Study on the Development of Personality Traits in Children with Language Disorders and Children without Language Disorders

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Abstract

This study aims to investigate possible differences in the formation and development of personality traits for children with various language disorders and children who do not have language disorders from a neuropsychological perspective. The child's personality is a psychological and social construct with strong implications on how to relate it to the surrounding individuals and brain function. During childhood, the individual manifests a variety of typologies of behavior and attitudes depending on the context in which they are, so personality traits are formed as a result of existing interactions and the family and educational context. In the case of children with different language disorders, the personality must be structured in a more secure and stable emotional environment, leading to the development of adaptation capacities to the external environment and an increase in stress resistance. Emotions and moods play a significant role in the development of personality traits. In this sense, we have started the research that aims to analyze the personality traits of children with speech difficulties and those who do not have these difficulties. The participants in this study are 60 children aged 7-12 years old from urban areas. The method used is represented by the HiPIC - Hierarchical Personality Inventory for Children (I Mervielde and Filip de Fruyt), a psychological tool for assessing the personality of children aged 6 to 13 and is based on the established Big Five model. The inventory is a personality HiPIC contains 144 items and allows the evaluation of the emotional, interpersonal, motivational and behavioral style of children based on the five dimensions of personality. Parametric statistical methods were used to identify possible differences between the two groups of participants in research. Also factor loadings and correlations between factors as results of exploratory factor analyses were evaluated. The study outputs confirms existing differences in the development of certain personality traits, the specificity being given by the situations experienced in the educational environment, the family environment and in the context of the process of recovering and improving the language disorders.

Keywords: Language Disorders; Personality Traits; Emotional; Children; Neuropsychology; Neuroscience.

1. Introduction

Personality should be seen as the most important psychological and social structure that an individual builds in relation to others. This could be interpreted by the effectiveness with which a person manages to stimulate positive reactions from others in different situations. Caspi (2000) considers personality as the total sum of the typical ways to act, think, and feel, by which each individual becomes unique. Childhood is a "crucial chance" to shape the individual's emotional predilections, since childhood habits are included in the synaptic networks of neural architecture and are difficult to change later (Goleman, 2001).

When we refer to personality development, it involves many changes, restructuring that can be considered vital. An important role at this stage, childhood and personality development is given by new factors such as: increasing personal relationships and experience, developing social knowledge, engaging in their own training process, and entering the life of the school community (Cretu, 2007).

Recent research into neuropsychology technology has opened up interesting possibilities for analyzing the neural mechanisms underlying language learning and development. The last decade has seen an increased interest in linking research to learning sciences and cognitive neuroscience on various topics of common interest such as language development, problem solving, learning difficulties (Goswami & Szucs, 2011). According to the literature, Openness is the most significant predictor of psychometric intelligence (Heaven & Ciarrochi, 2012). It is also associated with the acquisition of knowledge composing crystallized intelligence, such as information and vocabulary (Bates & Rock, 2004). People with high scores in Openness are more motivated to participate in different kinds of cognitive activities.

The aim of personality neuroscience is to understand both the biological systems that are responsible for the states associated with traits and the parameters of those systems that cause them to function differently in different individuals. DeYoung (2010) defines personality as being ,,individual's unique variation on the general evolutionary design for human nature, expressed as a developing pattern of dispositional traits, characteristic adaptations, and integrative life stories, complexly and differentially situated in culture''. From a neurocognitive perspective, personality is focused primarily on traits, which are relatively stable patterns of behavior, motivation, emotion, and cognition. In contrast to traits, characteristic adaptations and life stories describe the individual's specific responses to his or her particular life circumstances.

Norman (2003) stated that there is a strong correlation between Big Five personality factors (neuroticism, extraversion, openness, conscientiousness and acceptability), and children's conflict management strategies. Studies have shown that these five factors have the following descriptions: neuroticism, reflects individual differences as a child perceives and experiences the world as threatening, problematic and dangerous; extraversion, involves an active approach to the social world and includes features such as positive sociability, activity, assertiveness and emotionality; openness to experience, describes the breadth, depth, originality and complexity of the child's mental and experiential life; convenience, includes features such as altruism, tendency, trust and modesty and conscientiousness, describes control of socially prescribed impulses that ease task-oriented behavior, such as thinking before acting, compliance with rules and rules (Atashrooz, Behrooz, 2009).

Researchers (Garvey, Fogel, 2007) have defined personality traits as a set of characteristic dispositions that determine emotional, interpersonal, experimental, attitude and motivational styles. Personality dimensions, such as extraversion and neuroticism, have been shown to play an important role in the satisfaction of children's lives (Khosla, 2012).

Another significant aspect of children's personalities is given by how they are reflected in their academic achievements. Specialists have described the relationship between individual personal traits and academic achievements through the ability of general social adaptation, which we can call successful / unsuccessful socialization and specific adaptation to diversity (Saarni, 1999).

In the case of children with language disorders, the processes of recovery and education through cognitive stimulation, socialization, personal autonomy, occupational therapy, influence the personality of the individual through the skills they cause at the level of personality. This is supported by the personalization theory, which describes personality as the subject of the interpersonal relationship, being expressed in two psychological spheres: intra-individual (character, temperament, abilities, personality) and inter-individual (space that takes place in a group of relationships and reciprocal interactions). From this perspective, the results of language recovery appear in this dimension of personalization that contributes to the formation of student characteristics, especially in terms of self-esteem and self-image, quantitative and qualitative changes in positive emotions, behavior and attitudes (Novojenova & Sawilowsky, 1999). Positive emotions are an essential component of childhood personality development (Wang, Shi & Li, 2009). Body and emotional changes of the child are essential in the development of the self.). Regarding the state of well-being and the emergence of positive emotions, there are strong relationships between their existence and the five personality factors: emotional stability, extraversion, benevolence, imagination and consciousness (DeNeve & Cooper, 1998). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being.

One of the most important values that a person develops throughout his life is self-identity, which operates through self-confidence, self-esteem, and self-image in the relationship with the self and others (Horvath, 2012). Emotions guide the child to others by making him become more aware of his self (Gross & John, 2003). The importance of understanding and awareness of each individual's communication capabilities is a significant prerequisite for optimal cognitive adaptation to school and social needs. Various operations of thought, such as analysis, synthesis, or comparison allow each individual to make remarkable social progress, managing to best build those personality traits that are right and specific to their own temperament set (Griffits, 2007).

Strategies that teachers and therapists typically use in socializing negative emotions (sadness, anger, shame, fear) at different stages of development (childhood, adolescence) lead to mental health consequences (Saarni, 1999)). Emotional learning starts from the first moments of life and continues throughout childhood. Children develop a base of emotional perspectives and emotional capacity. During this time, strong stress can affect the ability of learning the brain (Goldberg, 1991).

2. Methodology

2.1. Aim

Analysis of how to develop and develop personality traits in children with language disorders and children who do not have language problems. Identifying the specific features of children's personality traits from a neuropsychological perspective.

2.1.1. Research Objectives

Identifying existing differences between children with language disorders and children without language disorders in terms of developing personality traits.

Making the neuropsychology picture of the personality traits of children with language disorders.

Making a specific picture of the personality traits of children in the urban environment.

2.1.2. Hypothesis

There are statistically significant differences in each personality traits between children with language disorders and those with no language disorders.

There is a specific picture of the personality traits of children in the urban environment.

2.2. Subjects

The sample consisted of 60 children aged 7-12 years old from urban areas. The subjects were both children with different language disorders, as well as children with a normal development of language, from urban areas. Voluntary participants were instructed before applying the questionnaire including on ethical issues in research.

2.3. Data Collection Method

The method used is represented by the HiPIC - Hierarchical Personality Inventory for Children (I Mervielde and Filip de Fruyt), a psychological tool for assessing the personality of children aged 6 to 13 and is based on the established Big Five model. The inventory is a personality HiPIC contains 144 items and allows the evaluation of the emotional, interpersonal, motivational and behavioral style of children based on the five dimensions of personality. The five dimensions of the questionnaire are: emotional stability (STAB E), extraversion (EXTR), imagination (IMAG), benevolence (BENEV) and conscientiousness (CONSTIINT).

2.4. Data Analysis

The data acquired after the psychological tool for assessing the personality of children aged 6 to 13 were explored through SPSS 13 program package. According to one-sample Kolmogorov-Smirnov test results, the five dimension of personality were establish to be normally distributed. So, the Independent t-test was appropriate for investigate the impact of group characteristic (i.e. presence or absence of language disorders) on personality traits. Exploratory factor analyses (Izquierdo, Olea & Abad 2014) and correlational analyses were used to search the link between personality traits.

3. Results and Discussions

3.1. Descriptive Statistics

Collected data was input into the SPSS statistical software. Because of the normal distribution of data (Table 1), we were able to apply the Independent t-test in order to investigate if are statistically significant differences between certain personality traits of children with normal language development and those with different language disorders.

Table 1 also shows descriptive statistics of the five personality traits investigated in this research for children with normal language development. As can be seen, the highest scores are obtained at the size of "imagination" and "benevolence". Taking into account the standard scores, we believe that the results obtained by the participants in this category are great, which leads us to build a picture of their personality traits focused on imagination, emotional stability and benevolence. Children who show a dominance of personality traits such as benevolence and imagination are characterized by positive attitude, eager to help, creativity, artistic activities.

Table 1. Results for descriptive statistics for five dimensions in children with normal development

		STAB E	EXTR	IMAG	BENEV	CONSTIINT
N		30	30	30	30	30
Normal Parameters[b,c]	Mean	**45.24**	**46.79**	**56.21**	**60.45**	**55.69**
	Std. Deviation	30.652	24.471	25.420	28.149	27.628
Most Extreme Differences	Absolute	.097	.085	.099	.219	.093
	Positive	.091	.066	.076	.131	.072
	Negative	-.097	-.085	-.099	-.219	-.093
Kolmogorov-Smirnov Z		.531	.468	.541	1.201	.509
Asymp. Sig. (2-tailed)		.941	.981	.932	.111	.958

In Table 2 One-Sample Kolmogorov-Smirnov Test was applied to identify the distribution of the data obtained from the test for children with language disorders. Also Table 2 shows the

descriptive statistics for the five dimensions of the personality analyzed in this study for children with different language deficits. The results presented in the table below show a normal distribution of data because the Asymp. Sig. (2-tailed) are greater than 0.05 which allows us to apply parametric tests for small groups in order to identify the differences between the two groups on personality traits.

Table 2. Results for descriptive statistics for five dimensions in children with language disorders

		STAB E	EXTR	IMAG	BENEV	CONSTIINT
N		30	30	30	30	30
Normal Parameters[b,c]	Mean	**42.03**	**40.17**	**37.86**	**38.79**	**49.90**
	Std. Deviation	32.775	29.111	30.936	39.564	37.747
Most Extreme Differences	Absolute	.135	.116	.173	.207	.168
	Positive	.135	.116	.173	.207	.155
	Negative	-.100	-.084	-.123	-.169	-.168
Kolmogorov-Smirnov Z		.739	.634	.947	1.133	.918
Asymp. Sig. (2-tailed)		.645	.817	.331	.153	.368

What it is interesting to overlook is that, on the one hand, lower scores were recorded for each of the five personality traits, and on the other hand the highest average was obtained at conscientiousness and emotional stability. From this we can extract the idea that, in their case, conscientiousness develops as a dominant personality trait and in the light of the gaps they present at the level of language. Even if they have these language difficulties, these children present a psychological picture of personality traits dominated by conscientiousness, emotional stability and extraversion.

3.2. Comparing the Average Results of the Two Groups

Taking into account the first hypothesis launched in this research on the differences between the two groups investigated in terms of personality traits, the Independent t-test was applied. Table 3 describes the Independent t-test results for the differences in the score of personality traits for the two categories of participants. There are statistically significant differences between children with language disorders and those with no language disorders only related to their imagination ($F=1.945$, $p< .05$) and benevolence ($F=6.827$, $p< .05$) (Table 3).

Positive, helpful and benevolent attitude is more common in children with a normal language development than those with language difficulties. Altruism and focusing on the needs of those around them are dominant for children in the first investigated group.

Table 3. Independent t-test results to determine the impact of group characteristic on personality traits

		Levene's Test for Equality of Variances		t-test for Equality of Means			
						95% Confidence Interval of the Difference	
		F	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
STAB E	Equal variances assumed	.439	.697	3.207	8.193	-13.193	19.607
	Equal variances not assumed		.697	3.207	8.193	-13.195	19.609

EXTR	Equal variances assumed	.805	.344	6.621	6.943	-7.278	20.519
	Equal variances not assumed		.344	6.621	6.943	-7.287	20.528
IMAG	Equal variances assumed	1.945	**.015**	18.345	7.310	3.712	32.978
	Equal variances not assumed		**.015**	18.345	7.310	3.700	32.990
BENEV	Equal variances assumed	6.827	**.018**	21.655	8.865	3.910	39.401
	Equal variances not assumed		**.018**	21.655	8.865	3.869	39.442
CONSTIINT	Equal variances assumed	7.441	.500	5.793	8.540	-11.303	22.889
	Equal variances not assumed		.501	5.793	8.540	-11.336	22.922

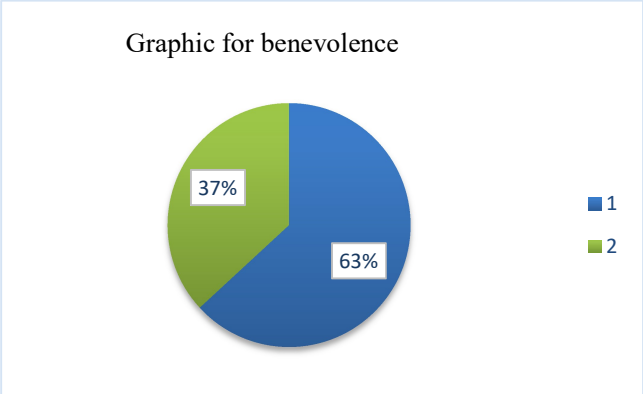

Figure 1. Graphic on the differences between the two groups - benevolence

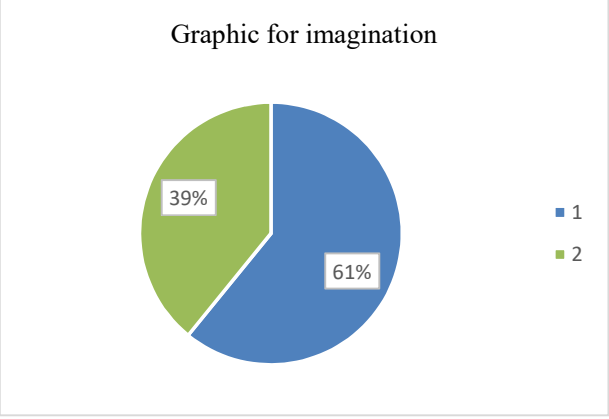

Figure 2. Graphic on the differences between the two groups – imagination

The two figures represent graphically the differences between the two groups of participants in this study for two of the analyzed dimensions, benevolence and imagination.
As can be seen in Figure 1, the percentage obtained by children with a normal development of language to size, benevolence is 63% compared to 37% obtained by children with language difficulties. It is necessary to intervene the specialists in the field to alleviate these difficulties, thus building and developing positive and benevolent attitude in the case of children with language deficiencies. The same considerations apply to size, curiosity, where the differences are similar.

3.3. Factor Structure of the Five Personality Traits

In this stage we investigated the factor structure of the five personality traits using the results obtained by HiPIC - Hierarchical Personality Inventory for Children (I Mervielde and Filip de Fruyt) psychological tool. Exploratory factor analysis (EFA) (Field 2006) in which principal axis factoring extraction with promax rotation was used to search the structure of the five personality traits (n=60). This analyses revealed that the item-factor structure of the psychological tool is unidimensional. The total variance accounted for one extracted factor with eigenvalues is greater than 1 was 50.558%. Factor loadings (Table 4) and correlations between factors (Table 5) were evaluated based on EFA results.

Table 4. Factor loadings (principal axis factoring extraction, promax rotation, one factor, n=60)

	Factor
	1
STAB E	.656
EXTR	.381
IMAG	**.744**
BENEV	**.899**
CONSTIINT	**.769**

It is observed (Table 4) that the factors with the highest load, which we consider to be the most representative for the model, in order of importance are: benevolence (0.899), consciousness (0.769) and imagination (0.744).

3.4. Correlations between Factors

Correlation analysis was performed between the most important psychological traits, i.e. benevolence and consciousness with the condition of constantly maintaining the effect of the extraversion variable on the two analyzed variables (Table 5 and Table 6).

Table 5. Correlation between benevolence and conscientiousness for children with normal development

		BENEV	CONSTIINT
BENEV	Pearson Correlation	1	.604**
	Sig. (2-tailed)		.000
	N	30	30
CONSTIINT	Pearson Correlation	.604**	1
	Sig. (2-tailed)	.000	
	N	30	30

Table 6. Correlation between benevolence and conscientiousness for children with language disorders

		BENEV	CONSTIINT
BENEV	Pearson Correlation	1	.832**
	Sig. (2-tailed)		.000
	N	30	30
CONSTIINT	Pearson Correlation	.832**	1
	Sig. (2-tailed)	.000	
	N	30	30

Table 7 and Table 8 highlights that extraversion as control variable has a low influences on relationship between *benevolence* and *conscientiousness*, both for children with normal language development and those with language disorders. After isolation the effect of the extraversion variable the correlation between benevolence and conscientiousness increases slightly from 0.604 to 0.606 for children with normal language development and from 0.832 to 0.840 for those with language disorders. The benevolent attitude, the opening to the needs of others and the conscientiousness of personal actions are in a strong connection when the personality factor, extravagance, which is present for these children.

Table 7. Partial correlation between benevolence and conscientiousness for children with normal development; extraversion as control variable

Control Variables			BENEV	CONSTIINT
EXTR	BENEV	Correlation	1.000	.606
		Significance (2-tailed)	.	.000
		df	0	27
	CONSTIINT	Correlation	.606**	1.000
		Significance (2-tailed)	.000	.
		df	27	0

Table 8. Partial correlation between benevolence and conscientiousness for children with language disorders; extraversion as control variable

Control Variables			BENEV	CONSTIINT
EXTR	BENEV	Correlation	1.000	.840
		Significance (2-tailed)	.	.000
		df	0	27
	CONSTIINT	Correlation	.840**	1.000
		Significance (2-tailed)	.000	.
		df	27	0

Therefore, maintaining constant the influence of extraversion variable we noted a significant positive correlation between conscientiousness and benevolence, both for children with normal language development and those with language disorders. But the effect of consciousness on benevolence is stronger for children with language disorders (r(28)=0.840) than those with normal development (r(28)=0.606).

4. Conclusions

The present study was conducted to explore the differences between children with normal language development and those with language difficulties. We also intend to build a psychological picture of personality traits based on a sample of 60 subjects on which has been applied the HiPIC - Hierarchical Personality Inventory for Children. The results of this research allow us to express the following conclusions:

- children with a normal development of language have a dominant personality trait, benevolent, which implies open, positive attitude, orientation towards other;
- children with language difficulties have the dominant personality trait, the conscientiousness, which is responsibility, perseverance, seriousness in accomplishing the tasks.

The strong correlation between the benevolence and consciousness mediated by the extraversion personality factor highlights the essential role that open attitudes, the knowledge of one's own personality, and the building of healthy relationships with people around him, play a sense of conscientiousness, responsibility and orientation towards the needs and feelings of others. Therefore, the specific picture of personality traits developed by children in this study shows a strong focus on extraversion, conscientiousness and emotional stability.

This study allows to investigate further hypotheses related to other dominant personality traits for the both subject categories. Our recommendations are materialized by the recognition of programs specialists and activities for building those personality traits that are presented with low scores.

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