

## **The importance of Physical and Sport Activity for SLD People at School**

### **L'importanza dell'attività Fisica e Sportiva per le Persone con DSA nella Scuola**

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#### **Abstract**

The purpose of this research work is to highlight the contribution that physical and sport activity can provide for a sustainable educational and formative development towards people with specific learning disorders.

There are, of course, some basic social and cultural criticalities to be overcome so that we can affirm an educational conception of "Sport for all" that leads, for subjects with specific disorders of learning, to the enhancement of the contribution that The motor activity towards the other disciplines can offer in school perspective.

Lo scopo del presente lavoro di ricerca è quello di evidenziare il contributo che l'attività fisica e sportiva possono fornire per uno sviluppo educativo e formativo sostenibile nei confronti delle persone con disturbi specifici dell'apprendimento.

Vi sono, ovviamente, alcune criticità sociali e culturali di base da superare affinché si possa affermare una concezione educativa di "sport per tutti" che conduca, per i soggetti con disturbi specifici dell'apprendimento, alla valorizzazione del contributo che l'attività motoria nei confronti delle altre discipline può offrire in ottica scolastica.

#### **Keywords**

Sport; Education; DSA; School; Physical Activity.

Sport; Educazione; DSA; Scuola; Attività Fisica.

## Introduction<sup>1</sup>

In the last years, the knowledge about specific learning disorders (SLD) has increased exponentially; in particular, if in the past we focused mainly on functional, neurobiological and psychometric aspects, research has recently extended its points of view by also deepening other aspects, such as that psychosocial and relational of the disorder.

An SLD student lives his “particular” condition in a context with specific reference systems: family, school and peer group, from which experiences related to the sense of self-esteem and self-efficacy, while changing depending on the environment in which the subject lives his own experiences, are inevitably generated.

All this is also highlighted in Law No. 170/2010 “the sensitivity of the psychological problems embedded in SLD students for the use of compensatory tools and dispensatory measures”, and this is why we have considered it interesting to investigate the perception that young people have about the consideration they think they enjoy by their peers and their teachers because of the learning disability, and the importance that sport and physical activity play at the relational level, regardless of age, gender and presence or absence of a disabling physical/mental condition.

However, the relationship between sport and educational/social growth of the SLD subject is not obvious: some social and cultural problems, such as the concept of sport exclusively in a competitive key and the identification of the SLD person as a patient, must be overcome.

In this contribution, we intend to offer pedagogical and educational reflections to promote the increase, and support the qualitative development, of the already widespread practices of motor and sports activities for SLD people, so that we can stimulate the education to the concept of sport for everyone.

### 1. Inclusive Understanding of SLDs in the School Context

Before highlighting the elements and modalities that characterize the educational value of motor sciences at school and in free-time sport for SLD subjects, it is appropriate to highlight the self-image that an SLD person thinks he offers to others.

From a school perspective, most of the SLD students think their classmates envy them as they can take advantage of the compensatory tools and dispensatory measures. What we have just stated is true because, for the students, these interventions are considered as real aids allowing them, in a certain way, reducing their commitment and study level, and not as “tools that replace or facilitate the performance required in the deficit skills” in order to allow their SLD peers pursuing an adequate level of study and education (Bollani et al, 2017; Ianes, 2006; Ianes, & Tortello 1999).

In the light of this, it is understandable how children can perceive themselves as criticized for the use of maps, schemes, forms, computers, etc., fearing to see the outcomes obtained in school tests diminished by their classmates. For example, the exclusive use of maps or the calculator during interrogations becomes then no longer a tool for studying, but, because of the negative reactions of the classmates, it risks being a stigmatizing tool and a diversity marker. Moreover, many children, in addition to feeling accused and mocked by their classmates, often do not feel recognized by their teachers as their learning difficulties can generate negative performances associated, by the teachers themselves, to a lack of commitment or of will.

What described above does nothing but increase the sense of incomprehension in young people, because their skills are brought into question, thus increasing their insecurity; in addition,

<sup>1</sup> The manuscript is the result of a collective work of the authors, the specific contribution of which is to be referred to as follows: introduction, paragraph n. 2 and conclusions are to be attributed to Domenico Tafuri; paragraphs n. 1 and 3 are to be attributed to Francesco Peluso Cassese

tion, some young people report a further perception of “diversity” as their teachers, in trying to justify to the class the use of dispensatory and compensatory measures to the other class members, frequently use discriminating terms against SLD students.

Hence the importance of correctly informing about what the Specific Learning Disorders are, what they imply and the reason why they are dealt with, as described by Law No. 170/2010, according to which young people diagnosed as SLD subjects are allowed to use a whole series of educational tools. This law recommends “giving start to appropriate initiatives to share, with the classmates, the reasons for the application of the instruments and measures mentioned above, in order to avoid stigmatization and negative psychological consequences too”, because “classmates can see them as incomprehensible facilitating means”.

It is essential for teachers to express their confidence in the fact that children can achieve good outcomes, encouraging them to see the positive aspects of the SLD, circumscribing and defusing the problem, thus conveying messages with a positive value. This is underlined by Law No. 170/2010: “the need to create a welcoming atmosphere in the class, implement an inclusive management in it, by taking into account the specific educational needs of SLD students”, since we must always consider that an SLD student lives his condition in a context characterized by the presence of specific reference systems making their condition more or less acceptable (Bachmann, 2011, Versari, 2011).

Students relate with their parents, teachers, etc., by confronting themselves, at the same time, with their peers. In fact, teachers and peers have the greatest influence on the importance of the others’ gaze, because past experiences organize the processing of information about one’s own social experience, creating positive or negative selves that represent ideas of the person with respect to what he/she may become, to what he/she would like to become or is afraid to become (Markus & Nurius, 1986).

Therefore, the above can confirm and reassure in relation to a normality, which, from young people’s point of view, means belonging to the group, or can instead lead to a diversity translated into marginalization. In this particular phase of the young subjects’ life, in which they wish to belong to the group and feel all the same, to feel that the other looks at you differently can have consequences on self-esteem, and therefore on one’s own identity. It certainly has an important influence on his growth path, but it does not eliminate his complex identity, because, alongside his special dimensions and needs, there are others that flow towards the horizon of normality (Ianes, 2006, Isidori, 2012).

This strong sense of acceptance by peers and adults also seems to influence the emotional sphere, in which the memory of experience is strongly structured as it links to emotional connotations, which are reactivated each time the person finds himself in situations that can make him recall the past experience. The complexity of each person’s subjectivity does not imply reductionism of one’s own identity to a single dimension; if this occurs, it means that the person’s own growth is compromised, and dehumanization processes are already underway (Canevaro, 2006, 2010).

Therefore, the need to spread and increase awareness of the culture of the SLD among young subjects and teachers is clear, otherwise what is unsaid, but perceived, risks eliminating a-priori all the possibilities they can be offered, as they will be the first to not accept them.

Hence the importance of sports activity in the school context, since thinking of sports activity in a formative and educational perspective highlights social and cultural aspects (De Anna, 2007, Selis & Stocchino, 2006), providing an answer to the special needs by entering into the dynamics of normality.

## **2. The Contribution of Physical and Sports Activity for an SLD subject**

The access to sports for the weakest social groups too has given start to a change in the meaning of sport, by reducing the consideration of the competitive sports performance alone

and making its educational and social value increasingly emerge. In this context, while considering what a person is able to give or to do, sport stimulates the consideration of oneself and of one's own existence (De Anna, 2005; Farinelli, 2005; Gianfagna, 2007; Mari, 2007).

The idea of sport for everyone needs a very precise definition that identifies it as an activity practiced by the subject, based on the high maturity level of the motor functioning. Like all types of functioning, that related to motor skills can become known in various forms, from those infantile to those of the special sports gesture, contributing to its the maximum possible development by always taking into account the individual conditions (Guiggi, 2012, Light & Dixon, 2007).

As for SLD young people, some studies have shown that physical activity can have a significant value, since they themselves have certain intrinsic characteristics: overall view, global perception, and ability to "read" situations more widely. So the dynamic reasoning is simple, the creation of unusual connections that other "non-disabled" young subjects could hardly develop. Therefore, it is very easy to see things from different perspectives, thus addressing the various situations with different approaches and methods. Furthermore, perception and learning take place in a multidimensional way, that is, by using all the senses, processing all the information in a global way and not in a sequential way. SLD young subjects are creative, they easily develop new ideas and solutions, express their potential in a dynamic, constantly changing context, managing to develop ideas and making predictions.

All these characteristics suggest a chance of success for SLD children, but as we know, all types of learning need attentive resources to be realized; this is why physical activity is essential, since, during a sports activity, with a type of simple or complex motor learning, it is possible to face different and important aspects of the executive system (management of frustration, control of interference, development of resources), adjusting the difficulties on the subject's effective resource, which will be therefore engaged in gradually more and more complex exercises (Benso, 2007, Di Palma, Ascione & Peluso Cassese, 2017).

In fact, the SLD young subject who seems to have weak attentional abilities is tempted to abandon the activity when those certain functions turn out to be his weaknesses, matched with performance anxiety and high emotionality, but if he succeeds in overcoming the critical period of stress and manages frustration, the opposite effect is generated and the activity becomes motivating, increasing the greater capacity for concentration, sustained attention and control. Moreover, the gradual exposure to stress due to physical activity turns out to be an aid as it allows limiting the "emotional encroachment" and strengthening the control system (Benso, 2007; Westendorp et al, 2011); consequently, the new skills acquired can be effectively conveyed in all other areas.

At this point, it needs to make a distinction between situational sport (tennis, fencing, martial arts) and individual sport (horse riding, athletics, dance, swimming). Usually we tend to direct the SLD young subject towards team sports, since it is thought to be the best way to learn how to stay in the world and socialize, even if, in fact, sport helps generally learn how to live according to the rules, learn the sense of discipline and respect for oneself and for the opponents; therefore, it must be the young subject to express himself and choose independently what sport to practice. Unlike team sports, those individual would seem to be more useful as they are based on an ad-hoc training structuring to stimulate the SLD subject to achieve and maintain, as long as possible, the maximum limit of the attentional resources of that moment. What we have described above is certainly more difficult to put into practice in a team sport, since the training must be adapted to the group and not to the individual. In addition, there is a risk of losing self-esteem and reducing self-efficacy, because, in a team sport, an SLD young person with difficulties in being attentive (who easily become distracted and with an emotional system that is more difficult to be controlled) risks being excluded from the game or marginalized in the locker room.

### 3. The Role of Physical and Sports Activity at School for an SLD Student

In the digital age the boys are less used to running, jumping and sweating, so it is necessary to understand the importance of sports practice, since, in addition to being a sort of escape, it is fundamental in terms of education, prevention of discomfort and knowledge of one's own abilities (Piccotti, 2014).

SLD young subjects frequently show problems from the point of view of attention, motor coordination, posture control and socialization within a peer group, and this is why sport is essential: it helps generate the useful conditions so that they can experience positive experiences with respect to the motor and socializing aspect, in a school, extra-school and group context (Bortolotti, 2017, Di Palma, Raiola & Tafuri, 2016).

Even if an SLD young subject apparently would seem unfit for physical activity, due to the too many lacks previously described, some positive aspects can be found by evaluating the "positive" characteristics of an SLD young person: a simple overall view, and greater problem solving skills.

Over the years, various studies on the role that motor activity plays for SLD children or adolescents have been carried out. Jelle Vuijk, by using the Movement Assessment Battery for Children (MABC), analyzed a heterogeneous sample of 137 school-age children who had learning disabilities, and the outcome was that: with regard to manual dexterity, the 52.6% of the analyzed children were below the 15th percentile value, the 40.9% were able in using the ball, and the 33.7% had good balance skills. Finally, correlations were found: between spelling, mathematics and the total MABC score, between mathematics and balance, between reading and ball use skills, and between spelling and manual dexterity (Jelle Vuijk et al., 2011).

The Dutch scholar Westendorp, by using the Gross Motor Development-2 test, correlated the motor skills of SLD children to those of normally developed children of their same age. This research generated outcomes with significantly lower scores on both locomotor skills subtests than their normally-developed peers, and a narrow correlation between locomotor skills and reading ability was observed in SLD children (Westendorp et al., 2011).

Another very interesting aspect concerns the postural control of SLD children; it was observed that the main motor area involved with balance and motor skills learning is the cerebellum (Fawcett & Nicholson, 1999; Jelle Vuijk et al, 2011). It is in this area that motor skills become automatic, and it is therefore possible to perform them without any awareness. At the beginning, when learning new movements or tasks, it needs to pay the utmost attention to what is being done, until the motor gesture itself is "incorporated" and "automated", so it can be performed without paying the attention required previously. Scholars correlate the motor impairments previously described with specific learning disorders, because the cerebellum is involved in much more complex cognitive activities, and specifically, there are neurological links to the cortex, including the Broca area. It is responsible for the language development, especially in the articulation of language skills as it involves time and fluency, and this explains the relationship with the phenomenon of dyslexia, reading, and writing.

For this reason, the education to sports practice becomes a path based on several levels, initially from the physical education practiced at school up to the introduction to sport and its specialized practice, so as to allow everyone to stand and go on according to the one's motor function maturity level (Bailey et al., 2009; Di Palma et al, 2016). Finally, we must consider that there is no best sport to best express oneself, but it seems that sport can represent a way to express one's own potential, finding an area in which to strengthen the self-confidence needed to face the hard challenge with the study and the school. Therefore, in the school context, physical activity is of fundamental importance, because the contents that have been the object of a type of active learning and effective participation are stored in the memory, in a significant way, thanks to the association mechanisms between the students' motor potentialities and their cognitive aspect.

## Conclusions

Sport and physical activity have enormous potential in terms of social, educational and cultural development, which must be exploited in relation to SLD individuals too, especially in a socio-educational context such as that of school. Its educational value has been reevaluated in a decisive way thanks to progresses in scientific research in the last decades, expanding the field of action of bodily experience and highlighting its close relationship with the emotional dimension and the cognitive processes.

An area of scientific research that aims to investigate the relationship between didactics, body, action and cognition, referring to an interdisciplinary approach, and then to the possibility of being able to relate different disciplinary knowledge by overcoming the artificial border among multiple subjects for the benefit of a knowledge that educates to a complex thought, so as to favor an aptitude for analysis and problem solving from different points of view. This assumes even more importance, as shown, in the case in which the object of analysis concerns the inclusion of SLD students.

Research in the field of education, specifically in the field of motor sciences, can favor the plurality of knowledge and of the sciences with their own autonomous statutes, supporting a flexible investigation process open to the analysis of every problematic situation. Therefore, the most effective teaching practices are also achievable through alternative didactic methods, and more specifically, through significant bodily experiences, in order to “simplify” the organization of a system of relationships that link every student’s cognitive style, to the structure of the knowledge to be acquired and to the set of intellectual and motor operations, so that the content of learning is preserved in their cognitive structure.

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