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EDITORIAL

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**Low Competence and Developmental Motor Coordination Problems in Physical Education
[Baja competencia y problemas evolutivos de coordinación motriz en Educación Física]**

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Currently there is no concern for clumsy children in physical education classes. Scientific and pedagogical literature do not show a great interest in children with motor coordination problems in Physical Education, this question is of more interest for physical and occupational therapists (Cairney, 2015).

The seventies, eighties and nineties were decades where this interest were present in Physical Education (Arheim & Sinclair, 1976; Haubenstricker, 1980; Hoare, 1994; Larkin & Revie, 1994; Wall, 1980). At the present time these interests has beginning to increase (Edmonds, 2013; Gómez, Ruiz & Mata, 2006; Parker & Larkin, 2003; Ruiz, 200, Ruiz, Graupera & Gutiérrez, 2001; Ruiz, Graupera, Gutiérrez y Miyahara, 2003; Ruiz, Mata & Moreno, 2007; Ruiz, Ruiz & Linaza, 2016).

Physical Education researchers as Arheim & Sinclair (1976) or Revie & Larkin (1993b) defined clumsy children are those individuals who had motor learning difficulties and displayed asynchronous and inefficient motor behavior when attempting to carry out motor tasks, that they would commonly be expected to accomplish under reasonable circumstances.

Wall (1980) highlighted the cultural component of these problems and considered that these children did not perform culturally-normative motor skills with acceptable proficiency. It was considered that children had low motor competence when they showed real difficulties to coordinate their movements in their activities in the gymnasium or the playground. From then to nowadays, things have no changed, and in all physical education classes there are children who show different degrees of movement difficulties.

Who are these children?

Their movements in the gym are uncoordinated and ineffective, not having the motor competence necessary to respond to the requirements of the physical education learning program.

Their basic motor skills tend to be behind the rest of his peers, and they are aware of this situation. Physical education classes can be a source of tension and anxiety, and sometimes of humiliation for these children, because of the difficulty in being able to carry out the skills of the program, or when they must play sports with their peers. They feel disoriented, they do not know when they should act, and when they do, it is too soon or too late, and their peers scold them, when they do not laugh at him. This situation can cause them to end up hating the subject (Carlson, 1995; Ruiz, 2005; Walling & Martinek, 1995). But these difficulties can affect in some motor skills but not in others, thus, some schoolchildren may find ball control very difficult while for others, difficulties arise when they must maintain balance and body control in space. This mosaic of difficulties makes it difficult to establish a single profile.

Children with low motor competence tend to lag their peer's motor competence and learning sport skills. These children have not reached the level of desirable motor development to be able to practice with competence in physical education classes. His basic motor skills are very elementary for their age; their functionality is clearly delayed with respect to the rest of his class. This difficulty makes them constantly watched and criticized by their peers.

What Physical Education can do?

The first person in school with these children in a dynamic situation is the P.E. Teacher. He/she has the first opportunity of providing primary care to these children, but unfortunately, they don't offer adequate help probably because they don't have the knowledge and skills necessary to teach clumsy children.

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Teachers have usually addressed P.E. classes with at least three instructive procedures, namely: 1) the most direct procedure, 2) a procedure in which they have allowed the participation of the students in different decisions, and 3) the procedure explicitly centered on the children. All of them in session formats that have claimed both individual, group or the whole class (Mosston & Answorth, 2008).

One of the intervention models that has received special attention for its favorable results with these children, has been the so-called task-centered approach (Larkin & Hoare, 1991; Revie & Larkin, 1993a). In this approach, children perform in a specific way those functional motor tasks that the teacher considers more important for them at that moment, since they allow the learning of more complex skills and permit interactions with other members of the class. This procedure has nothing to do with a teaching by command style of teaching, in which all is done in the same way and at the same time. This procedure does not avoid the development of an atmosphere of achievement, effort and personal progress (Graham, Hale & Parker, 1991). There are other proposals in which students are asked to explore their perceptual and motor space of work, so that they try to perceive affordances and discover the procedure of action that better solves the problem. These are procedures that some scholars have called non-linear pedagogy and others ecological task analysis (Davis & Broadhead, 2007).

Probably one of the concerns of P.E. teachers is to ensure that students have a high willingness to learn and practice. These children come to class with previous experiences of error or failure in the motor domain, and often lead them to not want to go to class because they hope they will fail again. They don't want their classmates laugh of them, and many times their P.E. teachers don't give them the necessary attention. P.E. teachers must be sensitive to the needs of these students.

Children with low motor competence in physical education and sport classes do not perceive as meaningful the tasks they practice and, therefore, they are not motivated. It is necessary to consider the interests and needs of these students. To choose key fundamental motor skills that allow them to play

and participate with their peers in other activities is a way of giving meaning to the practice. The motor learning process in physical education and sport classes entails putting into action all sensory-perceptual channels of children, which in the case of clumsy children could be the origin of their difficulties. Adopting a multi-sensory approach and with practice and patience, these children can learn the motor skills of the P.E. program (Lof-tesnes, Ingvaldsen & Sigmundsson, 2017) but these children are far below that of the rest of the classmates. They have a deficit of activity, which makes them vulnerable to fatigue (Rivilis, Hay, Cairney, Klentrou, Liu & Faught, 2011).

Repeating the same action many times in the same way, to progressively introduce variations of the same task can be an excellent way to promote the application of what has been learned to an analogous situation and to promote the process of transference. Clumsy children while practicing need to be given feedback on improvements and progress they are achieving, as well as how to overcome the difficulties they are encountering.

It seems logical to think that the work in large groups does not favor learning for these students, hence individual work or small groups are the best alternative. This work in small groups helps these children to participate in physical education classes, if teachers organize their classes properly and do not leave these decisions to children who will always ignore their clumsier classmates. Small groups not only allow the child to practice with other peers with various levels of competence, but also favor the process of socialization and relationship among them, inciting cooperation and acceptance of others less competent (Betts & Underwood, 1992; Goodway, Crowe & Ward, 2003).

Pedagogical research is showing how effective it is to create an atmosphere of work in which children are recognized for their effort and dedication, and where teachers offer feedback on good achievements and when their students request them (Chiviakowsky & Wulf, 2007).

P.E. teachers don't leave these children to growth up to be clumsy

The main objective of physical education in schools is to develop motor competence in all children, and all means ALL CHILDREN. If physical education teachers do not care about clumsy children in school, who will?

These children need more attention and more patience from their teachers. They don't follow the same pace of learning than that of their classmates, and their past experiences are plenty of failure and feelings of incompetence (Gómez, Ruiz & Mata, 2006; Ruiz, 2005). Clumsy children often feel they don't have control over the environment and are unable to prevent motor failure. It is in this situation when they begin to develop what has been called learned helplessness (Walling & Martinek, 1995). These children need a learning environment that considers the difference, a warmer teaching context where peers can understand that everybody has their own process of learning.

These children need extensive teaching and continual reinforcement. PE teachers must assume that with these children it is necessary to reteach fundamental motor skills (catching, running, landing, throwing, etc.). These children avoid playing and practicing outside classes and have a lack of motor experiences and a deficit of practice.

Physical Education and Sport is for ALL CHILDREN in school, regardless of their level of motor competence and PE teachers must be aware of children low motor competence and coordination problems, when they plan their pedagogical strategies. PE teachers don't leave these children to grow up to be clumsy and separate physical activity and sport from their lives!

References

Arheim D., & Sinclair W. (1976). *El niño torpe. Un programa de terapia motriz*. Buenos Aires: Panamericana.

Betts, M., & Underwood, G. L. (1992). The experience of three low motor ability pupils in infant physical education. *The Bulletin of Physical Education*, 28(3) 45-56.

Carlson T. B. (1995). We hate the gym: Student alienation from physical education. *Journal of Teaching in Physical Education*, 14, 467-477.
<https://doi.org/10.1123/jtpe.14.4.467>

Chiviakowsky, S., & Wulf, G. (2007). Feedback after good trials enhances learning. *Research Quarterly for Exercise and Sport*, 71(1), 40-47.
<https://doi.org/10.1080/02701367.2007.10599402>

Davis, W.E., & Broadhead, G. D. (2007). *Ecological Task Analysis and Movement*. Champaign: Human Kinetics.

Edmonds C. (2013). Why teachers need to hear the voice and experience of the child with dyspraxia. *Research in Teacher Education*, 3(1), 5-10.

Gómez M.; Ruiz L.M, & Mata E. (2006). Los problemas evolutivos de coordinación en la adolescencia: Análisis de una dificultad oculta. *RICYDE. Revista Internacional de Ciencias del Deporte*, 3(2), 44-54.
<https://doi.org/10.5232/ricyde2006.00303>

Goodway, J.D.; Crowe, H., & Ward, P. (2003). Effects of motor skill instruction on fundamental motor skill development. *Adapted Physical Activity Quarterly*, 20, 298-314.
<https://doi.org/10.1123/apaq.20.3.298>

Graham, G.; Hale, H.; A. S., & Parker M. (1993). *Children Moving: A reflective approach to teaching physical education*. Mountain View, Calif: Mayfield Pub. Co.

Haubenstricker J. L. (1982). *Motor development in children with learning disabilities*. JOPERD, may: 41-44.

Hoare D. (1994). Subtypes of developmental coordination disorder. *Adapted Physical Activity Quarterly*, 11, 158-169.
<https://doi.org/10.1123/apaq.11.2.158>

Larkin D., & Revie G. (1994). *Stay in Step: a gross screening test for children K-2*. Sydney: Authors.

Larkin, D., & Hoare, D. (1991). *Out of step. Coordinating kid's movement*. Nedlands: The University of Western Australia.

Lofthesnes, L. M.; Ingvaldsen, R. P., & Sigmundsson, H. (2017). Children with Developmental Coordination Disorder: Can Underlying Perceptual Disability be Remediated Through Specific Training?. *Psychological Reports*, 0(0), 1-13.
<https://doi.org/10.1177/0033294116687761>

Mosston, M., & Asworth, S. (2008). *Teaching Physical Education*. First online edition. Pearson Education.

Parker H.E., & Larkin D. (2003). *Children's co-ordination and developmental movement difficulty*. In Savelsberg G, Davids K, Vander Kamp J, & Bennett SI. (Eds.). *Development of Movement Co-ordination in Children* (p. 107-137). London: Routledge.

Revie, G., & Larkin, D. (1993a). Task-specific intervention with children reduces movement problems. *Adapted Physical Activity Quarterly*, 10, 29-41.
<https://doi.org/10.1123/apaq.10.1.29>

Revie, G., & Larkin, D. (1993b) Looking at movement: Problem with teacher identification of poorly coordinated children. *The ACHPER National Journal, summer*, 4-9.

Rivilis, I.; Hay, J.; Cairney, J.; Klentrou, P.; Liu, J., & Faught, B. E. (2011). Physical activity and fitness in children with developmental coordination disorder: A systematic review. *Research in Developmental Disabilities*, 32, 894-910.
<https://doi.org/10.1016/j.ridd.2011.01.017>

Ruiz, L. M. (2000). Aprender a ser incompetente en educación física: un enfoque psicosocial. *Apunts de educació física y deportes*, 60, 20-25.

Ruiz, L. M. (2005). *Moverse con dificultad en la escuela. Introducción a los problemas evolutivos de coordinación motriz*. Sevilla: Wanceulen.

Ruiz, L. M.; Graupera, J. L. & Gutiérrez, M. (2001). Observing and detecting pupils with low motor competence in physical education: ECOMI scale in the gymnasium. *International Journal of Physical Education*, vol. XXX-VIII, 2, 73-77.

Ruiz, L. M.; Mata, E., & Moreno, J. A. (2007). Los problemas de coordinación motriz y su tratamiento en la edad escolar: estado de la cuestión. *International Journal of Human Movement/Motricidad*, 18, 1-17.

Ruiz, L. M.; Ruiz, A., & Linaza, J. L. (2016). Movimiento y lenguaje: Análisis de las relaciones entre el desarrollo motor y del lenguaje en la infancia. *RICYDE. Revista Internacional del Ciencias del Deporte*, 46(12), 382-397.

<https://doi.org/10.5232/ricyde2016.04603>

Wall A. E. (1980). *Physical awkward children. A motor development perspective*. In Das, J.P, Mulcahy, R.F, & Wall, A. E. (Eds.), *Theory and Research in Learning Disabilities* (p.253-268). New York: Springer+Business Media, LLC.

Walling, M. D., & Martinek, T. J. (1995). Learned helplessness: A case student of a middle school student. *Journal of Teaching in Physical Education*, 14, 454-466.
<https://doi.org/10.1123/jtpe.14.4.454>

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