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EVALUATION OF THE COMPREHENSIVE DEVELOPMENT OF GIRLS AND BOYS IN PRESCHOOL AND SCHOOL STAGE

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Abstract: This is a quantitative descriptive, comparative, cross-sectional and field research in which the comprehensive development of 70 girls and boys [at pre-school and school age] was evaluated through the application of the Development Profile Instrument [DP-3] with the purpose that the schools they attended could have a screening evaluation that would allow them to provide the specific attention that each participant required. The results showed that all areas of development were distributed in a range of categories that ranged from those considered very low, understood as high risk, to very high, indicated as protective factors in development. Specifically, it was found that both the area of motor skills and being children were the variables with the highest risk factors.

Keywords: Comprehensive Development, Childhood, Screening evaluation

INTRODUCTION

COMPREHENSIVE CHILD DEVELOPMENT (DII)

It is a concept that attempts to holistically address the competencies, skills and abilities that girls and boys present throughout the growth process that goes from birth to adolescence (Santi-León, 2019).

Martins and Ramallo (2015) explain that DII occurs from the interaction between biological, psychological, hereditary and genetic aspects with the environment or development context. They explain that for a boy or girl to reach their maximum potential, it is necessary that they receive the care of responsible adults who provide them with the ideal opportunities for optimal growth.

However, the United Nations Children's Fund [UNICEF] (2023), as well as Ramírez (2023) point out that contextual adversities such as social inequality, lack of economic resources, coupled with violence within homes

or Outside of them, they are considered common structural factors that increase the probability of experiencing delays in DII because they can become negative consequences related to health, education, income, as well as general well-being in the short and medium term.

Due to the breadth of the DII, it is necessary to subdivide it into areas in order to have a better study, as well as understanding. In this regard, UNICEF (2018) explains that it is a comprehensive process made up of: the physical, motor, cognitive and socio-emotional areas, which, during the first years, lay the foundations for optimal growth.

AREAS OF COMPREHENSIVE CHILD DEVELOPMENT

Assuming that a strategy used to analyze the DII completely is to segment it by areas, this section presents the main characteristics of each of them.

1. **Physical Area:** It understands changes in the size, physical complexion and function of the organism. It involves everything from genetics, physiological function at a cellular or molecular level to more complex processes such as the interaction of metabolic processes, nutrition and health status (Hernández, et al., 2020).
2. **Motor Area:** Includes motor skills that are acquired as the Central Nervous System matures, it is subdivided into gross motor skills and fine motor skills. The first covers the large muscles of the body and is expressed in skills such as climbing, running or throwing, among others; For its part, fine motor skills are associated with small muscles such as the hand and fingers and include skills such as pinching or writing, among others (Herrera & Gutiérrez, 2023).

3. Cognitive Area: It includes skills that involve using memory, achieving planning, being able to organize ideas and objects, as well as possessing strategies for solving problems (De la Cruz & Rodríguez, 2022).
4. Socio-emotional Area: Includes the boy or girl's ability to assertively express their emotions, which means they can recognize them and modulate their expression. By achieving this, it will allow you to understand the emotions of others and respond appropriately to the emotions of others (Olhaberry & Sieverson, 2022).
5. Communication Area: Implies the ability of the girl or boy to communicate expressively in such a way that they can make their needs and ideas known to others and, at the same time, entails the ability to receptively understand what others tell them. They try to communicate, therefore, it requires verbal skills, as well as the understanding of non-verbal language (Durand, et al., 2020).
6. Adaptive behavior: It includes skills learned and promoted by primary caregivers who promote strategies that allow them to survive in daily life and in which the conceptual, social, and practical domains are involved. It involves activities such as dressing, performing daily tasks at home, using means of transportation, among others (Lagos, et al., 2022).

It must be noted that each of these areas are directly influenced by the people the children interact with, as well as the environment in which they develop; which can become a protective factor if children receive the necessary care and attention, or become a risk factor if they lack these. The way in which normal development can be established or

not is through medical and psychological evaluations.

COMPREHENSIVE CHILD DEVELOPMENT ASSESSMENT

Evaluating DII requires multidisciplinary work, specifically, the physical area is attended to by pediatric doctors; However, the rest of the areas are assessed by psychology experts who use different instruments to achieve a comprehensive analysis of the development of girls and boys.

From psychology, the DII can be evaluated using three types of resources:

1. Evaluate the DII from the different areas using different psychological instruments [each one measures a specific area]. For example, generally, the Wechsler Intelligence Scales are used for preschool and primary levels [WPPSI III] (Wechsler, 2011) and for children [WISC V] (Wechsler, 2024) in order to evaluate the cognitive area; Frostig's Visual Perception Assessment Method (Hammil, et al., 2016) is used to assess fine motor skills; The Adaptive Behavior Assessment System [ABAS-II] (Harrison & Oakland, 2021) to determine the level of daily skills that children possess, among other psychological tests in order to have an evaluation of the DII.
2. Evaluate the DII through direct application tests with children using instruments such as the Revised Merrill Palmer Development Scales (Roid & Sampers, 2011), Batelle Development Inventory (Newborg, et al., 2011) or the Child Development Assessment Test. [EDI] (SSA, 2021) in which a single instrument is used to evaluate the different areas of the DII and obtain a general development index.

3. Evaluate the DII from the reports of primary caregivers such as the Child Development Assessment [EDI] instrument (SSA, 2021) or the Developmental Profile- 3 [DP-3] (Alpern, 2018), in which an interview or a questionnaire with the purpose of investigating behaviors associated with child development.

It is important to note that all three resources can be used in the same evaluation process, selecting two of them and even using only one.

Specifically, when it comes to a screening or initial evaluation [which are used in both the clinical and educational settings] it is suggested to use instruments that are based on the stories provided by the main caregivers, because they are the ones who observe in their daily lives the behavior of children and can provide sufficient elements to establish the need to carry out a specific or in-depth evaluation in which it is necessary to apply other psychological instruments directly to the children.

Another advantage of using this type of instruments or psychological tests is that perhaps in the evaluation space it is not possible to detect behaviors that primary caregivers recognize in their developmental context such as home or school.

Considering the above, this research was proposed with the purpose of carrying out a psychological screening evaluation of the DII, to girls and boys who attended preschool and school level schools through the use of the Development Profile instrument [DP-3] (Alpern, 2018) as a recent initiation process in the school environment or that were detected by school authorities as cases that require special attention.

METHOD

GENERAL OBJECTIVE

Evaluate comprehensive child development based on observations by fathers, mothers and/or primary caregivers of children who are studying at preschool and school levels in order to provide strategies for their comprehensive strengthening.

SPECIFIC OBJECTIVES

1. Detect girls and boys who have just entered preschool and primary schools with the purpose of carrying out a DII screening evaluation.
2. Detect girls and boys considered by school authorities as those who required a DII screening evaluation.
3. Apply the Development Profile instrument - 3 [DP-3] (Alpern, 2018) in the form of a questionnaire to fathers, mothers and/or caregivers of the selected children, prior authorization, as well as signing the informed consent.
4. Establish a statistical analysis of the results from the implementation of the instrument.
5. Provide personalized feedback of results to each of the research participants.

TYPE OF STUDY

This is a research using a qualitative methodology of a descriptive, cross-sectional and field comparative type (Hernández, 2023).

PARTICIPANTS

Mothers, fathers and/or caregivers of 70 girls and boys between 3 and 11 years of age [M=6.61 / SD=1.91] [51.4% women, 45.7% men and 2.9% did not answer] with apparent normal development; who were selected from a targeted sampling in four different

educational institutions at the preschool and primary level.

The inclusion criteria is that they were students regularly enrolled in the four schools, in some cases they were new entrants and in others they were selected by the school authorities [psychologists] in order to be able to have an evaluation. integral of its development; coupled with obtaining informed consent for participation signed by the parents of the participants. The exclusion criteria involved those girls and boys who did not meet the aforementioned criteria or who did not give authorization from their legal guardians to participate in the research.

SCENARIOS

Four private schools for girls and boys at the preschool and school level.

INSTRUMENT

Development Profile [DP-3]: This is an instrument that aims to estimate the level of child development in five key areas (motor skills, adaptive behavior, socio-emotional, cognition and communication) based on the information provided by mothers, parents or caregivers through an interview or answering a questionnaire. The instrument evaluates girls and boys from 0 years and 0 months [0:00] to 12 years and 11 months [12:11] (Alpern, 2018).

It consists of 193 dichotomous items subdivided into different areas. Its scoring form is electronic and provides IQ scores [Mean = 100 and SD = 15] and percentiles based on age. It has scales in sections of 2 months for boys and girls under 2 years of age, in sections of 4 months for those aged 3 years, in sections of 6 months for those aged 4 to 6 years and in sections of 1 year for those of 7 to 12 years. It has an internal consistency of .85 (Alpern, 2018).

PROCEDURE

An approach was made to the authorities of each school to invite them to participate in the research. Within the agreements, it was established that each application would involve the return of the results to each participating primary caregiver, coupled with the preparation of a report with recommendations that would form part of the school record of each participating girl or boy.

Subsequently, the invitation to participate was sent to the parents, along with the informed consent for participation.

Once the consents were collected, the corresponding questionnaires were administered.

Finally, results analyzes were carried out, from which personalized reports were generated and the corresponding returns were made.

ETHICAL ASPECTS

In the implementation, the following ethical aspects were addressed: obtaining the signature of approval of the informed consent in which the purpose of the evaluation, confidentiality and ethical management of the information are explained in detail. Respect these agreements in light of the results obtained from the implementation of the research project. Verbally return the results to each of the participating main caregivers along with a series of recommendations linked to strengthening the DII of each participating girl and boy.

As a strategy to safeguard and protect information, it was agreed to deliver to each school the original protocols, the profiles obtained, along with the reports so that they would form part of the personal files of each participating boy or girl. It must be noted that primary caregivers could obtain a copy of the report at any time if they required it.

RESULTS

As a first step, the DP-3 allows obtaining information about the consistency or inconsistency of the responses by primary caregivers. In this regard, on the Inconsistency scale, 100% of the participants were located in the category called Normal, which means that they responded in a coherent and systematized manner. Therefore, all profiles were interpretable and the rest of the results of the scales and indices could be assessed [N=70].

Regarding the General Development Index, the IQ results were located on a scale of 54 to 140 points with a ME=101.92 and a SD=21.07, whose percentiles were in a range of 1 to 99%. When analyzed qualitatively, it was found that 5.7% were located in a category called Very Low, 15.7% in Low, 47.1% in Expected, 25.7% in High and 5.7% in Very High (Figure 1). These data express that the distribution of the results is broad, which implies that they range from a risk factor in the general stimulation of the DII to a protective factor in which girls and boys have received good support throughout their development.

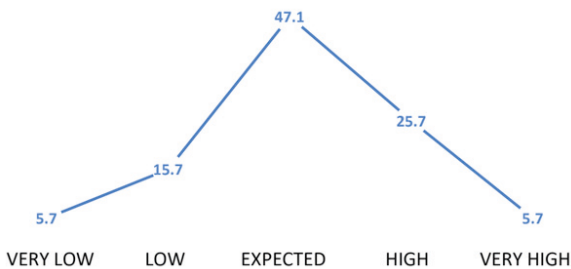


Figure 1. General Development Index

When performing the analysis by area, it was found that the Motor Scale measures the physical development and ability of the boy or girl to develop tasks that require muscular coordination, strength, flexibility and other motor skills (Alpern, 2018). The IQ results were located on a scale of 54 to 128 points with a ME=91.94 and a SD=18.17; whose

percentiles ranged from 1 to 97%. When analyzing them qualitatively, it was found that 14.3% were located in a category called Very Low, 18.6% in Low, 54.3% in Expected and 12.9% in High (Figure 2). In this area, no skills categorized as Very High were found. These results express that 67.4% of the participating children have a level of gross motor skills in which they make use of the large muscles of the body, maintain balance and coordinate the movement of the long limbs of their body; coupled with fine motor skills in which the smallest muscles come into play, which allows them to control more precise movements of the hand and fingers and includes aspects of visual-manual coordination. However, it is necessary to point out that in 21.4% of cases the results tend to be considered as an area of opportunity, which indicates that it is necessary to support them to strengthen this area.

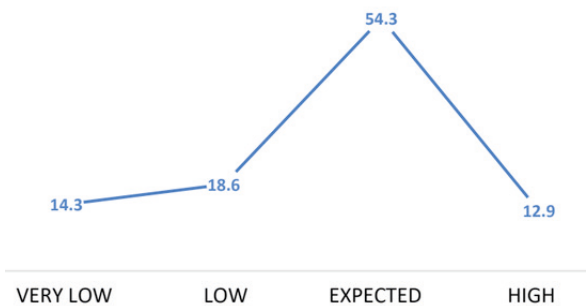


Figure 2. Motor Area

The Adaptive Behavior Scale evaluates the ability and maturity to face the daily demands of the environment (Alpern, 2018). The IQ results were located on a scale of 72 to 137 points with a ME=108.06 and a SD=18.89; whose percentiles were in a range of 3 to 99%. When analyzing them qualitatively, it was found that 12.9% were located in a category called Low, 47.1% in Expected, 28.6% in High and 11.4% in Very High (Figure 3). In this area, no skills categorized as Very Low were found. These results show that 87.1% of the participating children have self-care

and autonomy behaviors linked to eating, grooming and dressing that are expected or above what is expected for their age levels.

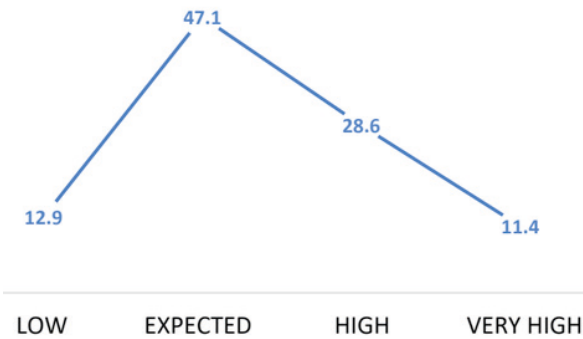


Figure 3. Adaptive Behavior

The Socio-Emotional Scale evaluates the abilities related to interpersonal relationships, the understanding of social and emotional aspects, as well as the way to act in certain situations in which one interacts with other people, therefore it reflects the degree of social competence. and emotional of the child (Alpern, 2018). The IQ results were located on a scale of 57 to 140 points with a ME=102.69 and a SD=19.75; whose percentiles were in a range of 1 to 99%. When analyzed qualitatively, it was found that 7.1% were located in a category called Very Low, 11.4% in Low, 71.4% in Expected, 10.0% in High and 1.4% in Very High (Figure 5). A wide range of categories was found in this area. These results show that 84.3% of the participating children have social skills to bond with their friends, relatives and other adults, coupled with the fact that they are capable of expressing their needs and feelings, as well as having a sense of identity and respect for others. social uses.

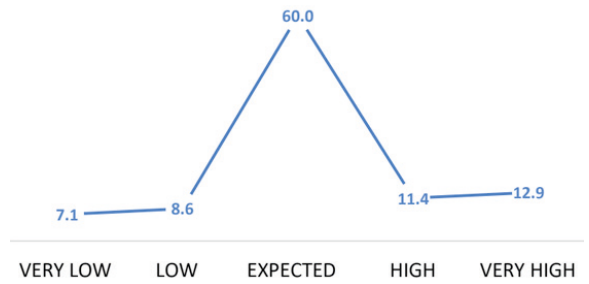


Figure 4. Socio-emotional Area

The Cognition Scale indirectly evaluates cognitive ability. It does not measure intelligence or performance directly, but rather the development skills necessary to achieve adequate performance in the academic and intellectual fields (Alpern, 2018). The IQ results were located on a scale of 57 to 140 points with a ME=99.69 and a SD=16.26; whose percentiles were in a range of 1 to 99%. When analyzing them qualitatively, it was found that 5.7% were located in a category called Very Low, 11.4% in Low, 71.4% in Expected, 10.0% in High and 1.4% in Very High (Figure 5). A wide range of categories was found in this area. These results express that 82.8% have previous skills necessary to achieve good school performance in fields such as reading, writing, mathematics, the use of computers and logic.

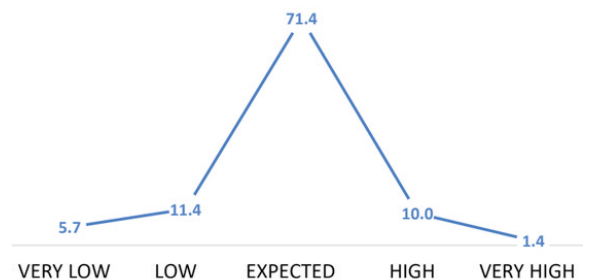


Figure 5. Cognition Area

The Communication Scale measures the capacity for expressive and receptive communication both verbally and in terms of non-verbal language. It includes aspects such as comprehension, oral expression,

gestural language and the ability to communicate effectively through the use of certain instruments such as the cell phone or computer (Alpern, 2018). The IQ results were located on a scale of 54 to 140 points with a ME=103.54 and a SD=20.78; whose percentiles were in a range of 1 to 99%. When analyzing them qualitatively, it was found that 5.7% were located in a category called Very Low, 8.6% in Low, 57.1% in Expected, 17.1% in High and 11.4% in Very High (Figure 6). A wide range of categories was found in this area. These results show that 85.6% of the participating children have the ability to understand spoken and written language, as well as to communicate using both verbal and non-verbal codes.

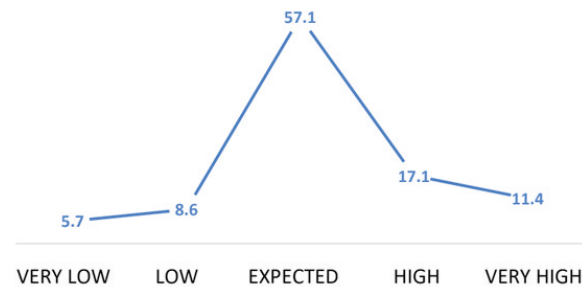


Figure 6. Communication Area

Subsequently, a statistical analysis was carried out using the Chi square statistical test in order to find statistically significant differences according to the biological sex of the participants. However, no significant differences were found in the results. Despite the above, it was possible to identify that the population group that presented the highest risk factors was men (Table 1), practically in all areas and general index, except socio-emotional.

| Index or Area | Very Low | | Low | | Expected | | High | | Very high | |
|---------------------------|----------|---|-----|---|----------|----|------|----|-----------|---|
| | h | M | h | M | h | M | h | M | h | M |
| General Development Index | 4 | 0 | 5 | 6 | 13 | 19 | 9 | 8 | 1 | 3 |
| Motor Area | 9 | 1 | 8 | 5 | 11 | 27 | 4 | 3 | 0 | 0 |
| Adaptive Behavior | 0 | 0 | 6 | 3 | 16 | 16 | 9 | 10 | 1 | 7 |
| Socio-emotional Area | 4 | 1 | 2 | 4 | 18 | 23 | 3 | 5 | 5 | 3 |
| Cognition Area | 2 | 2 | 3 | 4 | 23 | 26 | 4 | 3 | 0 | 1 |
| Communication Area | 3 | 1 | 2 | 3 | 20 | 19 | 4 | 8 | 3 | 5 |

Table 1. Analysis by sex and descriptive category

H = Male; M = Female; N=68

Because this was an analysis by biological sex, it was necessary to exclude two cases in which the primary caregivers did not report this information.

DISCUSSION AND CONCLUSION

As Martins and Ramallo (2015) point out, these results showed how primary caregivers can generate strategies so that girls and boys reach their maximum development potential. However, it was also possible to detect that, in the case of the children in this sample, they are at risk in their development, perhaps experiencing contextual adversities that do not promote skills for each age, since, due to the particular conditions of the sample, it can be excluded that economic conditions are intervening in its development potential.

A relevant aspect is that at the end of the analysis of results and the return of results it was possible to sensitize primary caregivers so that through simple strategies they can strengthen the development of the participating children.

Finally, the fact that educational institutions have screening evaluations allows them to have timely detections of the comprehensive development of girls and boys and, with this, to be able to make the corresponding curricular adjustments, as well as provide strategies

that can promote the strengthening of their development, together to have the active participation of primary caregivers, which would allow them to work together on the comprehensive well-being of the participating children.

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