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Potentiating Gross Motor Coordination in 5-year-old Infants

Abstract

The practice of gross motor coordination allows the infant to perform experiential actions to reach maturity, evidencing the passage from practical action to the action of thinking. In this way, feelings and sensations are promoted; discovering one's own body, space and time. The objective of the research was to describe the level of gross motor coordination presented by five-year-old children from I.E.I. N° 0345, Lima and I.E.I. N° 166 "Warma Kuyay", Callao, 2020. The research approach was quantitative, basic type and comparative descriptive design. The technique used was observation and the instrument was the checklist validated through the expert judgment technique and the reliability was 0.911, according to Cronbach's alpha. The results obtained describe the differences presented by five-year-old students in relation to gross motor coordination; the main indicators being the prioritization of the body through movement and the orientation to the development of motor activities, especially in the first years of life. This, because it favors the physical, emotional, socio-affective and cognitive levels, which evidences the differences between the samples investigated.

Keywords: Gross Motor, Cognition, Space, Time, Infants, Gross Motor, Cognition.

Introduction

In the course of time, it has become evident that man is a social being and that his individual practice called "I" transcends when he shares a life in society. As a consequence, the responsibility of human action and moral conduct, from Aristotle's conception, virtue lies in thinking for others and from "We". All states are concerned about the formation of their citizens and bet on early childhood focused on early childhood development. For the Ministry of Development and Social Inclusion (Midis, 2016), this guarantees timely early childhood development, betting on a multidimensional process in the construction of complex capacities that allow human beings to be competent from their potential to achieve autonomy in interaction with their environment in full exercise of their physical, emotional and social rights.

Psychomotricity is based on the unity of the person from the corporeality, emotionality and connectivity. Due to its existing linkage, each approach with our environment invites us to think, feel and act, experiencing and expressing our feelings through our body. In the current conditions, where there is no presentiality in the formation of 5 year old children, teachers are developing suggested activities related to the body and movement. From these experiences, the infants develop a progressive control and mastery of their bodies, readjusting their bodies according to their daily needs through play or experimentation.

The study was conducted in two public institutions in Lima and Callao, where five-year-old infants present difficulties related to gross motor skills, weak harmonic coordination in the movement of the body's muscles, lack of balance in the head, trunk and limbs when running,

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standing up and moving easily (Belkis, 2007). Likewise, they present rigidity in some parts of the body and difficulty in following the rhythm, little precision in visual-motor coordination with the mastery of objects, body, adaptation of space and movement; all aspects necessary for dynamic body control. Also, little internalization of the body scheme: adjustment of tone, postures, static and dynamic positions, self-control, relaxation. From what has been described, the problematic system arises: What is the level of gross motor skills presented by the 5 year old children of I.E.I. N° 0345, Lima and I.E.I. N° 166 "Warma Kuyay", Callao, 2020? No. 166 "Warma Kuyay", Callao, 2020, what is the emotional level presented by five-year-old children of I.E.I. No. 0345, Lima and I.E.I. No. 166 "Warma Kuyay", Callao, 2020, and what is the level of balance presented by five-year-old children of I.E.I. No. 0345, Lima and I.E.I. No. 166 "Warma Kuyay", Callao, 2020? The study is significant because it allowed identifying the levels of gross motor skills that five-year-old students have, considering that gross motor skills are the basis for development, nervous maturation and sensory-motor evolution in relation to the body of others, fundamental aspects in the formation of the child's personality. All this, in addition to the development of capacity, interoceptive, exteroceptive, proprioceptive sensations, cephalo caudal law, proximal distal law, the global period of learning and discrimination - transition of the body and its segments.

Considering the objectives of the research as describing the level of gross motor skills presented by five-year-old children of I.E.I. N° 0345, Lima and I.E.I. N° 166 "Warma Kuyay", Callao, 2020; describing the physical level; describing the emotional level, and describing the level of balance presented by the children of the mentioned educational institutions.

Regarding the research background, we have Alonso and Pazos (2020) with their study entitled Perceived importance of motor skills in Early Childhood Education in schools in Vigo-Spain. It was observed that the teachers surveyed made known the priority of working motor skills with infants. However, they state that they do not give it the required attention. In view of the fact that only those who work in this line have obtained satisfactory results, they have requested the academic authorities to increase the number of hours for the implementation of motor skills in children from the earliest ages. There is also a study by Águila and López (2019), called Body, corporeality and education: a reflective view from Physical Education. This study states that two essential criteria must be taken into account and the reason for the execution of the motor part in educational institutions from the early years of studies: first, it allows the student to develop autonomously without being inhibited before others and, second, with its constant application it not only facilitates but also increases the cognitive part of the student.

On the other hand, there is the study by Jiménez and Romero (2019), called Strengthening gross motor skills in enclosed spaces, where he emphasizes that the application of motor skills not only strengthens the motor part, but also allows children to develop the cognitive, emotional and social parts. This, since the implementation of motor skills allows the child to develop in a totalizing way because none of the parts and/or bases of development is isolated, but at the time of execution everything is combined at the same time. In addition, the research conducted by Osorio-Rivera et al. (2019), called Effects of a comprehensive physical activity program on gross motor skills of children with functional diversity, provides an overview where the exercise of motor skills is a therapy in view of the fact that with the help of the right person the participant will achieve the development of skills and abilities that differs from one but that in turn gradually allows the development of their cognitive part.

However, for Aristizabal-Almanza et al. (2018), in their study Active learning for the development of psychomotor skills and teamwork, they mention that it is of vital importance the intervention of the facilitator based on a dynamic work where he or she puts into operation with regard to laterality, coordination and body control. This is done jointly with his or her peers, given that with a potential zone, the child can develop his or her motor skills, which will lead to strengthening his or her cognitive side through teamwork or joint work. In the same line, the research conducted by Cuesta et al. (2016), concerning The Contribution of Cooperative Games to Psychomotor Improvement in Children in Early Childhood Education, refers to the importance of working in groups and with a preponderance of games. These movements that occur when interacting with other children allow the infant to remember, imitate and seek other mechanisms to succeed in the playful activity that will benefit him/her in the acquisition and enhancement of his/her knowledge.

Early education proposes theoretical approaches that support the comprehensive care of children, one of them is the pedagogical foundation that guides the philosophical paradigms of the learning process of infants and the teaching of the mediator or tutor. In the process of evolution, there are proposals from different educational currents such as Froebel (1888), creator of kindergartens, proposing education for children centered on spontaneous and joyful child activity. In this way, playful activities allow infants to get to know themselves and others and to interact with the environment.

With this same perspective, Montessori (1937), who brings the commitment to early childhood education from a perspective of respect for the infant, giving him the importance of being a person who enjoys all the necessary conditions to learn, based on the principles of freedom, movement and uniqueness. She emphasizes that in children's learning there is an urgent need to consider the sensitive periods, order, usefulness of the hands and language, gross motor development, creating spaces of curiosity to potentiate from the simple to the complex, from the small to the immense. This allows harmonizing the whole of phenomena and motivating social interest. In addition, these mechanisms assist the infant in the assimilation of experiences in contact with the environment and sensory, academic, artistic and cultural materials.

Another aspect to consider in the proposal is the structure of the furniture according to the characteristics and needs of the children. From this approach, the following is highlighted: "Observe the beach is immense but it is formed by small particles of sand, so great works are made with small actions of life" (Barcia, 2015). That is to say, an education for life is proposed, from life and with life, which allows the child to communicate with the world, from the teaching role an active posture practice is promoted: "Everything by love, nothing by force".

Decroly (1907) encourages the implementation of centers of interest, where the subject of learning has direct contact with nature, promoting an education focused on the real conditions of the child's daily life. Freinet (1974) proposes the assembly as a strategy that allows the child to stimulate oral language, free drawing as part of expression, personal taste, creation and imagination. In addition to this, workshops are the motivational spaces for the child's interest in establishing communication with the elements of reality, being observation, experience and thought the generators of investigative attitudes.

Universidad en Internet (2020) indicates that the child has intrinsic curiosity in his being and is potentially capable of constructing his own knowledge in the environment where he is, making social interaction possible. He points out that the infant develops his cognitive capacity and expresses it through symbolic play, putting into practice problem solving. The teacher must respect the pace of learning, promote emotional well-being in the environment, within the family and context.

The theory of development, proposed by Piaget, is assumed in the High Scope Method (2017), expressing the importance of the tutor in the recognition of the characteristics of the child, who must provide experiential experiences for students in cognitive development, active learning, oral expression, experimentation and representation. Meanwhile, García (1967) manifests a personalized education from the humanistic approach, whose educational purposes are oriented to an education for life and the common good. It is necessary to rescue the uniqueness of the child, creativity and autonomy. Dewey (1957); Kilpatric (1918) and Tocón (1996) cited in Medina (2018), circumscribe their proposals in the project method that starts from a problematic situation, solving them to apply them to new contexts and promoting negotiation as a fundamental contribution.

The psycho-pedagogical foundations are based on pedagogical constructivism. The psychological sources are based on the assimilation-cognitive theory of Ausubel (2002), where it is emphasized that the subject of learning possesses knowledge that serves as an anchor to build new concepts, ideas and propositions. While genetic psychology, provided by Piaget (1969), focuses on the development of human thought and intelligence, the stages of intellectual operations that are conceived, the concepts of assimilation-accommodation and organization-balance; in addition to the genetic and socio-cultural aspects. On the other hand, there is the contribution of the socio-cultural psychology of Vygotsky (1934), referred to the higher psychic processes, highlighting the link between the development of thought and language. Also, linked to educational practices and teaching strategies, where the mediator and the person enter into dialogue and communication to reach concepts of greater complexity (ZDP). Pikler (1984) emphasizes that the postural development in infants of holding the head, crawling, sitting and walking do not influence the development of intelligence. However, the possibility of expression, manipulation and action are closely related to the construction of operative thinking. For Aucouturier (2005), the processes that originate infant motor skills are oriented to the identification of the body as an expression of the psyche, following Wallon's (1974) conception. Therefore, it is necessary for infants to live emotionally all their movements as a means of creating thought.

The scientific foundations developed by various disciplines demonstrate that the accompaniment of children from zero to five years of age is crucial for the formation of intelligence, personality and social growth, from conception to physical, intellectual, emotional and social development. The anthropological foundations, in our country, are presented as a melting pot, multicultural, multilingual, multiethnic, influenced by the fourth industrial revolution. The legal foundations are sustained in the Political Constitution of Peru in art. 1: "Defense of the person and respect for dignity, supreme goal of society and the state". And, the socio-economic foundations that, through studies, have shown that investing in early childhood (0-5) is an

investment and not an expense, allowing significant economic returns in the future.

Movement is a state of the human being that guarantees a healthy life, developing the personality in the growth and development of skills and abilities. Movements are performed thanks to the concentration and relaxation of various sets of muscles, with the sensory receptors located in the skin and the proprioceptive receptors of the muscles and tendons coming into operation. The latter serve the function of informing the nerve centers in the gait for movement.

Gross motor control encompasses all parts of the body that generate movement of the muscles and bones in a harmonious, balanced, and coordinated manner. Gross motor control is a milestone in an infant's development, which refines uncontrolled and involuntary movements as the neurological system matures and it is possible to coordinate the body by establishing forward-backward; up-down; in-out relationships. Likewise, the body schema, spatial-temporal structuring, rhythm, coordination and balance are basic areas of gross motor skills that should be worked on between the ages of zero and six years, prior to reading and writing. This link allows the infant to have a self-image based on movement and that development is the act of movement to thought. Here lies the importance of empowering five-year-old children in gross motor skills as a fundamental basis for fine motor coordination. In this way, the subject of learning constructs his or her thinking. For Piaget (1969), through bodily activity children learn, think, create and act in problem solving. Therefore, the development of intelligence originates from motor activity in the first years of life; knowledge and learning are articulated from the child's action in his environment. For his part, Aucouturier (2005) proposes the use of play activities or the child's actions in various experiences. This allows them to reach maturity, evidencing the passage from action to thinking; favoring feelings, emotions, the discovery of their body, space and time. Ajuriaguerra (1983) supports an education for body movements, understood as a therapy to reeducate children with learning and behavioral problems, considering the importance of posture, observation of objects, manipulation and tonic dialogue with the development of posture. The physical, emotional and balance levels are developed together and for a better understanding are described separately. On the physical level, the brain structure is located, where the encephalon directs the gross motor development (body), the mobilizing agent of the different activities; in addition to highlighting the state of mind. The encephalon and the spinal cord constitute the Central Nervous System (CNS), together with the Peripheral Nervous System (PNS), being these the controllers of all the movements of the organism and the mind. That is to say, the driver of these nervous systems is the encephalon, no other part of the human system can replace it. The nerve cells allow us to think, speak and write. Actually, the functioning of the brain is compared to the hydraulic branch (Descartes, 2002), indicating that information is transmitted in the form of fluids through systems of ducts and tubes. In our era it would be the same as that of an electronic computer.

The brainstem performs basic functions such as receiving information from the senses through the sensory regions: vision, touch, hearing, taste, balance; it controls the involuntary activity of the tongue, larynx, eyes, facial muscles mediated by the motor neurons of these areas. It also controls sleep states and arousal levels through the reticular formation located in the central nucleus, coordinating with motor neurons in the spinal cord that control walking and breathing activities (heartbeat). The cerebellum, attached to the posterior part of the brainstem, is linked to motor activity, especially in the area of voluntary movements. In addition to this, it helps in the maintenance of balance and posture (Papalia, 2009).

Emotional level; the forebrain is the most developed region of the human brain, it is multifunctional, has the hypothalamus and is responsible for maintaining the balance of various body environments. It is related to the endocrine system, so it releases hormones from our body. The thalamus acts as a relay center of the cortex; the basal ganglia are large groups of cell bodies and are involved in body movements. The limbic system is related to emotional responses, memory and the cerebral cortex. The outer box of the brain is gray in color and is involved in higher level functions, with thinking, remembering and problem solving. The equilibrium level; the peripheral nervous system is formed by two types of nerves: sensory nerves that transmit information to the organs, body: skin, muscles to the brain; and, motor nerves that transmit information from the brain to the muscles and glands of the body, motor nerves can be part of the somatic and autonomic systems of the body (Papalia, 2009).

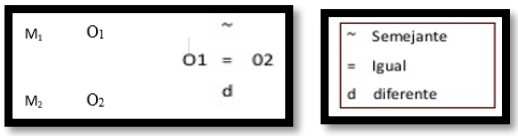
The motor component is developed through the muscular tonicity of the functions of balance, control, coordination and dissociation of movement and the development of motor efficiency: speed, precision, maintaining and recovering balance. Promoting activities that allow improving the aptitude in the motor task originates the maturity in the infant's personality, communication, relationships with others and with the environment. The body scheme allows the awareness of the body as a whole, interacting with body segments, space and surrounding objects; body knowledge and awareness of laterality. Spatial-temporal structuring involves

space in spatial adaptation, spatial notion, spatial orientation, spatial structuring and graphic space; time from temporal notion, temporal orientation, temporal structuring and rhythm: regulation of movement, adaptation to rhythm and repetition of rhythm. Finally, coordination and balance. Global dynamic coordination and visual-motor coordination, static balance and postural control and dynamic balance and postural control. The activities and exercises are necessary to develop gross motor skills, a cornerstone for the development of logical thinking and the ability to learn to read. Therefore, gross motor coordination is the basic foundation for fine motor skills, such as reading and writing, space, body schema, spatial-temporal structuring, coordination and balance.

Method

The type of study was descriptive because it describes the events or phenomena of an investigated reality, in a given situation (Hernández & Mendoza, 2018). The study describes the characteristics of five-year-old girls and boys of the mentioned educational institutions in real time, assessing the different elements of the investigated sample to enable possible research to deepen the levels of inquiry. Being the design non-experimental, due to the fact that the variable under study is not manipulated, it aims to describe the characteristics of a given event in time (Arias, 2012). The research was comparative, because it worked with two populations to identify the similarities and differences of the samples under study (Hurtado, 2010).

The diagram shows the research design:



Where

M1: Sample of children from a public institution.

M2: Sample of children from a private institution.

O1: Observation of the study.

O2: Observation of the study.

In relation to the operationalization of the variable, it is defined that the levels of gross motor skills are playful activities, which favor the passage from the pleasure of doing to the pleasure of thinking. It places the child in a situation of living emotionally the space, the objects and the relationship with the other, of discovering and being discovered. This represents a possibility to acquire and integrate without difficulty the context of his own body, space and time (Aucouturier, 2018). In addition, it is emphasized that language is the channel of expression, while movement and body are the means of manifestations of infants (Aucouturier and Mendel, 2004). In the same line, we have Le Boulch (1981), who perceives that motricity is the preferred means that accommodates the child to manifest his or her psyche.

Operationally, the variable is measured through the following dimensions: physical level, whose indicator was the brain structure; emotional level, being the indicators cognitive development, body activity and socio-affective aspect; finally, the level of balance, constituted by the indicators autonomy, sensory-perceptual aspect and spatial maturation, which were measured by means of a checklist.

Table 1.

Operationalization of the variable: Gross Motor Skills Level

Dimensions	Indicators	Items	Scales	Levels and Rank
Physical level	Brain structure	1. Moves the body in a coordinated manner 2. Coordinates the movement of the muscles to the rhythm of the music. 3. Enjoys body movement	Yes (2) No (1) Sometimes (0)	Achievement 18 - 20 Process 13 - 17 Home 0 - 12
Emotional level	Cognitive development	4. Easily remember the indications 5. Assimilates steps with ease		
	Body activity	6. It is observed that he thinks about the development of the activity. 7. Creates new movements 8. Facing problems of uncoordination		
	Socio-affective aspect	9. Expresses joy		
Balance level	Autonomy	10. Demonstrates balance and body control		
	Sensory-perceptual aspects	11. Explores with his body in dance 12. He investigates with his body in the dance		
	Spatial maturation	13. Agility is evidenced by 14. Coordinates arms and legs 15. Presents a position and stance towards the activity. 16. It is agile 17. It has strength in its movements 18. Paces the body according to speed 19. Demonstrates spatial organization 20. Demonstrates spatial structuring		

It is understood that the population is the totality of individuals and that they enjoy the characteristics in common in a period and space (Hernández et al., 2014). In this case, it consisted of 34 five-year-old boys and girls from educational institution No. 0345, Lima, and 22 boys and girls from public school No. 166 "Warma Kuyay", Callao; both state schools. The sample coincides with the population, being the study of census type (Hernández and Mendoza, 2014). The observation technique was used and as an instrument the checklist, following the procedures with the objective of identifying, establishing the data record, recording the data, examining and interpreting the data; finally, issuing conclusions (Arias, 2006; Rivero, 2008; Martins and Palella, 2012).

The validity of the instrument was carried out through the expert judgment technique, being acceptable from the criteria of clarity, relevance and objectivity. Reliability was high at 0.911, according to Cronbach's Alpha coefficient. For data analysis, the descriptive statistical method was used, using a database in Microsoft Excel to later elaborate tables and graphs in the SPSS version 22 program.

Results

Table 2.

Level of gross motor skills in 5 year old children in the educational institutions N° 0345, Lima and I.E. Nº 166 "Warma Kuyay", Callao

Gross motor skills level	I.E. Nº 166 "Warma Kuyay", Callao		I. E. Nº 0345, Lima	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Home	3	14%	1	3%
Process	19	86%	15	44%
Achievement	0	0%	18	53%
Total	22	100%	34	100%

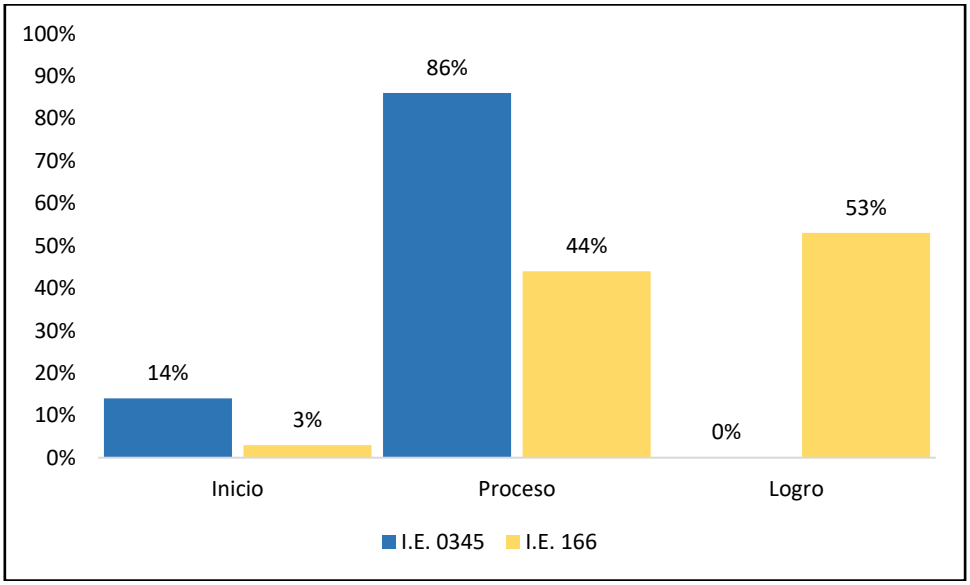


Figure 1.

Level of gross motor skills in 5 year old children in the educational institutions N° 0345, Lima and I.E. Nº 166 "Warma Kuyay", Callao

The descriptive results show that after the application of the checklist to the infants of the Educational Institution N°166 "Warma Kuyay" of Callao, 14% were found in the Beginning level of gross motor coordination; while the infants of the Educational Institution N° 0345 of Lima, 3% were located in the Beginning level of gross motor coordination. Eighty-six percent of the infants were classified at the level Process of gross motor coordination at Educational Institution N°166 "Warma Kuyay" in Callao, 44% of the children were at the level Process of gross motor coordination at Educational Institution Nº 0345, Lima. Finally, 53% of the infants were at the level

of Gross Motor Coordination Achievement in Educational Institution No. 0345, Lima.

Discussion

Alonso and Pazos (2020) identify the need on the part of teachers to attend to children's motor skills, requesting an increase in the number of hours in the training of infants from an early age. Águila and López (2019) agree that the organism, corporeality and education should be oriented from a reflective pedagogical practice in the area of Physical Education. This, taking into account the execution of the motor part in all educational institutions at all levels, especially in the first years of study, whose advantages achieved allows the autonomous development of the personality, being sociable and increases cognitive aspects. The descriptive results obtained in both public educational institutions show that 14% were at the beginning level of gross motor skills in Educational Institution N°166 "Warma Kuyay", 3% were at the beginning level of gross motor skills in Educational Institution Nº 0345 of Lima. Thus, it was evidenced that there is a lack of complementing the movement of the body, muscle in a coordinated manner, in addition to enjoying their own body movement. For Aucouturier (2018), monitoring in play activities favors the passage from pleasure "doing" to pleasure "thinking"; enabling the child to live emotionally the space, interact with objects, relating to the other discovering and discovering himself. In this way, the total integrity of the person is made possible in order to understand himself in the context of himself, of space and time. In this same visualization, Aucouturier and Mendel (2004) emphasize the development of language as a channel of expression of the infant towards his caregivers, mediators, mentors. Simultaneously, movement and the body are means of manifestation for the infant. In the same line, Le Boulch (1981) indicated that motor activity is the preferred means that accommodates the child to manifest his or her psyche. Here lies the complementation of knowledge, given the confining conditions that families have. Therefore, it is necessary for the family and early childhood education teachers to consider the elements of judgment to develop creative and innovative activities from the physical aspect, where psychomotor practice favors the harmonious development of the person and accompanies the processes of growth and development such as brain structuring (Aucouturier, 2018).

Regarding the emotional aspect, Jiménez and Romero (2019) propose the strengthening of gross motor skills in enclosed spaces. They specified that the gross segments of the body influence the cognitive and emotional aspects, considering the learning subject as a totalizing unit, conjugating in space and time. For their part, Osorio-Rivera et al. (2019) indicate that physical activity is integral due to the functional diversity that promotes these large extensions of the body; understood as a therapy, relaxation, internalization of the self. Finally, these activities lead to the development of abilities, skills that support cognitive development and the emergence of symbolic language. The results obtained were that 86% of the infants were classified in the level of gross motor skills process of the Educational Institution N°166 "Warma Kuyay" of Callao, 44% of the children are in the level of gross motor skills process of the Educational Institution Nº 0345, Lima. Therefore, the cognitive development is based on the memory that the children have when receiving the indications, assimilating the steps easily, performing the corporal activity through thought when developing the corporal activity. Through the socio-affective aspect, the infant is able to create new movements, face problems of incoordination and express joy. From the line of Aucouturier (2018), there is a relationship between the development of spontaneous playful games and movement, action, representation and expression of emotions (cognitive development, bodily activity, socio-affective aspect).

Aristizabal-Almanza et al. (2018) propose active learning in psychomotor development and group responsibility related to the aspects laterality, coordination and body control in a socialized process, identifying the infant's potential zone that will allow the strengthening of the cognitive aspect, being the role of the mediator the fundamental thing. Cuesta et al. (2016) develops cooperative games to improve psychomotor skills, emphasizing the child's interaction with peers. Through movement, these processes allow socialization, remembering, imitating, symbolic play, problem solving that will allow cementing knowledge. Finally, the results obtained in relation to the level of achievement of gross motor skills is 53% of the children of the Educational Institution No. 0345, Lima, presenting mastery of balance and body control, autonomy, in the sensory-perceptual aspect, explores and investigates with his body in dance, in spatial maturation is evident in his agility, coordinates arms and legs, presents a position and posture in front of the activity, has strength in his movements, carries the rhythm of the body according to the speed, shows spatial organization and demonstrates spatial structuring. From this perspective, Aucouturier (2018) mentions the relationship between the development of identity, autonomy, sensory-perceptual aspects, spatial maturation in the maturational processes represented by children in the conquest of the world.

Conclusions

It is described that the gross motor coordination presented by the five year old children of the Initial Educational Institution N°0345, Lima was 14% at the beginning level; 86% are in the process level of gross motor coordination and none obtains the level of achievement. Meanwhile, Educational Institution No. 166 "Warma Kuyay", located in the Callao Region, 3% of students reached the beginning level of gross motor coordination, 44% were in the process level of gross motor coordination, and 53% were in the achievement level of gross motor coordination. When contrasting both public educational institutions, it is observed that the 5 year old children of the Lima Region N°0345 obtain the level of achievement of gross motor coordination in 53%, than the infants of the Callao Region N° 166 "Warma Kuyay", who did not reach any achievement in gross motor coordination. Therefore, it is necessary to implement a continuous improvement plan considering the teachers as the central axis of the educational process that allows motivating and encouraging the 5 year old infants in both public educational institutions. This, to guarantee the emotional, physical and cognitive development, potentiating gross motor coordination. The dynamism of the activities suggested by the teachers will allow activating the gross motor development even in pandemic and discarding a sedentary education. At the same time, the study opens the way for future research from the mixed approach, which will allow from a dialectical perspective to move from the quantitative to the qualitative in times of change.

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