

# Dysgraphia in Children's Emotional Development

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**Abstract:** *The learning disorder of literacy known as dysgraphia, can affect the emotional development of the child in aspects of growth, so its prevention is necessary. Evaluations were applied within the 5th year of general basic education of the "Bogotá" Educational Institution, where significant changes were observed in the personality and character of the child. Therefore, in Ecuador knowledge of neurocognitive processes must be deepened in children and be able to optimize the information process, improving meaningful learning, critical thinking and thus improve self - esteem and emotional development in students. The present study is justified by the learning difficulties that are externalized in the educational process of children, who present problems in writing performance. The role of those responsible for educational training is to know strategies that minimize this impact on the personality of the individual as such. However, in the teaching - learning process of children where problems have been observed in the assimilation of reading and writing, in the aspect such as pronunciation, comprehension and mathematical calculations*

**Keywords:** reading - writing process, emotional development, learning, warning

## 1. Introduction

Dysgraphia is a functional disorder that affects writing, as far as tracing or spelling is concerned. Different authors such as (Vayer, 1997) and (Defontaine, 1974), have defined the control of graphics as a neuro - perceptual - motor act. According to (Portellano, 1988) indicates that:

Dysgraphia is a disorder of writing that affects form or meaning being functional. It occurs in children with normal intellectual capacity with adequate stimulation in their environment and without intense neurological, sensory, affective or motor disorders" (p.43)

(Fernández, 2014) cited by (Castejón, 2015) states that "motor dysgraphia, due to incoordination or psychomotor alterations, are reflected in main aspects for writing, such as dissociated graphic movements, altered tonicity, graphic signs, undifferentiated, incorrect handling of the pencil, among others". (p.49).

This work focuses on dysgraphia - performance writer which is a disorder characterized by difficulty writing. However, its detection in early care can prevent damage or personality disorders that are prominent characteristics in certain children. The lack of detection, diagnosis and treatment leads to consequences in adult life, this neurodevelopmental disorder problem affects 15% to 20% of the child population (Fejerman, 2015).

Dysgraphia has two aspects in context, one is neurological related to aphasia because it depends on agraphia (silences/muteness), and the functional type that affects writing and spelling. Therefore, being a functional disorder it is necessary to take into account a series of conditions regarding intellectual capacity in normal limits, also the absence of severe sensory damage, cultural and pedagogical motivation, absence of serious neurological disorders, among others (Vásquez, 2016).

With the above, it can be said that neurodevelopmental disorders comprise a heterogeneous group of chronic disorders that are closely related, observed and appear in early childhood before they are incorporated into primary school. That is, together they share an alteration in the

acquisition of cognitive, motor language and social skills, which in turn significantly impact the child's personality socially and academically (Fejerman, 2015).

In the Educational Institution "Bogotá", learning problems have been observed, among them the most frequent writing, being the writing performance one of the usual drawbacks. However, it is necessary to emphasize that at present the problems of learning to write are very continuous in the development of oral and written expression skills, the same that occurs in the first years of general education.

The writing process is reached around the ages of two and eight, in this learning influences different variables such as diversity of abilities, learning rhythms, interests, motivations, socioeconomic level, genetic load, affective aspects, sometimes resulting in educational needs. Based on this, students advance in their learning with different rhythms (Castejón, 2015).

Dysgraphia can occur in children with significant emotional conflicts, who use incorrect writing as a way to draw attention unconsciously (Ministry of Education, 2013).

### Family and dysgraphia

Events occurring within the family, such as lack of parental attention, domestic violence, abuse or lack of authority, lack of work, infidelity, poor communication, trigger writing problems since it incurs directly on the child's self - esteem.

Being aware of these factors can minimize the consequences leading to important changes in the child's personal and school behavior. Low self - esteem as a result of lack of affectivity or demanding pressure exerted by parents, is the most common psychological cause that produces dysgraphia problems. Identifying dysgraphia problems early will prevent the child from failing and having a feeling of negativity. This kind of feeling is always behind problems of behavior and discipline.

### Emotional development

According to the development of childhood, children become aware of their own emotions and their effects; This refers to creating relationships about why emotions are different in them and in other people. They begin by recognizing the facial expression to differentiate emotions

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and from this being able to intuit actions with respect to their environment and what they visualize in the expressions of other people. (Izard, 1994).

The objectives that the child sets with respect to other people and to themselves, show a change in relation to the approach. How children can express their emotions and feelings. This leads to important achievements at the level of compression, emotional regulation and empathic response. (López, Etxebarria, Fuentes, & Ortiz, 1999).

It should be noted that the emotional development of children is linked in the first stage of life, that is, between zero and seven years (Armus, 2012), at this stage the opportunities and capacities for a full exercise of the rights of a child who has to receive care in early childhood are potentiated and configured. From the birth of the child has the ability and need to relate socially and this develops with interaction with the mother or caregiver in this way influences their emotional, cognitive and social development.

**Relation between dysgraphia and emotional development**

Dysgraphia is a learning disorder that can lead to an emotional disorder since children have low self - esteem, isolation, disinterest, reluctance and even depression since they do not know the reasons why they can not write correctly. Children with learning disabilities may feel frustration, despair for not understanding a pedagogical subject, and may present inappropriate behaviors in the Educational Institution or in their family environment.

When a student with dysgraphia is in the school environment, and feeling that his learning pace is not the same as his peers and that he has difficulty completing written activities, it can cause teachers to rate him with low grades, feel unmotivated and even have problems with his peers. This can trigger the first signs of emotional distress, where in many cases when they are not detected in a timely manner they end in a school dropout.

Any negative attitude to learning problems in one or another environment can determine the child's experience of his difficulty which makes the child increase or decrease his self - esteem. Therefore, family involvement in the relationship

with dysgraphia is of great importance, both in reference to learning and emotional support. The role of containment and affective support is essential to promote security and improve their self - concept. The educational attitudes of assistance and personalized based on love, care and the establishment of adequate limits, without overprotection or restriction, helps them to better face their difficulty, feeling the support of their relatives or relatives in their difficulty, makes them see that they are accepted and loved.

Nor should the role of teachers be ignored in the early detection of the symptoms described in children, who must refer these cases to psychologists, who must analyze, make the respective referrals and provide the necessary help by reporting their result to the relevant school authorities.

The foundations proposed allow to establish the following research objective: To analyze the relationship between writing performance and emotional development in children in 5th year of basic education

**2. Methodology**

In the present research, a type of quantitative non - experimental design has been used. The design is based on the fact that there is no experimental manipulation of the variables, observation has been carried out and psychological batteries applied in their natural context. The type of analysis that has been performed corresponds to a correlational, trans - sectional or cross - sectional design since the variables were analyzed at a specific time. It is explanatory because cause and effect relationships were established from the facts, allowing with this method the analysis of the various problems presented by students with low writing performance and observed by the researcher so that they can intervene with a program and the necessary resources for its solution.

The population used in this study belongs to the boys and girls of the 5th year of basic education of the Institute "Bogotá" of the City of Quito - Ecuador, the ages range from 9 to 10 years, The sample corresponds to 30 students, 18 (60%) of the male gender and 12 (40%) to the female gender.

**Table 1:** Synthesis of variables, instruments and scoring

Variables	Instruments	Scoring
Writing performance	PROESCEvaluation	According to the scale of 5th year of basic education of the PROESC test From 0 - 107 writer performance problems. From 108 - 120 doubts in the writing performance. 121 to 132 hinders low level of written performance From 133 - 145 average level of writing performance. 146 - 168 High Performance Writer.
Emotional development in 5 - year - old boys and girls° Year of basic education.	Test CDE - 9 - 13 Emotional Development Questionnaire for boys and girls from 9 to 13 years old.	From 0 - 5 being of lower risk. From 6 - 10 reflectsincreasedrisk.

### 3. Results and Discussion

The results obtained after the descriptive analysis of the data are presented in this study. Then the results of the correlation between the variables and the comparison of the groups are described.

#### Descriptive statistics

The data reflected in the results table (table 2) can visualize the equitable distribution of the sample with respect to the writer performance variable.

#### Writing Performance Analysis

**Table 2:** Writing Performance Results

<i>Results EZAnalyze-Descriptive Statistics</i>	
Writing performance	
N Valid:	30,000
N Missing:	0,000
Stocking:	112,333
Median:	117,500
Fashion:	132,000
Standard deviation:	24,299
Minimum Value:	50,000
Maximum value:	145,000

#### Analysis of emotional development

The data reflected in the results table (Table 3) can visualize the equitable distribution of the sample with respect to the variable emotional development.

**Table 3:** Emotional Development Results

<i>Results EZAnalyze - Descriptives Statistics</i>	
Emotional Development	
N Valid:	30,000
N Missing:	0,000
Stocking:	5,267
Median:	6,000
Fashion:	6,000
Standard deviation:	1,760
Minimum Value:	1,000
Maximum value:	8,000

#### Descriptive analysis between written performance and emotional development

Next, the results found from the application of the PROESC test for the writer performance variable and the CDE - 9 - 13 Questionnaire for the emotional development variable are described, in Table 4 is the mean, median, standard deviation, minimum value and maximum value of the 30 students analyzed

**Table 4:** Descriptive statistics between writing performance and emotional development

Variables	Media	DT	Mín.	Máx.
Writing Performance	112,333	24,199	50,000	145,000
Emotional Development	5,267	1,760	1,000	8,000

According to the data obtained from the 30 students evaluated, contained in Table 4, the average of the PROESC test that analyzes the writing performance is 112.33 figure higher than the value of low writing performance. According to the scale of the test, students whose scores range between

0 and 107 have problems of poor writing performance, it should be noted that the standard deviation is 24 meaning that the data are grouped close to the average, the minimum value is 50 and the maximum is 145. From the CDE - 9 - 13 questionnaire the mean is 5.27 included in the intermediate range according to the questionnaire, in which 1 is a low value and 10 the maximum value, the standard deviation is 1.76, the minimum value 1 and the maximum value 8.

This research analyzed the relationship between writing performance and emotional development in children in the 5th year of basic education of the "Bogotá" Educational Institution. The results show that a group of students have poor writing performance and emotional development problems, which could worsen over time and become a dysgraphia disorder. In this way, the writing performance correlates positively in the emotional development of the children of basic education of the Educational Institution "Bogotá".

### 4. Conclusions

Therefore, taking into account all the above, the conclusions of this research can be summarized as follows:

Through the research carried out in the theoretical framework and the field study with the applied PROESC test, the presence of writing performance in children in 5th year of basic education was positively correlated, concluding that there is a group of students with low writing performance. There is a significant correlation with the detection of children with emotional development problems according to the CDE - 9 - 13 Questionnaire applied to students, presenting the mean value of 5.267 being in the range of emotional development problems.

It is necessary to continue investigating the neuropsychological bases of dysgraphia in Ecuador and the relationship with emotional development, in addition to other variables such as learning problems and emotional problems that limit the normal development of students, with an intervention plan in children who have problems in writing performance, the joint work of teachers, parents and Institutional psychologist so that the student is motivated in learning.

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