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Intelligence Scale of children with visual impairment – professional version: performance by type and degree of disability

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ABSTRACT. The objective of this study was the research of the validity of a scale for assessing the intelligence of children with visual impairment. The instrument (Intelligence Scale of visually impaired children - professional version, EPIC-DV) is made up of 29 sentences that evaluate the areas of verbal, logical, quantitative reasoning and memory, which must be judged by a professional within a Likert scale of 5 points, regarding the intensity of the behavior present in the child that has been evaluated. The sample was integrated by 10 professionals from specialized institutions (M = 45.7 years, DP = 13.1) who evaluated 30 visually impaired children, aged between seven and twelve years (M = 9, 76, DP = 1.81), of both sexes and of different levels of schooling. Of all these, 8 were acquired deficiency and 22 were of the congenital type, while 23 were diagnosed with low vision and 7 with blindness. The results pointed out that most of the areas evaluated did not show significant differences between the groups according to the degree of disability. The influence of the variable type of disability was found only for verbal reasoning, with a better performance of those children with congenital deficiency. In general, the results suggest that the EPIC-DV can be used as a complementary follow-up tool, within a broader process and aimed at evaluating the cognitive abilities of children and adolescents with visual impairment, regardless of the grade or type of disability.

KEYWORDS. Visual Deficit, Vision Disorders, Cognitive Aptitude, Validity of the Test, Measures, Psychological Evaluation.

1. INTRODUCTION

Nowadays, it is observed that the topic of social inclusion, and the interest in studies aimed at minority populations have gained space within the Brazilian scientific environment (Cássia and Dardes, 2010, Francia-Freitas and Gil, 2012), especially in the area of psychological evaluation. However, there is a lack of psychological instruments aimed at meeting the demands of people with some type of disability (Nacimiento and Flores-Mendoza, 2007, Nicolaiewsky and Correa, 2009).

Regarding the psychological evaluation for people with visual disabilities, the situation is even more aggravating, since there are few studies and research related to the investigation of different psychological constructs, especially intelligence (Lobato, 2005, Masini, 1995).

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Such shortage can be understood by the difficulty of working with the specificities required by the disability, together with the long and demanding process of development of psychological instruments. In consequence, only a very limited number of researchers focus their efforts in that area.

According to Brambring and Troster (1994), this lack of instrumentation creates a gap in research and studies focused on the development and cognitive profile of children and adults with this feature. Although the national literature presents important research (Machado, 2011, Nunes and Lomónaco, 2008, Rabello, Motti and Gasparetto, 2007), the international scientific production has been much more advanced and extensive when it comes to Psychological evaluations of people with visual disabilities (Alonso, 2003; Celeste, 2006; Navarro and López, 2002), mainly in the area designed to build specific instruments to use with that population (Ballesteros, Barsida, Reales and Muñiz, 2003; Deverell, 2011). Some advantages can be cited as a result of an adequate evaluation, for instance, the improvement of the quality of life of people with that specific type of disability. Despite that, there is not enough instrumentation for such evaluation and, consequently, not enough knowledge on the field.

In Brazil, the list of psychological tests available for professional and commercial use (System of Evaluation of Psychological Tests, SATEPSI, prepared by the Federal Council of Psychology), points to the absence of instruments that have evidence of validity to be used in that population, to understand the cognitive abilities and abilities of children, especially those with some type of disability (Chiodi and Wechsler, 2009). The available tests for the evaluation of this construct in the Brazilian population are all directed to the general population, not presenting, in their manuals or normative tables, any studies or data that demonstrate their effectiveness for usage in that specific population.

In general, having specific instruments for these populations can help reduce errors in relation to diagnoses and/or poorly conducted processes (Campos and Nakano, 2014, Zanfelici and Oliveira, 2013). Therefore the importance of a differentiated look before the specificities, particularities, and care that are indispensable for the construction or adaptation of an instrument together with the visually impaired. This, in general, allows a better quality of evaluation, application, and understanding of the results of this population. (Baron, 2006; Bizerra, Cizauskas, Inglez y Franco, 2012; González, Piera, Salabert y Seba, 2002; Malta, Endriss, Rached, Moura y Ventura, 2006; Navarro y López, 2002; Nunes y Lomónaco, 2010; Sena y Carmo, 2005).

The visual impairment can be understood as the loss - partial or total, acquired or congenital - of the vision, composed of a complex structure that entangles physiological aspects, sensorial-motor function, perspective and psychological (Ministry of Education and Culture, 2001). Thus, it can be said that from an evaluative perspective it is necessary to consider any individual specificity in order to optimize the preserved functions involving even a more precise diagnosis.

The specific needs can be numerous (Scholl, 1982), alternating in relation to the age of manifestation of the visual problem, the manifestation form of the disability, etiology, type (acquired or congenital), degree of vision (total or low blindness in the case of some residual vision), in addition to individual styles and social aspects (Barraga, 1997, Lowenfeld, 1977, Norris, Spaulding and Brodie 1957). In this case, it must be clear that these specificities act in such a way as to alter the execution procedures of a certain activity, but not being associated with the learning capacity (Cunha, Enumo and Canal, 2011).

Thus, it is essential for the evaluator to have that information available, in order to qualify physical access to objects and the stimulation of the tactile and auditory senses, promoting equal evaluation conditions for all (Ballesteros et al., 2003, Bizerra et al., 2012). This enables the assess-

ment of cognitive skills to be standardized but also considering each evaluated in its specificities. (Verdugo, Caballo y Delgado, 1996; Camargo, Nardi y Veraszto, 2008; Rabello et al., 2007).

For instance, we can mention the differences due to the type and degree of disability. Considering the type, blindness consists of a picture of visual impairment in which there is a total loss of vision. Blind people can make use of remaining senses for their learning and development, such as the senses of touch, hearing, smell and palate, which help with the assimilation of information from external stimuli and enable the perception, analysis, and understanding of the environment (Laramara, nd).

In scientific terms, having as a reference the classification of visual limitations provided by the World Health Organization (WHO, www.portal.saude.gov.br), a blind person is someone who has a maximum visual acuity lower than 1/50 (0.02) or without light perception. They need spoken books, Braille system, voice output devices, software with voice synthesizers, walking stick, orientation / mobility training (Deficiente Online, nd). On the other hand, people with low vision, are classified when the vision capacity of the best eye does not exceed 30% in relation to what is considered normal vision, even with relevant treatment or use of glasses.

In the World Health Organization (WHO), the maximum visual acuity between 1/20 (0,05) and 1/10 (0,1), can make use of special aids to improve the visual resolution, such as non-optical aids, optical and electronic aids. Regarding the type, it should be clarified that a person with a congenital disability is someone who was born blind or with low vision. This is different from those who were able to see, but developed a disability throughout their life (González, 2007).

The differences point to a wide range of alterations that may be present in visual function: impairment in visual acuity, in color vision, in the visual field, in contrast sensitivity, in adaptation to light (Douglas et al., 2009). So the particularities of the people classified within that characteristic must be considered, given the heterogeneity of the picture, mainly if we find out that the forms of learning and contact with the environment are different, as pointed out by Almeida and Araújo (2013) and Dale and Sonksen. (2002). It must be considered that people with a congenital deficient gained knowledge and experience without the use of vision throughout their life, and those who have acquired a deficiency had the chance to see at some point of their lives.

In this way, it can be seen that the population with visual impairment is heterogeneous and, therefore, presents great variability and diversity in relation to vision (Gil, 2000). This means that, despite classifying a person according to the degree (low vision or blindness) or type of deficiency (acquired or congenital), there is a need to evaluate other important variables, such as: the ophthalmological diagnosis; the evolution; the etiology and its prognosis; and, mainly, visual functionality in relation to the degree of vision loss. Thus, the time of occurrence of the deficiency, the progression of visual loss, and the association or derivation with other diseases and should also be considered.

The visually impaired, regardless of type and grade, present a decrease in vision irreversibly (www.portal.saude.gov.br), in addition to some restrictions in relation to their abilities, and in terms of daily life routines, such as their speed of work, their mobility, capacity for spatial orientation and to perform tasks that require the use of vision (Caballo and Núñez, 2013). Given these specificities and similarities, it is relevant to consider these specificities in the psychological evaluation process so that the individuals are aware of their capacities and limitations.

Therefore, the professional who is working with the assessment of the cognitive abilities of the visually impaired should pay attention to those situations that allow him to know his patient,

beyond his or her answers. In this approach, the use of a broader procedure, which involves not only performance tests but also an external evaluation, makes this process even more extensive, though recommendable.

Based on this proposal, the development of intelligence assessment tests for children with visual impairment (PAIC-DV) was initiated. This consists of tasks that assess performance in four areas (verbal reasoning, memory, numerical reasoning and logical reasoning) and a scale to be answered by the teacher (Intelligence Scale for visually impaired children - professional version, EPIC-DV), the battery has been the aim of studies investigating its psychometric qualities.

The verbal, memory and logical subtest were evaluated in terms of their suitability to the target audience (Campos and Nakano, 2014), as well as the performance of visually impaired children with normovisuals, while still analyzing the influence of variables such as sex and age (Campos and Nakano, in press). The scale had its content validity investigated (Campos and Nakano, 2016). In the study reported here, the focus will be on the scale of the teacher.

External evaluations made by teachers have been recognized as tools that contribute to a more comprehensive understanding of cognitive development (Cunha, Enumo and Dias, 2009), by enabling the expansion of the perception of cognitive abilities, as well as intellectual conditions, motor and emotional affect adjustment perspectives. Although systematized, this type of evaluation allows the understanding of the needs of each student, as well as the elaboration of good considerations about their academic development, necessary changes and, mainly, they can help in the identification of flaws in the quality of the student's learning (Ferreira, 2002).

In this case, the evaluation made by the teachers admits functions of diagnostic comprehension of representative gaps in relation to the skills that contribute to the academic development and can help to direct and minimize the difficulties in teaching (Viana, 2013). This can be reflected by assuming a starting point of support to plan strategies and rethink pedagogical actions (Blasis, Falsarella and Alavarse, 2013).

Within the perspective of the importance of carrying out an evaluation that considers the specificities of the visual disability, as well as the particularities due to the type and degree, the present study aimed to investigate possible differences in the cognitive capacity between the groups of children with DV (congenital, acquired visual deficiency, blindness, and low vision), based on the teacher's evaluation. The importance of investigating possible differences between groups of children focuses on the need to clarify the heterogeneity and specificities of each type and grade. It should be clear that the study, in the way it was organized, also constituted an investigation of the psychometric qualities of the scale, but specifically, evidence of validity, in order to guarantee security in its use.

2. METHOD

2.1 Participants

The sample was composed of 10 professionals of both sexes, being eight female and two male, aged between 18 and 65 years (M = 45.70, DP = 13.17), which act in the care of children with visual impairment. Among that sample of professionals, seven were pedagogues, a physical educator, a physiotherapist and a computer teacher, who developed activities directly with visually impaired children, in specialized care institutions.

The selection criteria for the professionals involved in the research were established: A) the parti-

cipants should be professionals who act regularly and permanently in the institution selected for the study, in order to ensure, in this way, that the participants know the routine and operation of said institution; B) have contact with the child that will be evaluated for at least 3 months, in order to guarantee an adequate evaluation of their abilities; C) be professionals who are willing to receive the researcher during their work file or who are in the institution available to respond to the scale, in days and times previously programmed with them; D) agree to participate voluntarily in the investigation, through the signing of the term of free and informed consent.

These professionals carried out the evaluation of 30 visually impaired children, aged between 7 and 12 years (M = 9.76, DP = 1.81), of both sexes and of different levels of schooling. Of these, 8 had acquired deficiency and 22 of the congenital type, while 23 were still diagnosed with low vision and 7 with blindness. For each child, a professional responded to the Professional Perception Scale on Children's Intelligence.

2.2 Instrument

Intelligence Scale for children with visual impairment - professional version - EPIC-DV The scale was elaborated from the CHC Intelligence model and from the selection of some specific skills, especially those of fluid and crystallized intelligence (Alfonso, Flanagan and Radwan, 2005, Bueno, 2013, Cattel, 1998, Flanagan, Ortiz, Alfonso and Mascolo, 2002, Horn and Cattel, 1967, Hunt, 1996, Knox 1977, McGrew, 2005, Zampieri and Schelini, 2013). The version of the scale that was used is composed of 29 sentences, divided into four areas: (1) Verbal Reasoning, (2) Memory, (3) Numerical Reasoning (with seven items each); (4) Logical Reasoning (with eight items) (Campos and Nakano, 2016).

The Verbal Reasoning area assesses the understanding of the child's verbal domains regarding their ability to establish relationships between words and phrases. The idea is to see if the child is able to grasp meanings of words easily, as well as to understand them and also make use of reading and writing.

The Memory area is focused on evaluating the ability to memorize and remember concepts seized in the short term. The evaluator will have to understand the capacity associated with the maintenance of information in the conscience for a short period of time, in order to recover them immediately.

The area of Logical Reasoning seeks to evaluate the child's ability to understand deductive and inductive relationships. In this type of reasoning, the child has a mental image and is able to see it without being real, often being able to solve a problem or perform a task based on that mental image.

Finally, the Numeric Reasoning area aims to evaluate the quantitative ability defined as the understanding of basic quantitative concepts such as addition, subtraction, multiplication, division and manipulation of numerical symbols.

The teacher should read each of the sentences, analyze their content and evaluate the level of the child, selecting the one that best describes the him (within a five-point Likert scale: Performance well below expectations, performance slightly by below expectations, performance slightly above expectations, performance well above expectations, unable to judge). This last category was inserted due to the perception that the professional may not have information about the child's performance in all areas encompassed by the scale, so instead of forcing him to make a choice that it will not necessarily represent the real skill of the child, it was decided to create that alternative response.

The instrument should be answered by teachers and professionals who have at least three months of contact with the child and usually involves about ten to fifteen minutes. The assigned score varies from 1 to 4, providing 1 point for performance well below expectations, 2 points for performance slightly below expectations, 3 points for performance slightly above expectations and 4 points for performance above expectations. There is also the category Unable to Judge, in which the score reached is zero.

2.3 Procedure

Before the data collection process, the project was submitted and approved by the Research Ethics Committee of the institution. Then, contact was made with the institutions and after the authorization, all professionals who met the inclusion criteria were invited to participate. All professionals had access to the consent term of the investigation and only responded to the scale after they had signed.

In the cases in which a professional evaluated more than one child, this response process was carried out in the workplace and during the file, with authorization from the institutions. The researcher stayed in the place, keeping her distance, to clarify possible doubts.

2.4 Data analysis

In order to fulfill the proposal of this research, descriptive analyzes were conducted comparing the perception of each professional involved in this process, regarding the cognitive performance of visually impaired children considering the degree and type of disability.

The analyzes were carried out through non-parametric Mann-Whitney analysis, comparing the intragroup performance of children considering type and degree of deficiency, in order to find out if the differences in the averages found were significant. We opted for this type of analysis since the data were asymmetric and the number of participants small.

It should be noted that the descriptive statistical analyzes were performed using the statistical package IBM SPSS Statistics 20.0 (Statistical Package for the Social Sciences) for Windows®, (SPSS Inc., Chicago, IL, USA, 2008). The levels of significance adopted were: $p \leq 0.05$ for significant values, $p \leq 0.01$ for very significant values and $p \leq 0.001$ for highly significant values.

3. RESULTS

Initially, the results of the evaluations of teachers regarding the degree of disability, that is, children evaluated with blindness and low vision, comparing the performances in the measures of the four skills that make up the EPIC-DV, were calculated considering the total number of points assigned by the teacher's evaluation. Descriptive statistics by group are given in Table 1, as well as the average difference test for each of the measures of the scale.

As it can be seen in Table 1, no significant differences were found for the degree of deficiency in any of the skills evaluated by the scale, as well as for their total score. Thus, it was possible to verify that in this sample, the perception of professionals on intellectual performance is possibly independent from the influence of the type of disability, since children with low vision and children with blindness were evaluated in a similar way than the skills.

It must be taken into account that the data distribution for each classification (low vision x blindness), refers to a reduced sample of children, being 23 that make up the sample of children with

low vision and seven that make up the sample of children with blindness. In addition to the restricted number of participants, the inequality of participants in each condition should be considered as a limitation in the interpretation of the described results. Although the differences between the groups were not significant, it is noted that, in general, professionals tend to perceive children with low vision as more skilled than children with blindness, in most of the characteristics evaluated, since they were assigned higher averages, with the exception of logical reasoning, as it can be seen in Table 1.

Table 1. Descriptive statistics and averages difference test for degree of deficiency in the results of professional perception by EPIC-DV.

Factors	Degree of disability	M	DP	Highest score	U	Z	Sign
Verbal reasoning	Low vision	23,00	6,29	28	70,00	-0,10	0,917
	Blindness	22,66	8,64				
Memory	Low vision	20,91	4,53	28	64,00	-0,41	0,676
	Blindness	19,66	7,36				
Logical reasoning	Low vision	23,04	8,82	32	66,00	-0,31	0,755
	Blindness	24,16	10,64				
Numerical reasoning	Low vision	12,33	8,85	28	60,00	-0,62	0,533
	Blindness	10,16	5,67				
Total EPIC-DV	Low vision	79,29	24,89	116	69,60	-0,13	0,897
	Blindness	76,66	30,53				

Note: N(low vision)=23; N(blindness)=7; N(visual impairment experts): 10; Legend: **: Very significant value (p≤0,01); *: Significant value (p≤0,05).

The same type of analysis was conducted, though focused on the type of deficiency (acquired x congenital), again using the non-parametric Mann Whitney test, in the four skills included in the EPIC-DV. Again, the total number of points reached through the teacher's evaluation was considered for the analysis. The descriptive statistics are given in Table 2, as well as the test of difference of averages for each one of the measures of the scale.

Table 2. Descriptive statistics and averages difference test for the type of deficiency in the results of the perception of professionals by EPIC-DV.

Factors	Degree of disability	M	DP	Highest score	U	Z	Sign
Verbal reasoning	Acquired	17,16	8,88	28	34,00	-1,98	**0,050***
	Congenital	24,37	5,18				
Memory	Acquired	17,16	5,84	28	46,00	-1,35	0,191
	Congenital	21,54	4,6				
Logical reasoning	Acquired	20,83	6,52	32	61,00	-0,57	0,595
	Congenital	23,87	9,47				
Numerical reasoning	Acquired	12,33	4,96	28	64,50	-0,38	0,705
	Congenital	11,79	8,91				
Total of EPIC-DV	Acquired	67,50	23,43	116	52,00	-1,03	0,299
	Congenital	81,58	25,75				

Note: N (congenital deficiency) = 24; N (acquired deficiency) = 6; (Visual impairment experts and professionals): 10; Legend: **: Very significant value (p≤0,01); *: Significant value (p≤0,05).

According to Table 2 it is possible to notice that no significant differences were found in most of the skills regarding the type of disability, except for the Verbal Reasoning factor. In this type of cognitive ability, children with congenital deficiency obtained higher scores than those with an acquired disability. Thus, the results point to the differences between the two types of disability.

As previously mentioned, these results should be weighted, considering that the data distribution for each classification (congenital x acquired), refers to a reduced sample of children, being 24 that make up the sample of children with congenital deficiency and 6 that make up the sample of children with acquired disability. Therefore, this limitation should also be considered during the understanding of the described results.

4. DISCUSION

Unlike the initial hypothesis developed about the existence of cognitive differences between the different types of degrees of visual impairment, given the specificities of each table noted in the scientific literature, the results revealed more similarities than differences between groups. It is interesting how the external evaluation, carried out by the professor, confirmed previously found results about the nonexistence of these differences between the groups also in the performance tests (Campos & Nakano, 2014). Hence, it could be suggested that both types of evaluation (performance and external) seem to indicate similar results.

On the other hand, one of the hypothesis refers to the fact that the differences between the groups, if they exist, may not have been identified due to the fact that the EPIC-DV is carried out through external evaluation, through the perception of the professional. In this way, it is possible that the professional's evaluation had been more procedural, in order to know the person he or she is evaluating (criterion assumed to be considered suitable to perform the task). These differences may not have been identified.

This differs from the situation in regular local schools where a more generalized evaluation tendency can be observed, reflected on what was expected in relation to the student's age and/or schooling. In order for this doubt to be solved, it is suggested to carry out other types of evaluation, to deepen the investigations in relation to possible differences in performance, and individual research is necessary, through other instruments and/or evaluation methods. This framework reinforces the relevance of using the two measures together, within a broader perspective of evaluation.

Another hypothesis implies the possibility that, by working in institutions specialized in the care of that specific population, professionals have a deeper knowledge of the specific needs of these children, as well as clarifications about the fact that the lack of vision does not interfere in the intellectual and cognitive capacity, and it is only necessary to stimulate other sensory organs, as it has been recommended in the literature. Even though the visual sense is little or nonexistent, disabled people can develop various other skills that are favorable to them when faced with a variety of situations (Roberts, 1996).

Among these special needs, these children may take longer to perform some activities, mainly because of the need for greater use of tactile perception, which requires more time than the visual (Cerqueira and Ferreira, 1996; Oliveira, Biz. and Freire, 2011). To perform the tasks, these students need to manipulate and explore the object to know its characteristics and, later, make a detailed analysis of the parts to draw conclusions (MEC, 2007). The comprehension of these characteristics was included in the process of construction of the tests, as well as the scale, so that

the skills focused on these instruments were in accordance with the real potential of these individuals, to allow a contextualized and specific evaluation. It was sought, through the development of the instruments, to guarantee that, despite the type or degree of disability, such subjects could be evaluated and compared with others under conditions of equality.

It is worth noting that by involving the teacher in the task of assessing the cognitive development of their students, a possible factor that should not be disregarded is the bias in the answers. In case that the professional who has been invited to perform such evaluations is also directly responsible for the learning process and domain in which he is evaluating (Gottman and Clasen, 1972, Oliveira and Leite, 2000), some attention should be paid to that possibility. On the other hand, the relevance of that professional can be argued due to his more refined view, his professional practice and his particular knowledge of each student, so that the knowledge of the strategies used by the students and the Possession of more precise information about the process by which teaching and learning is given (Lunt, 1995) cannot be rejected either.

In this way, it is important to consider the EPIC-DV, initially as a tracking tool, given its ease of application, the speed of data collection, as well as the possibility of collective application. It is intended that such instruments enable professionals who, through their application, can identify strengths and weaknesses of the child, which could later be verified through the application of other instruments with the infant, as well as using other tools and evaluation methodologies that complement this investigation. In this sense, the importance of using instruments that present evidence of validity for this specific population is highlighted, though unfortunately is still characterized by the gap in our country. Overall, the PAIC-DV and the EPIC-DV aim to remedy, in parts, the difficulty encountered by professionals when faced with the need for cognitive assessment of children with visual impairment.

5. FINAL CONSIDERATIONS

Considering the importance of the EPIC-DV as an instrument of evaluation of cognitive abilities, from the perspective of the professional/professor, the results presented in this study and in others previously conducted indicate the suitability of its use for the purpose for which it was developed, although other studies need to be conducted in the future.

The complementary analyzes may also be carried out to further expand the knowledge on the operation of the instrument such as analyzes that allow obtaining information on the operation of the items, focused on the investigation of the distribution of responses or variability of these in the different points of the scale, indications of central tendency and the estimation of the difficulty of being endorsed (chosen), through the use of more modern statistical methodologies, such as the Theory of Response to the Item.

Other investigations carried out in a complementary way with analyzes from the classical theory of tests are recommended. These studies should consider the investigation of the influence of external variables (sex, age, schooling), as well as search studies for evidence of external validity, comparing the results in EPIC-DV with other performance instruments.

Regarding the EPIC-DV, it is suggested to extend the amount of evaluations per child (minimally two different evaluations of the same child, made by independent evaluators). This extension would allow the conduction of more robust analysis through the theory of response to the item, verifying the severity (difficulty) of the judges (professionals who evaluated the children). Through this procedure, possible differences between evaluators could be noticed, improving the quality of the results found.

Regarding the scale, it should still be inferred that it makes possible an initial evaluation of children's cognitive abilities from an external perspective, which would indicate their understanding as a tracking instrument. This consideration was concluded based on the results obtained, and can be better demonstrated and justified in subsequent studies related to the normalization processes of the instrument.

Given the scarcity of materials on the subject and the concern and need for studies with specific populations, the development of a psychological instrument capable of evaluating cognitive skills of children with visual impairment is relevant to the area of psychological assessment in the country. Thus, it is objectified that new studies are conducted with the instruments, in order to investigate the psychometric properties and then have the possibility of disposition for professional use in accordance with the rules of publication and marketing of the country.

It must be recognized that the research brings limitations, mainly in relation to the small number of participants, due to the difficulty in locating children with this picture or institutions of attention to them. In this way, studies with larger samples are recommended so that the instrument created may have verified its psychometric qualities, required by the Federal Council of Psychology (CFP).

Finally, the results presented here pointed out that the scale can be used, within the same correction system, for different types and degrees of visual impairment, with the exception of the verbal subtest, which will need to consider the type of deficiency when comparing the results of those children with the normative data. Separate tables for congenital and acquired deficiency should be prepared for this subtitle to ensure that a child's performance is compared with others in equal conditions, given the significant differences found.

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