

La estimulación temprana de la actividad cognoscitiva a niños síndrome de Down desde la educación ambiental

Early stimulation of cognitive activity in Down syndrome children through environmental education

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RESUMEN: La investigación aborda la estimulación temprana de la actividad cognoscitiva a niños síndrome de Down desde la educación ambiental. Para su desarrollo se aplicaron diferentes métodos y técnicas investigativas lo que permitieron realizar un estudio diagnóstico de la situación que presenta la preparación de los estudiantes de la carrera Licenciatura en Educación Preescolar. Se presentan una propuesta de acciones de preparación a los mismos que permitieron lograr mayor incidencia en la estimulación temprana de la actividad cognoscitiva en niños con síndrome de Down en la primera infancia desde la educación ambiental.

Palabras clave: Estimulación temprana; Actividad cognoscitiva; Síndrome de Down; Primera infancia; Educación ambiental.

ABSTRACT: The research addresses the early stimulation of cognitive activity in children with Down syndrome from the perspective of environmental education. For its development, different research methods and techniques were applied, which allowed a diagnostic study of the situation presented by the Preschool Education career in the initial training. Thus, the proposal of activities allows achieving greater incidence in the early stimulation of cognitive activity in children with Down syndrome in early childhood from environmental education.

Keywords: Early stimulation; Cognitive activity; Down syndrome; Early childhood; Environmental education.

Introduction

The study of early stimulation in children in early childhood is not a recent topic, although it is still

very controversial among physicians, psychologists, psychiatrists, pedagogues and a challenge in the XXI century.

Hence, early stimulation in all children in early childhood, especially those with Special Educational Needs (SEN) and specifically those diagnosed with Down syndrome should be focused on the acquisition and development of their abilities so that they can act with maturity, responsibility, develop their self-validism, acquire knowledge and skills that allow them to integrate as much as possible in the school, family and social environment from early childhood.

The deepening of the theoretical aspects on the early stimulation of the development of cognitive activity in children with Down syndrome from pedagogical positions, together with the deeper knowledge of this problem in the current pedagogical practice, make it possible to adopt a theoretical position that supports the possibility that the child in early childhood transforms its way of acting under the optimal guidance of the educator, which would favor its maximum intellectual development.

On this basis, guaranteeing inclusive, equitable and equal education and promoting lifelong learning opportunities is one of the objectives of the 2030 agenda, that is why the development of children in early childhood has been a priority in Cuba, from the III the improvement there are developed important changes with the establishment and strengthening of services.

The specialized bibliographic review related to the topic, shows important references in the works of national and foreign authors who focus on the study of early stimulation in people with Down syndrome.

At the national level, we find studies by (Zurita, 2003) who addressed early stimulation for comprehensive development in early childhood.

Other researchers emphasize the benefits of early stimulation, which provides creative development in children from early childhood and is one of the priorities of the Cuban educational system in environmental education.

Environmental education is defined as the formation of environmentally responsible citizens who contribute to sustainable development.

From the early stimulation of cognitive activity in Down syndrome, the researcher proposes activities that allow the educator to promote ecological awareness and care for the environment from early childhood.

The objective of the research is: to elaborate environmental education activities for the early stimulation of cognitive activity in children with Down syndrome in early childhood.

Development

Early stimulation is a very current topic and of great importance for different countries, so different researches related to the topic have been carried out. The variety of terminology such as: early stimulation, early stimulation, early care, early education or adequate stimulation is not the most significant thing, but the actions that each specialist assumes in his research in early childhood.

Using the criterion of (Betancourt, 2003), she claims that “The selection of one or another terminology is not, perhaps, the most important thing” and that: “What is fundamental is the conception that sustains it”, assuming in our research the term early stimulation.

The Cuban doctor (Fernández, 2008) states:

“Early and preschool stimulation constitutes a component or essential part of preventive work, it is defined as the system of comprehensive developmental actions that are embodied in a program or stimulation guide to enhance and promote the maximum development of children from early childhood, taking into account their life history, needs and developmental demands” (p. 10).

The above definition shows that all children need stimuli for the proper development of their motor, cognitive, emotional and adaptive capacities. In addition, understanding that the work of pedagogues and specialists who work in institutional and non-institutional ways should aim to stimulate from early childhood to those who need it, which starts from the correct orientation to parents, who play a key role in the development of the child, among those with Down syndrome.

Taking as a starting point that Special Education in Cuba has as experience more than 54 years of hard work in terms of prevention and/or compensation of children with any SEN associated or not to disability and as an objective of our research the Down Syndrome, it should be taken into account in the specific programs of early stimulation the cognitive abilities that can be developed in each of the stages of early childhood, bearing in mind the diagnosis issued.

Down syndromes have better visual than auditory capacity and their comprehension capacity is superior to that of expression, their language is scarce and appears with a certain delay, muscular atony also determines differences in the development of the ability to walk or in fine motor skills, for which the specialist of the institutionalized or non-institutionalized pathways must contemplate all these aspects which will allow evaluating the maximum development reached, the most appropriate adaptive and learning mechanisms in their early stimulation program according to the area to be compensated.

Taking the above as a starting point, it is possible to identify the most significant achievements in the development of this process in Cuba, they are: equal opportunities to life, education and development; more humane social attitude towards these people: support, solidarity; conditions for psycho-pedagogical, multidisciplinary diagnosis and its positivity; increasingly earlier diagnosis and comprehensive early stimulation system; introduction of the work algorithm for early stimulation; construction and development of an inclusive and integrative educational model.

(Hernández, 2014) considers cognitive development as part of Piaget's theory of cognitivism, where there must be a balance between the environment as an external part and personality as an internal part of an individual, which allows him/her to achieve development in the physical as well as intellectual area.

In early childhood the child actively builds his knowledge, according to his experience with the environment in which he develops, which will allow him to acquire greater cognitive skills from birth.

Cognitive development in early childhood should be analyzed as children move from a practical intelligence to an intuitive intelligence, that is, how they can reach the symbolic capacity, which is characteristic of human beings after receiving the appropriate stimuli from the environment.

Despite this, difficulties still persist in the stimulation of cognitive activity, caused by the lack of knowledge of the particularities of the development of children with Down syndrome, which prevents drawing appropriate and timely strategies with the aim of forming general skills from the early years in the education environment.

Therefore, any intention of early stimulation of cognitive activity in early childhood by the educator should not be presented to the child in a disorganized or improvised way. It is necessary to structure

a serious program that can be carried out by educators, parents and specialists who interact in the first six years of life.

In order to outline this program, some very important steps must be followed:

- Know the diagnosis of the child and the family to be stimulated.
- Define the principles that will guide our action (define the development that should be achieved by years of life and the one that has been achieved).
- Define the areas of development to be stimulated and the respective maturational dimensions.
- outline the general objectives of our action, (programs, manuals, strategies, methodology), the activities to be planned and their form of evaluation.

To guarantee an adequate development of cognitive activity in environmental education, it is necessary to work in teams of teachers, specialists, pedagogical assistants and the correct orientation to the family, which is perhaps the most important aspect, in which there should be a favorable environment for an active and collaborative participation of the child and the family, respecting each one of the achievements that should be reached in each one of the months of development, hence the vital importance of an adequate stimulation of cognitive activity in children with Down syndrome in early childhood.

Early stimulation of cognitive activity in children with or without disabilities helps to improve the development of memory, thinking, attention, executive functions or language, referring to all the knowledge of the infant as a biopsychosocial being.

From cognitive psychology, the being acquires a greater accumulation of information and experience that will allow him/her to interact with greater adaptability to the environment that surrounds him/her. Hence the importance attributed to the Down syndrome diagnostic entity in the research process.

Cognitive characteristics

This is the defining characteristic of this genetic alteration. However, it is not possible to relate intelligence with a physical trait of the syndrome, i.e., there is no direct relationship between mental disability and a physical trait (Ruiz, 2001).

In early childhood Down syndrome, cognitive functioning is affected, although it manifests itself in different ways, taking into account the degree of mild or moderate disability that may be present.

According to (Flórez, 2005), “comprehensive vocabulary and certain adaptive skills tend to develop at a faster rate than memory or executive function. However, the speed of learning as a whole is slower than that of the rest of the population.”

The child with Down syndrome has little capacity for orientation and concentration, which will impair the reception and assimilation of information received from the environment, requiring higher levels of assistance and time to respond to the order or information given.

According to (Flórez, 2005) memory is a process that allows us to record, encode, consolidate and store information so that, when we need it, we can access it and evoke it. Short-term memory is that which allows us to maintain or manage information for a short period of time, approximately a maximum of thirty seconds.

Infants with Down syndrome memorize images more easily and not concepts, due to the attention deficit they present, needing more visual stimuli to inhibit or retain responses.

As expressed by (Jimenez, 2012), who distinguishes two memory systems (implicit and explicit), people with Down syndrome keep intact the functions of implicit or episodic memory, while they have impoverished the functions of explicit memory.

Another of the cognitive processes is thinking, which in infants with this diagnosis presents specific characteristics as they have difficulties in decision making, their learning is slow, so the activities planned must be of interest and motivating.

According to (Piaget, 1973), thought directs language, this being one more manifestation of the symbolic function, one more product of our action on the environment. Thus, language is an instrument at the service of intellectual development and subsequent to it.

Language is the area in which these children seem to suffer the most important delay and the greatest difficulty in development, which is the reason for these difficulties:

- Problems in the perception and creation of sounds and canonical sequences of speech sounds, which form words (the phonemes of language).
- Limitations in short-term memory making the task of associating form with meaning more difficult.

➤ Limitations in identifying words and therefore their meaning.

The perception of children with this disability follows the developmental patterns of children without this syndrome, but with a certain delay. The same happens with expression, in general terms, since there are other difficulties that limit their development; taking into account the mental operations of the abstract level.

Difficulties in identifying word referents and, therefore, in constructing meaning.

The perception of children with Down syndrome follows the developmental patterns of people without disabilities, but with a certain delay. The same is true for language, in general terms, as there are other more specific or individual deficits that hinder its development. This difficulty also has to do with mental operations at the abstract level.

Therefore, the researcher considers it necessary that the child with this disability needs experience, which allows him to develop his level of thinking, his ability to reason, pay attention, follow instructions and react quickly to different situations that arise in his daily life.

On this basis, the author proposes activities that allow teachers to be better prepared theoretically and methodologically to address issues related to environmental education.

- Exploratory activity in their environment, recognizing their surroundings.
- Repetitive games related to environmental education.
- Narrate stories showing images and objects related to the surrounding environment.
- Show recordings where they listen to different sounds and can recognize the environment around them.

Conclusions

There are different trends and criteria about early stimulation, which are developed to provide adequate care in early childhood, but there is still insufficient information about the stimulation of cognitive activity in children with Down syndrome in early childhood related to environmental education.

In correspondence with the process of early stimulation of cognitive activity in children with Down syndrome in early childhood, corroborates the existence of the scientific problem and the need to offer a way of solution from science, so it was necessary to develop activities that will allow

teachers a better theoretical and methodological preparation to address issues related to environmental education.

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