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Aid to life – Montessori pedagogy in the service of autism spectrum children

Summary

This article explores the feasibility of implementing Montessori principles outside traditional Montessori environments, focusing on children with autism whose families cannot afford Montessori schooling. It examines whether Montessori education can effectively address the needs of autistic children in non-Montessori settings. The author, a Montessori educator, describes her efforts to adapt Montessori methods in diverse environments, including public kindergartens, schools, therapeutic centres, and extracurricular activities. The research refers to the growing prevalence of autism, as noted by the World Health Organization, and the necessity of inclusive educational approaches. The author presents practical examples of children's interactions with Montessori materials and innovative adaptations of Montessori philosophy to suit various settings. Special attention is given to activities inspired by Montessori's Great Stories, demonstrating their potential in engaging children from different backgrounds. The paper argues that Montessori education should extend beyond specialized institutions to benefit a broader range of children, particularly those on the autism spectrum. It highlights the importance of preserving the core tenets of Montessori pedagogy – individual, spontaneous activity, and holistic human development – while adapting to external conditions. The article provides valuable insights into integrating Montessori principles in non-traditional settings, advocating for more inclusive educational practices.

Keywords: Maria Montessori method, autism spectrum, developmental material

Słowa kluczowe: metoda Marii Montessori, spektrum autyzmu, materiał rozwojowy

Introduction

A few years ago, I was offered the opportunity to work with two foundations that support the development of children on the autism spectrum. These are the therapeutic centres that support children between the ages of 2 and 8, who have more profound developmental dysfunctions, rare genetic defects, and children who have autism along with other dysfunctions of various origins. I was faced with the dilemma of whether Montessori pedagogy, which I had specialized in for many years working in schools, could be applied to the education of children with special developmental and educational needs, but outside the

typical Montessori environment. Because of the depth of the disorder and the numerous co-occurring dysfunctions with ASD, the chance of these children being able to attend a Montessori preschool or school is slim. Their everyday life is determined by the rhythm of numerous therapies and developmental activities that take place at the foundation, but also outside it, such as rehabilitation, physiotherapy, dog therapy, hippotherapy, and auditory training. In the space acquired thanks to the foundation, I was able to organize a small workshop, equipping it with the most basic Montessori materials. I would like to mention that I am not a therapist by training. I was hired as a Montessori teacher, in a school that focuses mainly on complex therapies, and since a large group of children attending this school show signs of “standard” intellectual development and there are even some children with outstanding talents, in order to provide them with the right stimulation, to broaden their experiences, and to support their cognitive development, there was the need to hire a teacher with extensive experience in personalized work with children.

It cost me a lot to convince myself of the advisability of such work. I found it hard to believe that it was possible outside a Montessori environment, where my little pupils would not be able to experience all the benefits of a diverse group of children in a properly prepared environment, so characteristic of Montessori pre-school and school settings. I had to go back to the roots of Maria Montessori’s pedagogy, and her concept of “aid to life” as the goal of the pedagogical method she created, in order to come to an understanding of my new function, to redefine my role, to adapt the forms of working with children that I had learnt about, and to accept this “otherness” in order to be able to enter the field of education, which until now – at least for me – has been an enigma and a constant experimentation in the field of pedagogy and therefore has been my personal “getting out of Montessori box.” I had to accept that in some ways I would be alone in my work and reflections on the direction of my interactions, because I am the only Montessori teacher in this environment. And finally, I also had to agree internally to abandon many Montessorian illusions in my work with children with autism and learn to accept that much of my efforts would fail.

Accompanying instead of teaching

The first aspect that succeeds brilliantly in transferring from the Montessorian philosophy to the more conventional education is the understanding of the role of the teacher as a guide, a companion in the journey, where this accompaniment, taken directly from the function of the pedagogue of ancient times, is essential. In Athens, a child of about 7 years of age was assigned a special supervisor, usually a trusted slave, who was entrusted with his care and who was responsible for the education of the boy’s manners until he reached the age of majority.

In the case of working with children with various dysfunctions, this understanding of the role of the educator seems to be the most natural and at the same time optimal form of coexistence in the educational space. It allows close observation of all the children’s

actions, the way in which the child moves, both in the motor and intellectual sense, in relation to working with developmental material from different fields. Careful observation of the children's reactions to working with the material makes it possible to identify their interests and leads them not only to new discoveries.

Enabling the child to try to acquire knowledge and new skills independently, accompanying them "acceptingly" in the choice of materials, supporting their will, their desire to discover and act, any spontaneous activity, in the case of children with autism is, in my opinion, the most important component of this work.

When considering how I could best help these children, I drew on the main tenets of Maria Montessori's concept. Here, the teacher does not focus on finding deficits and areas to fix in the child, but on bringing out the potential that every human being has and guiding the child towards autonomy. Children who fall into the autism spectrum experience a variety of developmental difficulties including communication, social development, thinking, cognitive skills, forms of activity relating to their interests, and motor skills (Goldstein, Ozonoff 2017: 24). In the contemporary scientific understanding of autism as a complex disorder – "a biologically determined set of behaviours that occurs in a variety of clinical forms and severity" (Goldstein, Ozonoff 2017: 24) – there are different approaches.

One that is particularly intertwined with Maria Montessori's conception takes into account the diversity, individuality, and dignity of dysfunctional people. It is a humanistic strand that does not involve merely treating and teaching autistic people behaviours that are socially accepted as the norm, but broadens the understanding of the nature of autism as a particular form of existence in the world. It has led me to turn towards the children as they are, precisely at the moment in which I meet them, in all their fullness, and who, as people, gradually allow themselves to be discovered, and only then to set the directions for pedagogical interventions.

Furthermore, the literature contains publications by autistic adults or parents of autistic children recalling the unwarranted therapies forced upon them, the blocking of self-stimulating behaviour, the painful exercises, the controversial increased intake of vitamin doses (Beytien 2018: 100). Montessori pedagogy does not fit into either of these approaches.

As children with severe dysfunctions who are in therapy are most often directed by an adult, guided by cues to the tasks they have to do, it became important for me to look for opportunities for them to experience autonomy and freedom of choice. "People with autism need teachers who are more flexible and creative than they are" (Beytien 2018: 119). Maria Montessori argued that by skilfully accompanying the child, one has the opportunity to recognize the so-called "sensitive phases/periods," that is, special moments in development that allow the assimilation of new content or skills and can herald real developmental leaps. If I want to accompany the child according to the Montessori pedagogy, I don't treat the child as a problem. Directive instructions are replaced by encouragement, friendly accompaniment, whispering, which is very often new for autistic children. One child, even before it enters the studio with me already lowers its voice, and clearly enjoys this atmosphere

of mystery. For others, it takes several reminders, support, guiding the movement of their hands, waiting for them to return to working with the material after a momentary “switch-off.” “Developing also means being able to recognize small, inconspicuous changes as part of development” (Berg 2007: 45). When children come into contact with a material, manipulate it, even if they do it in a non-specific way, e.g. turn the material up and down, try to make it move, I remain silent and observe. I have noticed that children with autism or Down’s Syndrome, who have issues with movement easily fall over. They wander around objects close to them, they stumble and bump into furniture – they transfer the desire to move to objects.

Self-regulation, self-discipline, self-esteem

In the children I work with, regardless of their age, I have discovered a strong need to work with the practical life material, and even in the case of children with severe gross and fine motor skills disorders, there was a great desire to practise pouring, spooning, sifting, sorting, threading, and using tongs.

These activities were particularly popular with the children and involved pouring water from one jug to another, filling different vessels to a certain height, and transferring water with a sponge, spoon, or pipette from one bowl to another. Since the autistic children and those with Down’s Syndrome are mostly characterized by a significant delay in the development of the kinaesthetic sense, I modified Montessori practical life exercises by using deep trays from which the child’s spilled water does not spill and which are easier to clean up - different types of heavy-bottomed bottles suitable for a child with reduced dexterity.

I reduced the number of items to be transferred from dish to dish or increased their size. Quite a few of the people I work with react with great anxiety when something is spilled or scattered during an exercise, which – of course – happens all the time. The reaction of the teacher is significant here. The words: “it’s okay, it’s just spilled water, we’ll clean it up, let me show you how...,” allow the child to reduce the tension, although there are times when the child gets so upset that they start crying and stop the exercise. There are also children who, in the initial phase, do not tolerate getting their hands wet or dirty at all. Any kind of activity involving practical life exercises builds up the child’s belief that they can do the task by themselves. The children with Down’s Syndrome manifest this very expressively when they have completed a task by joy, self-satisfaction, or... hugging me.

The eye-hand coordination, the self-regulation, and the gradual increase in the children’s attentiveness during the tasks, regardless of the length of their concentration, are for me a very important indication that this very set of exercises leads the children to independence and freedom.

Role of repetition, concentration exercises, value of sensory aids

In early childhood education – I have been aware of the role that senses play in human development. One of the most common characteristics of children on the autism spectrum is deficits in sensory processing. Researchers hypothesize over-arousal and attention-related abnormalities (Corbett et al. 2017: 322). In Montessori pedagogy, sensory training materials are referred to as “keys to the world” (Montessori 2019: 112). For children with special educational needs, the importance of sensory exercises seems doubly important. Children with autism are often distinguished by an almost obsessive need for order. The sensory materials offered to the child in Montessori settings are series of logically ordered elements differentiated according to only one characteristic. It seems to be an added value for the autistic to work with this group of materials.

When observing the children’s work with cylindrical blocks involving the placing of ten wooden cylinders of different diameters or heights in the corresponding holes, I see that they are often unable to “carry over” the experience once gained. The change involving a different arrangement of the cylindrical blocks is a great challenge to children, and often they do not know how to do such an exercise again. They have to go through the whole working process over again. The mother of Zachary – an autistic boy – describes it this way: “Generalizing information is difficult for people with autism. Zachary swims in the local pool, but on holiday in the Atlantic he has no idea what to do because it is not the same water” (Beytien 2018: 119). A person with autism is able to differentiate elements, perceives details perfectly, is characterized by visual thinking, but has problems with combining details into categories and therefore with forming concepts at a more general stage.

Nonetheless, my impression is that Montessori pedagogy, which is based on a holistic vision of reality (which also manifests itself in all materials) is in this sense a therapeutic pedagogy for children with ASD. The starting point here is not the details, but the logical whole. This gives the child the opportunity to repeatedly practise seeing the object as an ordered structure before dealing with its details.

As children with ASD are characterized by disharmonious development and the lack of sensory experience, which has its consequences in delayed development of thinking, sensory training materials can be a good tool to support the development of different mental operations for many dysfunctional pupils. It is also interesting to see the experience of working with materials to train the sense of touch, differentiating textures, feeling weight and temperature, and overcoming some children’s reluctance to touch different objects. The tactile materials are enclosed in wooden boxes. When I offer a child such a box to work with, I do not open it. It is placed in front of the child, and it is up to the child to decide which items to take out. I do not impose this, being aware of the occurrence of hyper-reactivity, sub-reactivity, or sensory seeking that characterize children with ASD. I do, however, consistently offer the child the same material again to work with at different times.

Sensory materials not only “teach” the senses, but also refer to specific concepts and thus can enrich the child’s language. This stage of working with Montessori materials is called the three-period lesson.

In the first stage, the teacher’s task is to provoke an association of the name with an object or feature of the material. In the second stage, the teacher checks whether the child has associated the name with the object or feature. The teacher, while saying the name, asks the child to move or otherwise manipulate the indicated object. The third step is to verify whether the child has memorized the name corresponding to the object. The teacher, pointing to a particular object, asks: “What is it?” or in the case of a feature: “What is it like?” and the child answers (Montessori 2014: 138). A certain group using the Montessori studio are non-verbal children, so I introduce only the first two stages of the three-period lesson to them. Although it also happens that children with echolalia try to mimic the words I say or give some sound of their own language in response, which in a way can be seen as the closure of the third stage of the naming lesson.

Other developmental materials – learning with the head, heart, and hand

In children with ASD who have reached school age, working with mathematical and linguistic material is also of considerable benefit. Owing to the attention limitations in autism spectrum children, the construction of Montessori material that contains only one specific problem, isolating the chosen issue from others, can foster the understanding of the essence of the material.

The representations of mathematical or grammatical concepts are highly pictorial and, in the initial phase, learning about them is linked to manipulation. This makes it easier for the child to get an idea of the subject matter of the exercises, while their repetition and the possibility of gradually increasing or decreasing the difficulty of the task allow for individualization of the learning process.

Montessori’s pedagogy emphasizes the building of intrinsic motivation in the child supported by interest, rather than rewards and punishments (Montessori 2005). For children with attention dysfunctions, this is not an easy task. The supportive presence of the teacher, the acknowledgement of progress on a task, and an increased number of short verbal messages are indispensable when working with some children, also because their therapies are based on positive reinforcement and the child is very used to this formula of work.

Here, a delicate discernment is needed as to what will serve the child and what will not, whom, when, and at what point to motivate further work. Many children need messages from an adult before they know the material and their ability to work with it. This was difficult for me because, as a Montessorian teacher, I was aware that my intervention was to be limited to what was necessary, and that the system entirely rejects rewards and punishments.

I remember a situation with a four-year-old boy who had chosen a cylinder block to work with. I showed him how to use it. The child independently placed most of the cylinders in

the holes, but at one point he encountered a problem and struggled for a long while with two cylinders that did not fit into the holes in the block. I waited patiently without showing either impatience or approval. The child looked at me and his nervousness grew. So, I asked if he wanted to finish the exercise, if he wanted me to help him, and he cringed, expecting a clear message from me rather than being left with a decision he could not yet make. My silence irritated him. Nowadays, I try to be more considerate about “praising” children and sense whether my: “yes, you succeeded” or “try differently,” is really needed by the child.

Owing to their very distinctive design, Montessori materials have a self-control function (self-error correction or error control feature). This is particularly useful for children for whom forced eye contact and the need to maintain it can be both difficult and unpleasant. There are children with ASD for whom mathematics is a particularly interesting area. A fascination with numbers stands out for several of my pupils. Montessori materials in this area are a real highlight for them and intensive work on large numbers can last for several weeks. Here, too, there are quite a few benefits to be found in the wealth of materials and their applicability to autistic pre-school and school-age children. Interestingly, there are also children who unerringly line up number cards in rows from 1 to 9000 and read them in two languages while, when asked to put six golden pearls (beads) from one of the mathematical aids into a bowl, they have trouble performing such a task. I experience many such amazements just reassuring myself that the thinking of a child on the autism spectrum is very different from what I was taught in my studies and during my Montessorian training.

Three examples of working with children with ASD

Swift

Swift is 5 years old. He is a boy in the autism spectrum. He also experiences other difficulties. The child’s gross and small motor skills are impaired. He has trouble keeping his balance. He moves slowly, clumsily, on widely spread legs. He bumps and knocks into things very often. He stumbles and falls even in spaces he knows well. He has severe attention deficits and is easily distracted. Knowing of his difficulty moving in space, I suggested that he work on a small rug spread out on the floor, but the child found it difficult to control his limp muscles and would lie down on it next to the Montessori material, interrupting his work. He probably associated such a situation with an SI class or physiotherapy exercises on postural mechanisms and showed a readiness for physical rather than intellectual activity. The child strongly preferred activities at the big table. In Swift’s case, many other modifications had to be made, not only concerning his workspace. There was a whole group of Montessori materials in areas that interested him. For example, mathematics materials, were not suitable for him owing to the large number of small elements, although on an intellectual level the child showed readiness to work with them. He was curious about numbers and enjoyed counting. The solution was working with special large wooden coloured pearls (beads),

which correspond to one of the Montessori materials, enlarged so that the child could not only touch each isolated element, but even grasp it with his whole hand.

I also used other materials, such as a set of sand-paper numbers, in an enlarged version. When the child was working with sensory material, I gave him only the three to four largest pieces of the set in the initial phase. At a certain stage, a set of ten wooden cylinders arranged in blocks became a favourite activity for Swift. It was quite a challenge for the boy to place the smallest pieces in the series with his powerful manipulation difficulties. I noted that he did not experience frustration at the time, even though both inserting and removing the individual pieces made it difficult for the child. The satisfaction of completing the task, outweighed the effort the little boy was making. I also had to modify the materials for pouring water, sieving sand, and transferring objects from one container to another: much larger trays, massive bowls, jugs with the right handles, so that the boy could manage the task himself. Knowing that it is the materials from the practical life section that can help the child's concentration, motor development, and, in the future, self-care, I often offered such activities to Swift. Many times, however, the boy would interrupt the task and expect my immediate reaction with his "No!" when he saw that he had spilled water, knocked over a dish or got his clothes wet, which is a critical moment for many children with autism, as any dirt on their hands or clothes is not accepted by them. So, I brought a small travel hairdryer from home to show Swift how we could deal with such a problem.

Hannah

When we started working with Hannah, she was 7 years old. Hannah is a child in the autism spectrum and her parents also reported that their daughter has underdeveloped cognitive functions and a severe speech delay. It was the problem with communication and the very distorted speech, despite Hannah's expression, that was initially the biggest trouble in entering into a relationship with her. She tried to communicate with me, but seeing that she was not understood by me she withdrew, intimidated. What captured me about this child and helped me recognize the direction of our work together was rooted in her dysfunctions, but at the same time became a clue. It was Hannah's particular predilection for order. From the beginning, she paid exceptional attention to the order in the environment and organized herself for work. She chose the things she needed, and when she had to write something down or cut something out, she first got everything ready. The fixed place of materials in the environment definitely helped Hannah to work. The child became aware of the topography of the room and the logic of the placement of the materials. Their structured design as well as the very flow of the teacher's presentation of the material supported the child's learning.

In addition, the individualized form of the three-period lesson, the result of one stage of work with the material from the previous one, and the fact that the child did not have to explain anything, but only point to specific representations, helped the girl to understand her task, and I could get used to her way of communicating and learn her "language." The material became a bridge between us, and Hannah quite quickly began to point to her

favourite materials, eagerly returning to them, demonstrating what was consistent with her developmental stage. Thanks to the intensive speech therapy work, Hannah, now nine years old, has overcome some of her difficulties, can speak in full sentences and much more clearly. At her level, she works with a lot of Montessori materials, doing parts of the tasks quite independently. Thanks to the joint efforts with the girl's parents, we were able to enrol her in an inclusive school run using the Montessori method and Hannah has been a student there since the second semester of this school year.

Kate

Kate is a six-year-old girl in the autism spectrum, not communicating, owing to selective mutism. She is a very dependent child, expecting to be constantly guided, difficult to interact with, with poor facial expression. Kate performed non-verbal tasks at her age level, but did mechanically, and she did not show any initiative of her own either during play or learning. She just waited passively for the teacher to suggest something to her. I could not see her reaction to the proposed materials. Reflecting on my strategy for working with this girl, I decided that we would start with fixed rituals so that the child would become accustomed to and understand her task – starting with the way I greeted her and invited her to do the tasks, encouraging her to start working independently and finishing with the material in the studio. I placed all the materials I offered the girl one by one near the table where Kate and I were working, so that she could see them. This strategy was to give her a sense of constancy, security and prepare her to make her own choices. Despite the lack of answers, I always asked her if she wanted to work with a particular material. I also showed her that if she didn't want to do the task, to move the material away from her. When a girl finished a task, I would ask her to help me put the material away. I tried to create a situation so that the girl would want to speak up, so that at least one word would be said, possibly a gesture for "yes" or "no."

It took more than a year for Kate to speak up for the first time. At first, however, I taught her to choose on her own from two materials from a particular area, which I gave her to work with. I heard Kate's first word while working with sand-paper numbers. In the third stage of a Montessorian three-period lesson, when the teacher's question is asked – "What is this? What number is this?" Kate answered "Seven." The girl is now showing good progress both in the area of neurology and working with Montessori material. She is revealing great potential in mathematics and is solving numerous mathematical problems.

Conclusion

All of the children mentioned attend various therapies. The activities in the Montessori studio are among their many developmental support activities. It is therefore difficult to state unequivocally whether it is the Montessori method that contributes significantly to these

children's chances in the cognitive, social, and emotional spheres. Undoubtedly, however, the main characteristics of this method, i.e. guiding the child towards autonomy, integrity, and self-awareness while respecting their pace of work, respecting them as a person, can be a significant factor for their development. The external order, the physical and temporal structuring of the materials presented, the visual support, the possibility of free choice, the naturalness of this method, and its reliance on object manipulation, make it compatible with other forms of interventions used in working with children on the autism spectrum. By observing the activities of these three children over an extended period of time, I can conclude that:

1. Children make attempts to work independently.
2. They successfully perform manipulative activities according to their abilities.
3. They expand their vocabulary through three-period lessons.
4. They use selected Montessorian materials according to their purpose.
5. Two of the children mentioned are able to use symbolic notation.
6. They improve their communication skills in everyday situations.

Montessorian stories

In fact, my collaboration with foundations created for children on the autism spectrum began with an invitation to conduct group activities based on the first of the five great Montessorian lessons on the "Coming of the Universe and the Earth". These stories constitute an educational context that leads children to seek and understand their role in the universe, on Earth, in relation to people, and to take responsibility for the world. The essence of the presentation is also to show the mutual interdependencies in the reality in which we live, discovering the relationship between nature and culture. Together with the child, we take a kind of journey through time and space in their imagination. "We start with the origin of the universe, talk about the history of life, learn something about the peculiarities of man – his mind and culture" (Dattke 2009: 100). The foundation is laid in the five stories created by Maria Montessori and her son Mario.

When I undertook the task of telling the first of these stories to children on the autistic spectrum, I modified the story a little and encouraged them to participate: laying out elements on a black ribbon representing the passage of time from the Big Bang to the formation of the Solar System, performing simple experiments, turning the lights on and off, setting up a model of a volcano, etc. I also encouraged them to participate in the creation of the story. It turned out that, although it was my first visit, the children responded very eagerly to the invitation by co-creating the story through their activity. Afterwards, I was offered the opportunity to come and see the children once a week and continue the activities.

I have also conducted these activities in public and non-public schools, where they have always been received enthusiastically by the children, often leading to lively dialogue, questions, and the children's interesting reflections. It is very important to me that this

unique form used in the Montessori method does not remain available only to children in Montessori schools. For it has a universal, unifying, cognitive value, showing the close interdependence of man and the whole Universe. In today's world it seems to be particularly important that people learn from an early age to perceive and understand this relationship, to develop it and to seek their task as inhabitants of the Earth.

Montessori institutions are still few, soonly privileged families have access to them. In the area of Warsaw, where I live and work, these are exclusively fee-paying, private institutions. The cost of Montessori education is very high, so I am even more keen to promote this pedagogy and use its values among children outside Montessori communities.

The examples I have mentioned of “getting out of the Montessori box” and the adaptation of Montessori pedagogy in different settings are some of the challenges that I believe are worth addressing. I believe that a concept which was born in Italy, and which has developed in many countries around the world still leaves opportunities for creative use with a much larger group of children than is currently the case and in places where it has previously been inaccessible.

Research

The few studies on autism and the potential for holistic support for child development in the Maria Montessori pedagogy strand are part of an attempt to create a system of effective practices that both researchers and practitioners in early childhood education and special education are working on, as described in their research projects by Epstein, Lindeman, and Polychronis (2020), titled *Montessori: A Promising Practice for Younger Learners with Autism Spectrum Disorders*. However, it is important to mention that these studies are often projects based on individual experiences gathered while working with students with ASD. They therefore concern a specific individual, with particular and unique characteristics. They are carried out in specific settings, adapted to work with such individuals and using activities and resources appropriately adapted for the specific child, for their individual, specific needs and abilities. They cannot therefore be considered universal.

In my opinion, it is also important to note that research usually presents a combination of different methods for supporting the development of children with special needs, for example, with the TEACCH method (Treatment and Education of Autistic Related & Communication Handicapped Children), developed by researchers at the University of North Carolina, as a response to the educational needs of those diagnosed with an autism spectrum disorder. However, the author of this research Project – Sánchez Soriano (2019), concludes that the proposal to use two models of intervention – the Montessori method and TEACCH – does not pretend to be considered as applicable to all students with this type of dysfunction.

Similarly, Calero Vázquez (2018: 71), in the conclusion of her thesis, points out that research on ASD conducted in different parts of the world does not provide clear results on the causes of the disorder, which can lead to misinterpretation and thus reduce its scientific value.

Realizing that non-standard solutions are needed when working with students on the autism spectrum, proposals are being made for didactic projects in the Open Education stream, zoot therapy, socialization strategies, and alternative communication systems, and these are being combined with Montessori's concept, which, because of the characteristics it exhibits, is largely compatible with the needs of people with autism. The inclusion of Montessori pedagogy in the scope of pedagogical interventions, seems to be something very relevant in all contexts, as it is a pedagogy focused on each child and that child's optimal development.

Conclusion

The Montessori philosophy and materials can actively support the development of children with dysfunctions. They provide an opportunity to expand the world of children's pre-conceptions, to order sensory impressions, to stabilize posture, to coordinate movements, to promote attention, and to individualize the learning process. They also offer the opportunity to make certain modifications and adapt them to the needs of the pupil, which makes them very useful for children with various developmental and educational problems. It is also worth reflecting on the fact that researchers consider autism to be the most enigmatic disorder (Goldstein, Ozonoff 2017: 24), while the WHO notes a steady increase in the number of people affected and reports that one in a hundred children has autism (WHO 2023). This calls for a new look at education, also in economic terms, because every child who is given the right support has a chance to function in the community, to build independence, and to get a job. This is why it is so important to develop new models, to look for inclusive solutions.

The very issue of using the Montessori method in working with children with dysfunctions requires detailed research, verification, as to whether e.g. the tendency of children with ASD to place elements of aids evenly and their extraordinary care for order and narrowed field of attention correlate with limiting the number of elements and almost mathematical precision in differentiating them in Montessori material.

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