

Perinatal Anoxia (fetal distress), generating dyslexia, dysgraphia and other learning disturbances. (Updated summary of theoretical and practical research conducted by Lou de Olivier in 1996 and published as Monograph in 1997.)

INTRODUCTION:

When the brain undergoes any type of privation that is vital for its functioning (lack glucose, lack oxygen, etc.), undergoes changes. The longer the deprivation remains, the more severe the lesion, which develops. Following form:

A- Mental confusion: Affects the associations layer.

B- Sensitive alterations: Visual hallucinations, kinesthetic, etc.

C- Motor disorders: From mild motor in-coordination to convulsions. After these Three stages, if deprivation continues, it will lead to serious injury, destruction of tissues, the hypothalamus, medulla and cortex. And this process is irreversible. In sequence, without cortical activity, the individual begins to vegetate until death.

The decrease in oxygenation in the brain is called Anoxia (or for some authors, Hypoxia) (fetal distress) and occurs in the child mainly at the time of childbirth (for causes such as: Childbirth Cesarean section, prolonged labor, hypertonia, premature rupture of the water sac, anemia, Maternal asphyxia, etc.) Something between 30 to 60 seconds of choking can injure irreversibly the brain of a newborn. In less severe cases, Dyslexia, Dyscalculia and other learning problems, which may harm the whole school life of the child. In fact, any electrical shock to the brain or any deprivation that suffers can cause disturbances that Will oscillate according to the intensity of discharge or deprivation.

Note: Some authors accept anoxic limits ranging from 30 seconds to tree Minutes, but for Cole (1942), the first inspiration must occur within two Seconds, crying should occur after five seconds and breathing should be regularized 10 seconds after the head is detached. The delay of 30 seconds would already be excessive.

MATERIAL AND METHODS:

After extensive research, using little material (Current) available in English, Spanish and Portuguese reached a reasonable theoretical basis and it was realized the need to prove this theory in the practice. Three schools were selected for research, preschool with students six to seven year old middle class private school with students attending the first grade between the ages of six and seven middle and upper classes and a public school with pupils aged seven to eight years, also attending the first grade belonging to the middle / low classes, in a total of eighty students.

The criteria for class denomination were: value of tuition (when paid), standard of living (through research / questionnaire / interview), number of active or dependent members in the family, place of residence and family income.

This field research was started by proposing a meeting with parents, if the reason for this research, the importance of the follow-up that would be done, not only Research, but above all, for the learning of children and the need for of parental collaboration. At this first meeting, parents were asked to the "live birth declaration" of their children. This is a document that every hospital provides on the occasion of the birth of and it is so important that it is obligatory by law to take you to the Register the child. But, amazingly, the vast majority of parents (and even some teachers, pedagogical coordinators and directors), did not know. And of the eighty students, only four documents.

At first, this represented a certain degree of difficulty because it depended on this to detect a perinatal anoxia (fetal distress) through the "**Apgar index**", being this is the only way to accurately affirm the occurrence or not of Perinatal Anoxia (Fetal Distress). During one week, the students were accompanied in the classroom, in arts activities, math, dictation, essay writing and, at snack time, in Recreational activities. There was opportunity to see how much of them were dispersed and problematic, not only in learning, but also in the relationship with the teacher and with colleagues, but there was still no starting point, just that which had to be known to prove the theory.

After a week, with more emphasis on observation than on interaction with students, it was decided to create a questionnaire with specific questions that, answered with precision, would give elements to prove a possible perinatal anoxia, although, only by approximation. The questions were elaborated in a simple and direct way so that any parent could respond without problems, clarifying data how and place of birth, type of delivery, how long the child took to cry, if child and / or mother needed an oxygen balloon, if there are cases of diabetes and / or hypertension in the family, etc.

This time the return was much higher that is, of the eighty chips distributed, seventy Returned filled. Some details have been forgotten, some questions answered with a naive, "I do not know" or "I don't remember", but at least they returned approximately 88% of the chips. The follow-up of the eighty students was continued for another week, taking turns between the three schools that are strategically located near from one another. In the second week it was decided to close the monitoring of the twenty preschool students because the parents did not seem willing to collaborate, (all ten not returned chips were from this preschool), and the school did not provide sufficient infrastructure for this type of research.

Sixty first grade students from the first grade continued to be followed, being twenty in private school and forty in public school. In the third week of the opportunity to apply the tests came up: Trace Play /Cognitive development (Esther Pillar Grossi) and ABC (Lourenço Filho) in the students of the private school. These tests will be described in the public school sequence. All the students did reasonably well on the tests, including Rodrigo, the only one who, for deduction (through the answer sheet) may have suffered perinatal anoxia (fetal distress).

During the meeting of parents and teachers the researcher met again and discuss some of the learning problems detected in some students clarify the parents' doubts about their children, the researcher and even the Psycho-pedagogy, because the great reality is that most parents, teachers, Pedagogical coordinators and directors are totally unaware of what Psycho-pedagogue.

After this meeting, the public school was exclusively monitored. And just it can be verified the great difference between the reality of the public school and that of the particular. Public school students, for the most part, have a low standard of living. Their parents usually work all the day, they have many children, which prevents them from advising them. Mothers, when they become pregnant, rarely undergo prenatal care, do not have access to well-equipped hospitals; More vulnerable, subject to complicated and risky parturition. Another striking difference between the two schools is that while the parents of the "private school" asked questions and demands and the parents of preschool students refused to fill out a form, the parents of the "public school did everything to collaborate, even without understanding the purpose of the research.

The class at times became unbearable, but the teacher, extremely dedicated, always circumvented the situation. Have attempts made to these children, but they were dispersed (even by the presence of the Researcher in the classroom) and, therefore, could never finish their work. Theoretically, there was evidence that perinatal anoxia (fetal distress) may compromise learning, but in practice, not yet. All students appeared to have learning process and, even if it analyzed the records and the

behavior of the children, it was not possible to arrive at a logical conclusion.

Each of the forty patient record was carefully analyzed and ten which, by approximation, suggested perinatal anoxia. Researcher went to school again to see how many of them were in recovery. By a great coincidence, the recovery was starting that day and there was the opportunity to find seven of the 10 children who had been selected as possible victims of Perinatal Anoxia (fetal distress). A significant number which theoretically represents 70%.

On the same day, the tests "Trace Play" and "ABC" were applied to these seven children. These tests are: Trace Reproduction / Process Fundamentals Cognitive (Prof. Esther Pillar Grossi- with influence of Lauretta Bender- The Bender-Gestalt Test) This is a test consisting of twelve geometric figures that students need to reproduce each one on a blank sheet that they previously received. At should be shown to students for thirty seconds, then "Hidden" for students to reproduce on their sheets your memories of what they saw.

This class required that the figures be shown for almost sixty seconds each and, in some cases (intersection), also reproduce them on the blackboard. Really so some of them did not get a good reproduction. This test was collective. Of Test (Prof. Lourenço Filho), tests II, III and V were used, which consist of: Test III: There are three figures that must be reproduced in the air by the examiner, using his index finger. Then, the child, also using his index finger, should Imitate the movement made by the examiner. And finally, the child should reproduce these figures on paper. Each one's turn is obvious.

This sequence was followed three times, then the figures were drawn on the blackboard. And, even so, some students had problems in reproduction, as will be Analyzed soon. This test was applied collectively in sequence to the test cognitive. Test V: The following story is told: "Maria bought a doll. It was a beautiful doll. The doll had blue eyes and a yellow dress. But in the same day she bought it, the doll fell and broke. Maria cried a lot. "When to listen to this story, the child has to recount what understood of story just heard. This test was applied individually.

RATING CRITERIA:

TEST 1 - REPRODUCTION OF TRACES 1 and 2 - Distinction between open line and Closed 3- Distinction of duality 4- Topological notion of inclusion 5- Notion of Connection between duality (connection / union) Each hit equals one point. Note: For a more detailed assessment, it was considered necessary to add that the Total or partial alteration of the original figure, will give the child a score of 1 \ 2 and the No reproduction will be characterized as an X in Table 1, which will follow. 6- Distinction of duality = 0 Perception of integration = 1 Integration by a region in Common = 2 7- Union, notion of opposing half-lines = 1 8- Duality = 1 Inclusion = 1 One point for each intersection, a total of two points for each segment, Total of ten A point for each angle, a total of ten A point if more of Half of the segments are rectilinear 9 - Distinction of three separate curves = 0. Binding of two curves = 1 Addition of 1 index relative to third boundary = 2 Figure equivalent to the model = 3 10- Right number of borders = 1 Intersection only in the External border = + 1 11- Duality = 1 Qq. Approximation (pt./trace) between the two. Borders = 1 True intersection of a region = 1 A point for each segment, a total of twelve A point for each angle, a total of twelve a point if more half of the segments are rectilinear 12- Three boundaries without connection or interconnection between two frontiers = 1 Third border with some link with a of the other two = 2 Some connection between the three = 3 Perfect playback = 4

TOTAL GENERAL OF THE POINTS OF THIS TEST = 25 POINTS ABC TEST: II - Evocation of figures: 7 correct evocations = 3 points 4 to 6 correct evocations = 2 points 2 or 3 correct evocations = 1 point 1 or incorrect evocation = 0. A score will also be 0 (zero) if the child says

nothing. III - Reproduction of movements: good reproduction of the 3 figures, without inversion = 3 points. 2 figures well reproduced and 1 regular, without inversion = 2 points. Regular reproduction of the 3 figures, no inversion = 2 points. Poor reproduction of the 3 figures, being the same 1 irregular reproduction of 2 figures and 1 inverted = 1 score. 2 figures reproduced regularly, without inversion and 1 figure not inverted, but plotted by inverted motion = 1 point. Inversion of 2 or 3 figures = 0 (zero). 3 figures any = 0 (zero). V - story playback 3 capital actions and 3 minutiae = 3 points. 2 capital actions and 1 or 2 minutiae = 2 points. 3 capital actions, no minutia = 1 point. 2 capital actions and 1 to 3 minutiae = 1 point. 2 capital actions, no minutia = 0 (zero). 1 action and 1 to 3 minutiae = 0 (zero). If the child swims said, it will also score 0 (zero).

TOTAL OF THE POINTS OF THIS TEST = 9 POINTS RESULTS:

Analysis of test students (names are fictitious) The analyzes refer only to two more complex cases. Carlos: Born on 7/17/90, in a cesarean section after nine months pregnant. The mother had to use an oxygen balloon throughout the delivery, the child used balloon for a few hours, having been born with totally purple skin.

According to the mother, this child has passed the time of birth. There are cases of hypertension in the family. In the cognitive test, he was able to reproduce in a reasonable way figures 1, 2 and 3. After trying to reproduce figure 4 several times, it ended up reproducing again figure 3. It also failed to reproduce figure 6, confused it with to no. 5. It did not reproduce figures 7, 8, 9, 11 and 12. It reproduced figure 10 with 7. You were not able to reproduce the test figures III (ABC), not was able to write the "B", reproduced the "P", despite being copied from the blackboard.

Refused to do tests II and V, remaining silent all the time and not reacting to no question and / or encouragement. Before finishing the test, he got up from his wallet, ran to the door and began to beat it violently, not stopping until the supervisor, arrived and took him to the board. According to the book *Dyslexia (Implications of the Portuguese Writing System - First Edition - 1997 pg. 144)*, this child presents characteristics of "pure alexia" or pure verbal blindness (CVP), which can be caused by left occipital lesions in different locations and is characterized by serious problems of comprehension of written language, reading aloud and difficulty in copying since the child only reproduced four of the twelve figures of the first test and did not reproduce the figures from test III "ABC", even without able to copy the letters written on the blackboard. By the way, the child acted during the application of memory tests, totally alienated and then got up running to the door, repeating aggressive and continuous movements (beating violently the portal), it is assumed that it also has autistic characteristics. According to the *Manual Of Child Psychiatry, p. 698*, the autistic child has an inability to maintain the constancy of perception, which means to say that identical perceptions, From the environment, are not experienced as being the same every time. This disability results in an under-load or Central nervous system (E.M. Ornitz and E. R. Ritvo – 1968).

For B. Bettelheim (s / d), the autistic child only sees what makes sense to him and ignores all the stimuli without importance. It uses the senses not to apprehend the world, but to from frightening experiences. At a more "light" stage, it can be said that this child has borderline characteristics. According to the *Manual of Psychopathology Child, p. 149*, "school failure characterizes these children who, until they enter the school has had, in most cases, a normal psycho-motor development. "On pg. 150, complements: "the tendency to behavioral manifestations: Instability, reaction of prestige, being able to arrive at angry reactions before the failure".

These settings should also serve to justify Daniel's behavior (A child to be analyzed shortly after Carlos), because, besides not being able to reproduce None of the drawings, nor do any of the tests, Daniel, while trying to do a lesson Without success, has had several "hysterical attacks" (which have been reported to me by the teacher). Daniel: Was born on 12/2/90 in a normal birth after eight

months of pregnancy. According to parents, this child was born with myelitis, cannot explain, but the child was resuscitated and then operated. This child does not very slow in his learning. According to the teacher, there are usually crises that "Remember hysteria" every time you fail in writing, copying, etc. Sometimes he is Aggressive with colleagues and is sometimes dispersed to the extreme. Daniel tried, but not he was able to reproduce any figures from the first test. Also, failed Reproduce the figures from test III (ABC). In memory of words / figures, test II, he remembered cat, car and foot, which, in fact, is hand. From the story of test V, only Remembered the "girl who cried a lot". Wondering why the girl cried so much, he says he cannot remember. He goes on to say that he does not remember Questions like, "What was the girl's name?", "What did she buy?", etc.

Requested of the child who designed his family and this is the only material available for analysis. According to the Manual of Child Psychiatry, p. 249, this child presents Important disturbances by the fact that his drawing reproduces in a rudimentary way the human figures with particular traits (for example, the very tall brother with three Heads). According to the Manual of Child Psychopathology, pg. 244, "the difficulty of the drawing of the human figure: man tadpole, man without foundations, body shattered, proportions in view of age ... The essential problem remains the articulation between mental deficiency and the symptomatology of psychotic functioning conceived of both as witnesses of an antinomic organization (initial position of countless psychiatrists: only intelligent children could would be psychotic, the others being nothing more than weak), or as clinical behaviors which do not necessarily presuppose a proper etiopathy. "

DISCUSSION:

According to the classification of cognitive development proposed by Piaget, in the preoperative period, the child is led to develop its function Symbolic (or semiotic): language, imitation postponed, the mental image, the Drawing, symbolic play. Piaget calls the symbolic function "the capacity of Evoke objects or situations not currently perceived, using signs or symbols. " This symbolic function takes place between 3 and 7 years. (Manual of Psychopathology Children - pg. 37) On page 145 of the same manual, Piaget's proposal is described and Its followers in relation to the tests (term that replaces the test), which consist in a conversation with the child, in which arguments are exchanged, making it possible to the very structure of reasoning. In the preoperative period: that of intelligence representative (2 to 7 years), these tests rest on the genetic analysis of (circle, square, diamond) and then more complex.

According to Laretta Bender (Genetic psychometry pgs. 92, 93), at four years the child already draw two circular closed figures (fig.4). In the case of the closed diamond (fig.8), product of the superposition, it is possible to reproduce it from the age of six years. At five years, the child makes vertically oriented ovals (fig.3,5), which converts Gradually in multilateral at the age of six, while at seven, when a reversible operation allows it to return to the starting point of the analysis. From the age of seven, the child performs hexagons, although the angles are rounded and lacked symmetry in the sub-forms, especially in the obtuse angles, which tend to flatten because the change of direction is less clear. At four years of age, child effectively draws a circle that includes another (Figure 4), at age five, the shape acquires its horizontal orientation. At age six he can draw a multilateral that delineates like irregular hexagon one year later, occasion in which crib is counted with the more or less parallel sides of the hexagon in the line average.

Despite the proposal of Piaget to "soften" the tests and to be it is clear to Bender that only at the age of eleven can the child reproduce perfectly the model (obtuse angles), after coordinating schemes infra-logical properties of symmetry and parallelism together with a metric of proportions, the children tested fell far short of the average expected for their ages (seven years).

From the most serious cases like Daniel (who could not do any of the tests) or Carlos (who, in addition to little answer to the tests, still had a reaction choleric), to Joana and Sandra (who at least answered virtually every test), the children tested presented great difficulties of assimilation and reproduction of figures, whether geometric or not. And all children have in common, a very great difficulty of keeping details, seen or heard that is, have visual, auditory, and sequential memory failures. All are scattered, restless, some become hyperactive, except the girls Sandra and Joana who, in the reality, are shy and quiet about each other.

In summary, the seven children tested had cognitive, sensory-below average. As already specified in the Mark case and reaffirmed in other cases, all the children tested presented basic characteristics of dyslexia that are they confuse symmetrical letters, they have written in inversion and present with "estrefossimbolia", lateral dominance disorder, defended by numerous authors already cited, as specific for dyslexia. This is a given quite significant since all children tested, at some point, written mirrored / inverted. The other three children selected at first, who suggesting perinatal anoxia (fetal distress), although they have not been tested the fact that they did not need recovery, which leads me to believe that they are learning without problems.

Important note: Since 1996, when this research was conducted, until the year 2003, Lou de Olivier deepened his studies and proved that inverted writing may be natural at the beginning of literacy, the confusion of symmetric letters, in fact, is the incapacity identify the letter. The brain does not identify the letter, so it cannot read and, being unable to read, cannot write. Therefore, the dyslexic does not exchange or confuse letters, he does not identify them in your brain.

CONCLUSION:

Concluding, in a group of ten children, possible victims of anoxia seven of them had significant learning problems, memory, restlessness / hyperactivity or excessive shyness and, in the two severe, autistic and / or borderline characteristics. Confirming the research carried out by Kasen (1972) and already described in the chapter "Proven Studies" (page 19). It was observed that these seven children tested clearly showed the greatest difficulty of Learning of boys in relation to girls. These, in addition to being number (two girls to five troubled boys), still conquered the two highest scores in the sum of the tests, as specified in the Tables (p.38).

Reaffirming the placement on the breadth of auditory memory and understanding discussed in full in the Discussion chapter, page 50), all children many difficulties in the retention of images and quantity of information memorized, which characterizes them as potential detrimental neurogenic learning, limiting them, upon receiving a series of information, making them impossible to process and store them. Two cases stood out by its greater gravity, the first being Daniel, who, in addition to the common difficulties (as specified in the Discussion section, page 51), attempting, with no success, to reproduce the figures and remember the details heard in the story.

The second case, Carlos (quoted in the same page, which, in view of its difficulty in answering the questions, reacted cholera, and thus demonstrated borderline and even autistic characteristics, making it the most complex case since it belongs to a family with few and attending a public school, with many students and few chances to get special attention. In view of this, parents of the two to a health-post, so that they could be evaluated and passed more accurate examinations, which would more accurately accuse their degree of commitment. The teacher was guided in order to

better understand the limitations of the cases (the two girls) and the intermediaries (the other three cases). And the understand these children not only as dispersed and / or disinterested, but as Individuals who need more attention and stimulation, to the maximum of the normal pattern of learning expected for their ages ...

"This research, in addition to the learning disability probably caused by Perinatal anoxia, also showed us the disinformation of the professionals of Education; Not for disinterest, but to lack opportunities to expand, the schools that receive far more students than their physical, aiming only for profit, the naivety of parents who often do not even realize or refuse to believe that their children have problems, difficulties in school or outside.

The much that still needs to be done for the education of our children and that, only Now it begins to elucidate itself ... And, above all, it has shown that it can be more comfortable simply complain about the country's education system and say that nothing can be done. But undoubtedly it is immensely more rewarding and productive to seek the maximum possible knowledge and use it to promote change. If not an entire system, at least in the school where we teach, in the neighborhood where we live, or even only inside our homes with our children. If everyone can engage in improvement, however small, one day problematic children, in learning. Or in any mode, will no longer be statistics only to become adults who have managed to overcome their limitations. "

This research gave origin to the book "The Productive School" republished with the title Truths That Nobody Published and currently, in revised content, in the book Learning Disorders and behavior. All by Lou de Olivier.

The research also found several articles linking perinatal anoxia with acquired dyslexia with autism and the Borderline, being the main ones that follow:

Dyslexia Acquired:

Dyslexia Acquired, specifically, caused by general or perinatal anoxia (fetal distress) has been identified and researched since 1978 by the Psychotherapist and Psycho-pedagogue Lou de Oliver who, from an accident where anoxia occurred (Absence of oxygen in the brain) as a consequence of loss of memory and ability to read, classified and started to research the topic. In the period between 1978 and 1995 was widely researched culminating in publications from 1995, being that the official publications date from 1996/1997 in several newspapers, 1999 in the book The Productive School pg. 11, followed by publication updated in 2003 in the book. Learning Disorders / Behavior: Truths that no one has published pg. 13 and as of 2006 made official in the book Learning Disorders and Behavior currently in the sixth edition on page 50. In all of these Olivier claimed to be acquired dyslexia caused by accidents such as Cerebral Vascular Accident, perinatal anoxia/neonatal hypoxia (fetal distress). Among others.

The synthesis of this research is:

According to Olivier (2003) acquired dyslexia arises when the individual suffers some types of Brain injury, which he calls "electric shock in the brain." Dyslexia can be acquired when the individual goes through some types of trauma called stroke (Brain vascular accident), and the individual may have difficulty in reading and / or writing. Olivier also considers perinatal anoxia or Neonatal hypoxia (fetal distress) as the main cause of acquired dyslexia in neonates, In this case, acquired dyslexia will only manifest itself when the child begins to Literate, but having acquired dyslexia during her birth that is, that was generated with normal reading and writing acquisition suffer deprivation of oxygen during childbirth loses that capacity and becomes present the acquired dyslexia that will be latent when starting school studies.

Parallel research in Brazil and in other countries started to add to the scientific basis and is currently officially classified in the descriptors of World Health Sciences in English (Acquired Dyslexia), in Spanish and Portuguese where besides the denomination Acquired Dyslexia has the following synonyms: Acquired Disturbance from Reading, Acquired Alexia, Acquired Verbal Blindness. The official classification is as follows: Aphasia receptive activity characterized by the loss of the capacity previously acquired in understand the meaning or significance of handwritten words, despite the be intact. This condition may be associated with Cerebral Artery Infarction posterior and other cerebral diseases.

Lou de Olivier has been researching since 1978 and officially publishing these topics since 1996. And the full articles can be read in the books: Disorders of Learning and Behavior”, currently in the sixth edition and “Behavior Disorders and Learning Disorders”, first edition.

Bibliography:

Books: (Portuguese)

DE OLIVIER, Lou (1999). A Escola Produtiva: Como detectar e tratar os problemas de aprendizagem e de ensinagem. São Paulo – SP- Brasil: Scortecci;

DE OLIVIER, Lou (2003). Distúrbios de aprendizagem/comportamento: verdades que ninguém publicou. São Paulo- SP- Brasil: Scortecci;

DE OLIVIER, Lou (2006). Distúrbios de aprendizagem e de comportamento: como detectar, entender e tratar os problemas de aprendizagem. Rio de Janeiro- RJ - Brasil: WAK

DE OLIVIER, Lou (2008). Transtornos de comportamento e Distúrbios de aprendizagem: Rio de Janeiro – RJ - Brasil: WAK

Artigos e Dossiês: (Portuguese)

DE OLIVIER, LOU Dossiê Anoxia perinatal e dislexia adquirida em 18 páginas (Momentos que podem definir uma vida). Revista Psique Ciência e Vida número 90, pgs 35-50 - Junho 2013 – Editora Escala - São Paulo – SP - Brasil

DE OLIVIER, LOU Dossiê Hiperatividade não é distúrbio, é sintoma (incluindo a Hipoatividade) - Revista Psique Ciência e Vida número 81, páginas 35-52 – Setembro – 2012 - Editora Escala - São Paulo – SP - Brasil

DE OLIVIER, LOU – Artigo Dislexia Adquirida - Revista Sentidos 74 - Janeiro -Fevereiro 2013- Editora Escala - São Paulo – SP - Brasil

Websitegrafia:

(Portuguese and English)

<http://www.loudeolivier.com/>

<http://www.dislexiaadquirida.med.br>

<http://www.multiterapia.med.br>