи не працювали з дітьми із психомоторними розладами. Більшість респондентів (98%) не брали участі у тренінгу по роботі з дітьми з відхиленнями у розвитку. **Висновки:** Рівень знань психомоторних порушень опитаних вчителів низький. Викладачі мають труднощі не лише у визначенні епідеміології різних розладів, але і в правильному визначенні повного спектру симптомів.

психомоторні розлади, учитель, діагностика, симптоми.

## Introduction

Modern education is currently going through a lot of transformations. One area, subjected to intense change, is work of school with pupils showing all kinds of disorders (Firkowska-Mankiewicz, 2004). With adoption of inclusive education model each student, both healthy and having developmental disabilities should have created optimal opportunities to learn and participate in school life for themselves (Richy, 2000, Zacharuk, 2011). Development difficulties of children should not isolate them from social relations, and should force the teachers and other employees to change organization and implementation of learning process, so that these students could successfully participate in them (Guidelines for Inclusion, 2005).

The process of inclusive education's implementation in Poland comes slowly from the plane of concept to the level of implementation, as evidenced by the fact that in many cities inclusive schools already exist. Their number, however, is still not sufficient to fully enable the inclusion of all students with developmental disabilities. To implement such changes the knowledge of teachers in the different types of disorders that could affect students is essential (Gruszczyk-Kolczyńska, Zeilińska, 2011). This knowledge should be extensive and very specific, and must not be limited only by memorizing of terminology

issues. Teacher should identify specific and non-specific symptoms of disorders, know the pathological mechanisms of their formation and all possible forms of therapy, effective for specific dysfunction. His knowledge should be broad enough so that he could create optimal conditions for each of his student's work, and also knew how to establish effective cooperation with their parents (Dykcik, 2010).

Mastering this knowledge, however, is difficult and does not take place only in the course of preparation for the teaching profession. Most often it extends to all years of professional education. Only the knowledge gained through specialized courses and training supported by experience allows the teacher to implement fully the demands of inclusive education. Regardless of the teacher's seniority, and level of implementation of the facility in the principle of inclusion, every teacher is required today to have an elementary knowledge in subject of the child's development.

The aim of this study was to determine the level of knowledge of teachers in the symptoms, diagnosis and treatment of disorders of psychomotor schoolchildren. By specifying this state, the degree of implementation of model of inclusion in Polish schools will be simultaneously analyzed.

## Materials and methods

To conduct the study survey technique was used. The questionnaire contained 19 questions related to

psychomotor disorders and actions taken in this area. The study was conducted in 2015 among teachers of physical education and integrated education of employees in 7 Primary Schools in Wrocław and Olesnica. The study was attended by 174 people, including 81 women and 93 men.

### Results

The surveyed teachers have little knowledge of psychomotor disorders, despite the fact that this issue is currently very timely and occupies an important place in the psychological and pedagogical considerations regarding the functioning of children with developmental disabilities. More than 1/3 of respondents correctly identified the epidemiology of psychomotor disorders in school-age children. The same number of people gave an incorrect answer or was not able to answer this question at all.

As the most common disorders among children of school age, teachers enlisted ADHD (30%) and dyslexia (30%), other respondents were unable to name psychomotor disturbances typical for the population of school-age children. When asked about the general signs of psychomotor disorders can be observed in everyday behavior of children at school they found that all disorder symptoms can be seen in everyday school situations (45%), but unfortunately 27% of respondents said that it is difficult to say whether there is such a possibility.

Only 38% of respondents correctly identify the symptoms of nonspecific psychomotor disorders, the remaining group of teachers was not able to do so or point to incorrect answers.

The lack of basic knowledge of teachers in the children's psychomotor abnormalities revealed even more in the answers given by them specific questions regarding specific disorders. And so, according to 35% of respondents, the first symptoms of ADHD are not possible

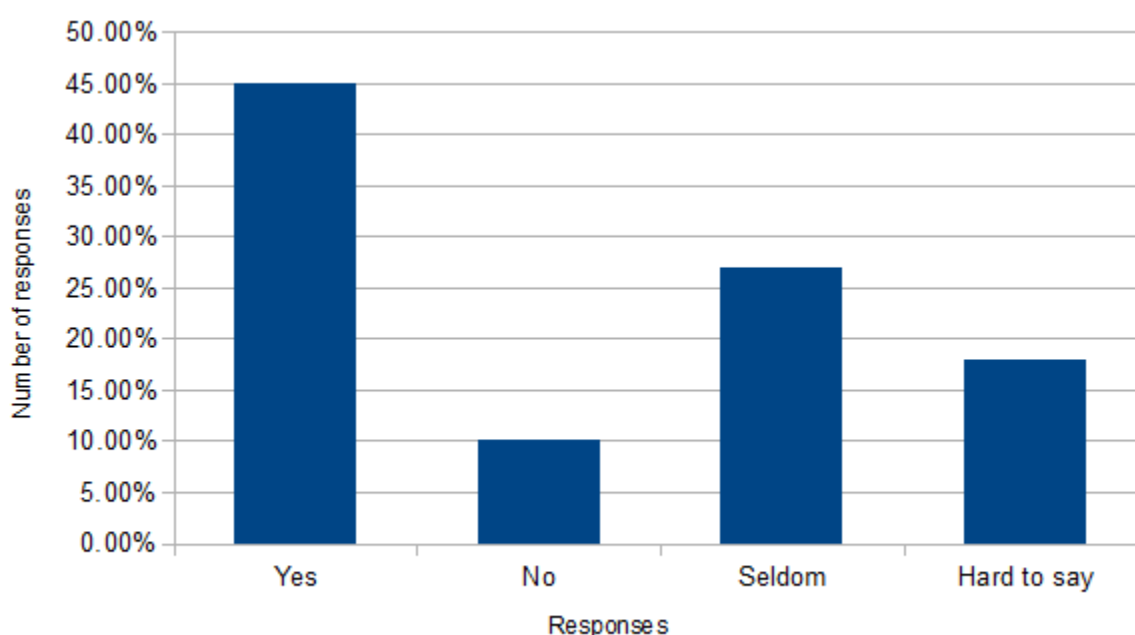
observe until about 6 years of age, while 33% of teachers do not know at what point in a child's life such symptoms can be observed.

Half of the respondents identified that ADHD is a disorder occurring with the same frequency in boys and girls. The same percentage of teachers also does not connect symptoms of ADHD with problems in the child's learning. For this group of respondents, irregularities in small and large motor activity are not specific for the described disorder. As specific for ADHD, teachers listed only the child's difficulties in attention and impulsivity. The question of whether ADHD disorder can disappear with age was met with very diverse responses.

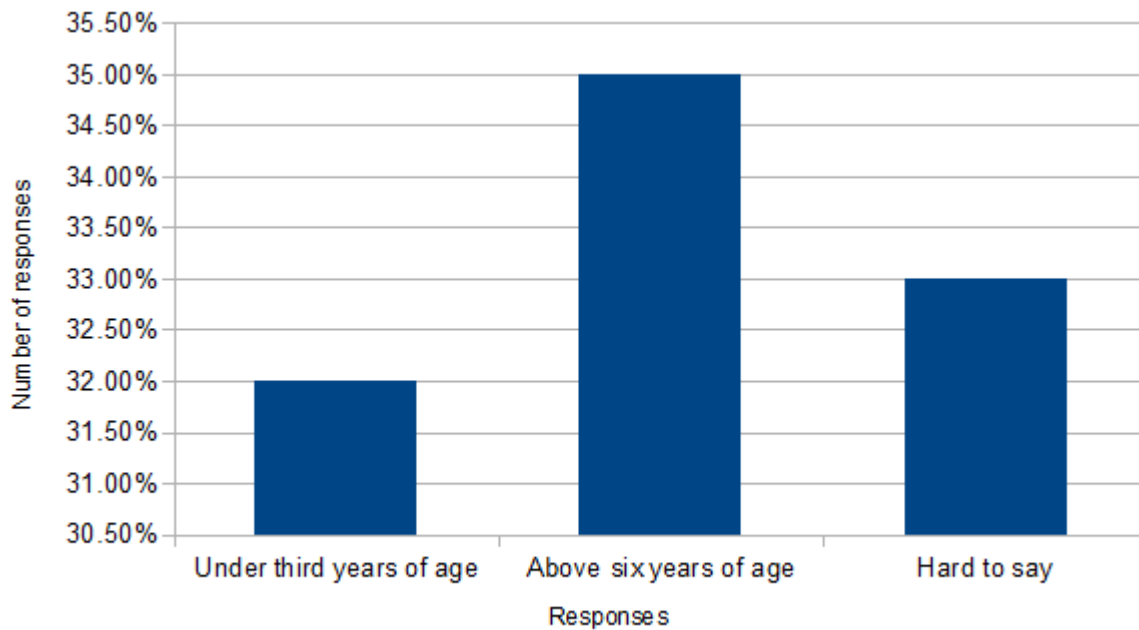
Another issue examined was the knowledge of teachers about the signs of dyslexia, the diagnosis and treatment. The very definition of what is dyslexia, respondents accounted for a significant difficulty. Each of the proposed definition found the same number of supporters.

Nearly a quarter of the teachers surveyed also had trouble identifying the symptoms of dyslexia limiting them only to difficulty in reading and bad handwriting. Only for 30% of respondents the symptoms of the disorder manifest in both the large and small motor activity, and reading and writing skills of children. The remaining group of respondents (45%) identified the symptoms of dyslexia incorrectly, or not taken the task at all.

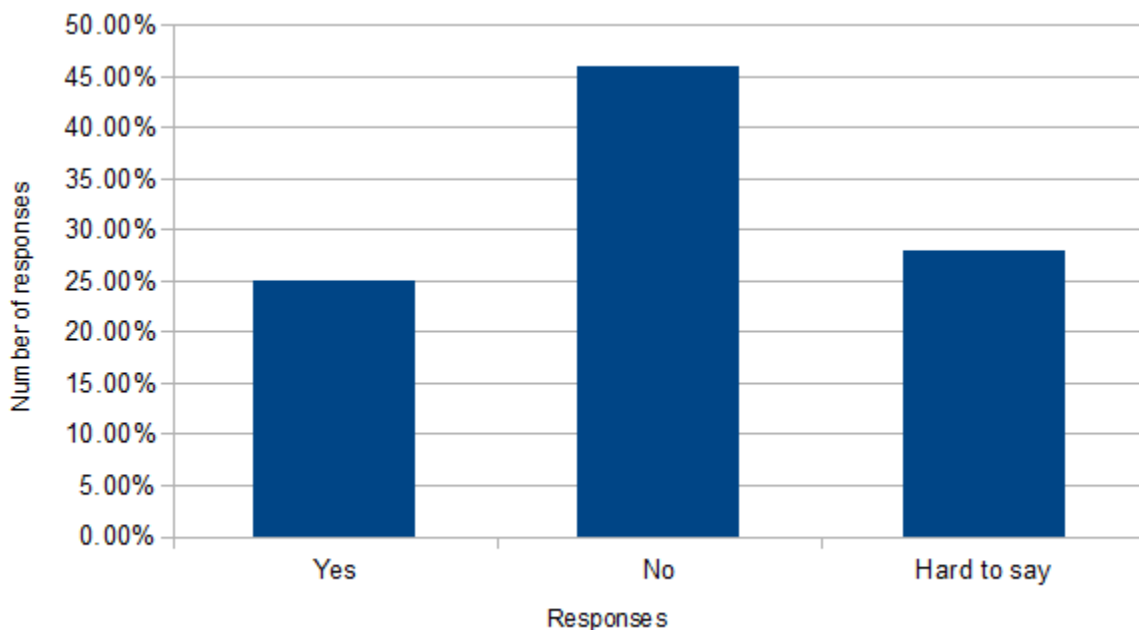
Over 80% of teachers said they had never worked with children with psychomotor disorders. The majority of respondents (98%) also did not participate in courses and training on working with children showing growth problems. In addition, what appears to be a consequence of the observed state of knowledge and experience of the subjects, none of the teachers take diagnostic or supporting actions for children with disharmonious development. This means that for a significant group of people



**Figure 1.** Ability to recognize the symptoms of psychomotor disorders in children in the school environment



**Figure 2.** The possibility of early recognition of symptoms of ADHD



**Figure 3.** Disappearance of ADHD symptoms with the age of the child

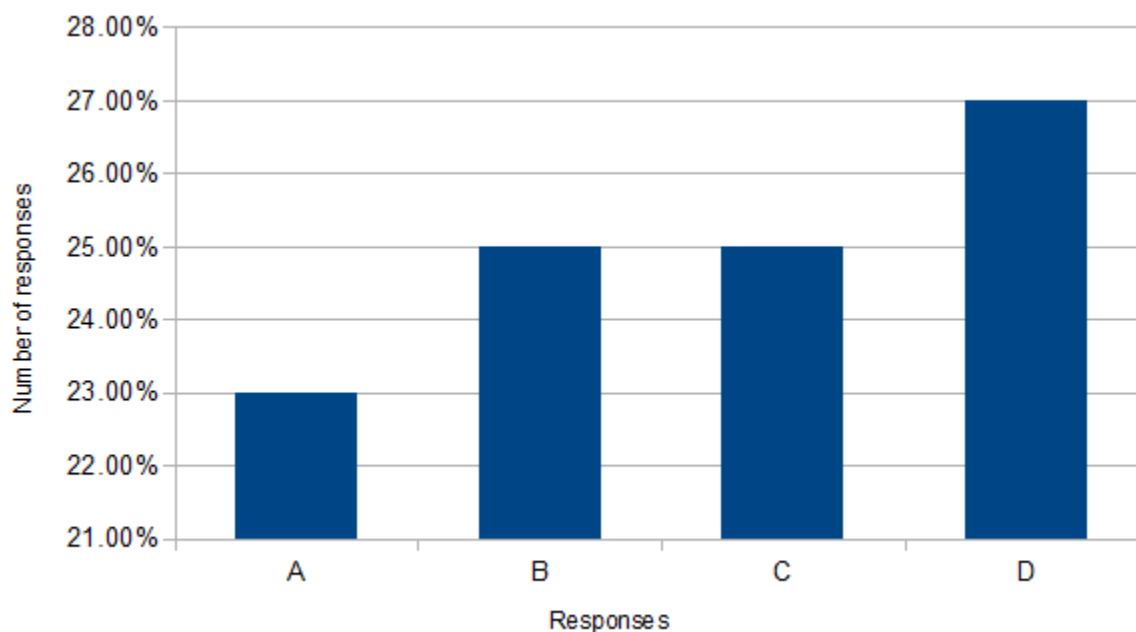
psychomotor disturbances are not possible to observe the behavior of the child at school. As a result, this group of teachers also will not be able to help children who can be actually diagnosed with the described disorders.

Nevertheless, the fact that 72% of respondents showed interest in forms of training in diagnosing children for psychomotor disturbances is optimistic.

#### **Discussion**

According to American Psychiatric Association, since 2012 as many as 10-15% of school children have showed psychomotor disturbances (APA, 2012). Considering

the fact that average quantity of pupils in class is 25-30, it can be concluded that statistically 2-3 children in each class have abnormal development. The declaration of majority of surveyed teachers, which suggests they never had to deal with such children, can mean that they do not recognize the symptoms of disorders among their students. Problems with identifying the specificities of each psychomotor disorder are further supported by the limited scope of knowledge respondents. Identifying them only with predominant symptoms can lead to an inaccurate assessment of the child's behavior, in



**Figure 4.** The definition of dyslexia

A: Dyslexia is a specific difficulty in reading and writing of children with normal intellectual development

B: Dyslexia is a specific difficulty in reading and writing and abnormalities of small and large motor activity of children and the abnormal intellectual development

C: Dyslexia is a specific difficulty in reading and writing and abnormalities of small and large motor activity of children with normal intellectual development

D: It's hard to say

which symptoms manifest themselves more complex or generalized (Zimmer, 2010). These children are thus less likely to receive optimal support and assistance from the school, and often because of this experience school failure in later grades (Blythe 2015, Kruk 2013). Only 30% of teachers actually defines the various disorders and describes their symptoms, so it has a chance to promote the development of their students.

In the face of such results, Schoemaker's and Wilson's postulate, which suggests teachers should diagnose children's development, is difficult to implement. Since they are spending a lot of time with them in school, they have good ability to recognize abnormalities in the child's development (Schoemaker, 2015). Knowing how to interpret the child's behavior to better understand them, and thus stimulate their development properly, which in inclusive education is key to the process of bringing up a child with different needs (Kutscher, 2007, Majewska, Majewski, 2012, Richy, 2000). The results suggest, however, that none of the teachers did not carry out a diagnosis of psychomotor development in their wards.

However, the surveyed teachers feel the desire to acquire knowledge in the recognition and diagnosis of psychomotor disorders in children, which could be a turning point for the implementation of inclusive education in Polish schools.

#### **Conclusions**

Level of knowledge of psychomotor disorders of the surveyed teachers is small. Teachers have problems not only with diagnosing the epidemiology of various disorders but also with the proper definition and the definition of the spectrum of symptoms. Training of teachers in this direction is necessary for the implementation of inclusive education model, and their willingness promises the desired changes.

#### **Declaration of Conflicting Interests**

The authors declare, that there are no potential conflicts of interest in respect to research, authorship, and/or publication of this article.

### References:

1. American Psychological Association. *Diagnostic and statistical manual of mental disorders: DSM-IV-TR. (fourth, text revisioned.)*, Washington: DC; 2000.
2. Blythe S. *Attention, Balance and Coordination. The A.B.C. of Learning*. PWN: Warsaw; 2011.
3. Blythe S. *How to be successful in learning*, Warsaw; 2011
4. Bowe FG. *Birth to five: Early Childhood Special Education*. Albany; 2000.
5. Cantell MH, Smyth MM, & Ahonen TP. Clumsiness in adolescence: Educational, motor, and social outcomes of motor delay detected at 5 years. *Adapted Physical Activity Quarterly* 1994;11:115-129.
6. Davis D. *The gift of Dyslexia, Why Some of the Smartest People Can't Read, and How They Can Learn*, New York; 2010.
7. Firkowska-Mankiewicz M. Inclusion education as a challenge for the Polish school. *Special school [Szkoła Specjalna]*, 2004;1:19-27. (in Polish)
8. *Guidelines for inclusion: ensuring access to education for all*. Unesco: France; 2005.
9. Kirby A, Peters L. *100 Ideas for Supporting Pupils with Dyspraxia and Dcd*. London: Continuum International Publishing Group; 2007.
10. Krause A. Globalization - individualism - uniformity. Disability in the process of social mobility. In: T. Zólkowska (ed.), *Special education - concepts and reality. Contexts of special education*, Szczecin; 2007.
11. Kruk-Lasocka J. *To recognize the child from the perspective of inclusive education*, Wrocław; 2012.
12. Kutscher M. *Kids in the Syndrome Mix of ADHD, LD, Autism Spectrum, Tourette's, Anxiety*. Liber: Warsaw; 2007.
13. Mandich AD, Polatajko HJ, Rodger S. Rites of passage: understanding participation of children with developmental coordination disorder. *Hum Mov Sci.* 2003;22(4-5):583-595.
14. Majewska J, Majewski A. *Outline of psychometrics. Main Currents of psychomotor support of the development of children and youth*. Gdansk; 2012.
15. Nowak A, Romanowska-Tołoczko A, Bartusiak I. Irregularities in the motor development of children as early signs of psychomotor disturbances [Nieprawidłowości w rozwoju ruchowym dzieci jako wczesne objawy zakłóceń psychomotorycznych]. *Pedagogics, Psychology, Medical-Biological Problems of Physical Training and Sports* 2009;9:192-195. (in Polish)
16. Polatajko HJ, Cantin N. Developmental coordination disorder (Dyspraxia): an overview of the state of the art. *Semin Pediatr Neurol.* 2006;12(4):250-258.
17. Piek JP, Edwards K. The identification of children with developmental coordination disorder by class and physical education teachers. *British Journal of Educational Psychology*, 1997;67b(1):55-67.
18. Richy DD. *Inclusive early Childhood Education*. London; 2000.
19. Schoemaker MM, Wilson BN. *Screening for Developmental Coordination Disorder in School-Age Children in Developmental Coordination Disorder and its consequences*. University of Toronto Press: London: 2015.
20. Zacharuk T. Inclusive education as opportunity for all students. Merits, *Mazowiecki Quarterly Training [Meritum, Mazowiecki Kwartalnik Edukacyjny]*, 2011;1(20):2-7. (in Polish)
21. Zimmer R. *Manual Motion education, foundations for training and pedagogical practice [Handbuch der Bewegungs-erziehung, Grundlagen für Ausbildung und pädagogische Praxis]*. Breisgau; 2004. (in German)
22. Zimmer R. *Children need self confidence, fun motion activities that make them smarter and stronger*, Kielce; 2006.

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