

Research Article

Adaptive Behavior and Autism Spectrum Disorders: Differential Analysis of Demands and Needs With Neurotypical People

Manoel Baña Castro^{1*}; Luisa Losada Puente²

¹Faculty of Teacher Training, Avda Ramón Ferreiro, s/n. 27002-Lugo, University of Santiago de Compostela, Spain

²Faculty of Education Sciences, Elviña Campus, s/n. University of ACoruña, A Coruña, Spain

***Corresponding author: Manoel Baña Castro**

Faculty of Teacher Training. Avda. Ramón Ferreiro, s/n. 27002-Lugo. University of Santiago de Compostela, Galicia, Spain.

Email: manoel.bana@usc.es

Received: February 28, 2023

Accepted: April 05, 2023

Published: April 12, 2023

Abstract

The presence of adaptive behaviors in people with Autism Spectrum Disorder are usually frequent. Generally, they are confused with the same disorders but, in reality, they occur as dysfunctional communications as a result of a lack of understanding in the environments and daily realities of these people, which explains many of their demands and needs. In recent years, there has been a growing interest in the conceptualization and evaluation of adaptive behavior, as well as attention to behavioral disorders, increasingly evident in educational and experiential environments. This new situation greatly affects children with Autism Spectrum Disorders (ASD), so the educational community (and society in general) must offer responses to these needs and demands of both children ASD as well as those of their peers instead of creating warning signs and relating these difficulties to characteristics determined by the disorder itself.

There are many families and education professionals who manifest their lack of training and knowledge about the needs and demands of these people, which greatly hinders their full inclusion in their education and life, generating frame works of co-existence that are difficult to accept for some and other people.

Methods: A quasi-experimental study, with a retrospective cross-sectional design, is carried out by analyzing 209 subjects from Galicia (n=111 subjects with ASD and n=98 neurotypicals) to whom the ICAP Adaptive Behavior assessment test was applied between 2016 and 2021.

Results: The skills of the participating subjects, evaluated through the ICAP, indicate risk factors in the regression analysis insofar as it affects the four dimensions evaluated between the two samples of people with ASD and without ASD. The identified risk factors are related to young age (OR=2.27, 95% CI=1.30-3.96) and being male (OR=2.67, 95% CI=1.41-4.68) relating them to the development of motor skills (OR=2.34, 95% CI=1.07-5.11), social and communication skills (OR=14.70, 95% CI=5.73-37.7), personal life skills (OR=3.93, 95% CI=1.73-8.92) and community living skills (OR=9.87, 95% CI=3.99-24.42).

Conclusions: It is evident that disorders affect the development of adaptive behavior, it is not a matter of observing this relationship today, but it is about determining the needs and demands for support, being rigorous and making the right decisions for its development in the best way Possible. In this study, the impact on the development of communication and social skills of this disorder

can be verified, as well as on the development of community life in the whole of its adaptive behavior, which is why they should be priorities and demands to attend to in the processes of attention and development with these people.

Keywords: Autism spectrum disorder; Adaptive behavior; Life and behavior skills; Risk factor's; Odd ratio; Attentional focus; Demands and support needs

Introduction

The neurodevelopmental disorders are currently defined as those alterations originating in childhood or adolescence, which imply a series of dysfunctions or difficulties in the general intellectual functioning and adaptive behavior of a person [22]. Boys and girls with developmental disorders present difficulties when it comes to acquiring early functions for their daily life such as communication, motor, and community skills; The evidence of these difficulties should not be an impediment to the development of care systems that begin in the family, continue at school and carry out the community, institutions, services and resources that society generates for a life in harmony and coexistence. [14] Points out: "educators *have the unequivocal and important responsibility that what we do inside the school (in collaboration with other educational agents) is part of the solution and not part of the problem.*" (p. 102). This makes evident the need for educators to focus more on what we can provide, help and encourage than on looking at the difficulties and needs of people with ASD, as well as their peers.

The concept of adaptive behavior is popularized in the field of developmental disorders when today call *American Association on Intellectual Developmental Disorders* (AAIDD) defines intellectual disability on the basis of two criteria that must be present simultaneously during the developmental period (i.e., before the age of 18): a significant limitation (1) in intellectual abilities (two standard deviations below the average) and (2) on a person 's behavior or adaptive skills [2,15,16,23]. The inclusion of the adaptative behaviour in the definition of the intellectual disability generates, obviously, the need to value it, favouring like this the creation of a number of tools that allow to evaluate it [27] and that facilitate the preparation of the differential profiles regarding the group of the population.

The understanding and treatment of *behavioral disorders* has been a highly demanded topic from many sectors, especially parents and educators. When we refer to behavioral alterations, we point out those maladaptive, altered behaviors that can be annoying or absorbing for the subject himself or for those around him and that alter or hinder the development of daily activities and coexistence within the community [8,21]. Interest in determining how behavioral changes should be dealt with has endured over time; traditionally, and until very recently, one of the solutions focused on eliminating altered behaviors in two ways: (1) explaining to the subject the reason for the difficulty of his behavior and (2) through negative reinforcement. However, what mostly happened is that this altered behavior was strengthened and reinforced [11].

In recent years, a new paradigm of person-centered behavior has appeared, pointing out that everyone has their particularities when it comes to behaving. Also, the Behavior is conditioned by the cultural environment in which we live. In this

sense, the fact of interpreting a behavior as assertive, aggressive or inhibited should not be done in an exhaustive way (for example, there are cultures in which people communicate in a higher tone of voice or by standing closer in space). In the same way, there are great variations depending on the role represented. At a certain time, since a person communicates differently if he is with his friends, his family, his co-workers, etc. In this way, talking about adapted behavior, or not, depends on the context and the person with whom we are communicating.

From this perspective, adaptive behavior appears closely linked to the socialization process, since people acquire the behaviors and values of the society in which they live [28]. In other words, the behavior is associated with the adaptation of the subject to his social environment and the possibilities of reaction in this environment, in a framework of peaceful coexistence and development/learning. Thus, [32], defines adaptive behavior as "*the effectiveness of the individual to adapt to the natural and social demands of their environment*" (p. 869). In this sense, adaptive behavior is currently understood as a multidimensional concept in which we can find many areas or sets of skills that allow us to adapt to our environment and develop a minimum quality of individual and community life. In addition to this cultural character, adaptive behavior also has a strong evolutionary character, since the acquisitions of the different adaptive abilities depend on the evolutionary age of the person [28,29]. Adaptive behavior is currently conceived as the set of conceptual, social and practical skills learned by people to manage their daily lives [10,22,37,42].

The difficulties suffered by people with ASD when it comes to functioning in daily life and satisfying their most direct personal needs are becoming increasingly relevant [29]. Thus, with the new quality of life model, a new definition of intellectual disability emerges, pointing out the difficulties that the social and physical environment presents to these people for their development and learning. That is why, as previously mentioned, the AAIDD incorporates adaptive behavior into the concept of neurodevelopmental disorders, more specifically in the definition of Intellectual Disability, favoring the development of this concept at the beginning of the 1960s. And settling down from the nineties.

In this way, new definitions and the need to attend to adaptive behavior arise, highlighting its modifiable nature through psychological and educational intervention as opposed to other dimensions such as, for example, cognitive. In reference to this molding capacity, Leland (1978) states that "*adaptive behavior is the reversible aspect of intellectual disability*" (p. 282).

These new ways of conceptualizing and understanding developmental disorders have influenced other movements or diagnostic and/or care systems, enabling the development of

Quality of Life and Inclusion models and establishing the Support Paradigm in developmental disorders of which we will talk later. In this way, the new definition of intellectual disability, as well as the development of other social care measures, have benefited the development of new tools such as the Inclusive School, favoring support for groups in social exclusion, among which are the people with autism spectrum disorders.

Even though adaptive behavior is popularized in the field of intellectual disability, its measurement instruments have been extended to other fields such as the evaluation of people with and without neurodevelopmental disorders. This is because the character of the behavior exhibited by a subject in each context determines the degree of adaptation to the social and cultural environment in which he lives, characterizing his successes and failures in it. Nowadays, when observing behavioral difficulties in schools and educational contexts, we find ourselves with the need to provide students with strategies and functional and practical skills with which they can have a daily life that is as rich and quality as possible; although, for this, we cannot rely solely on the transmission of knowledge of an instrumental nature. In this way and given the relevance of behavior in learning and in the development of people, the dimension that jointly defined a possible disorder has come to be considering in the ordinary classroom as educational purpose.

This is how difficulties in adaptive behavior become support indicators of intellectual disability, facilitating their educational attention at enabling a more open and interrelated understanding of ASD. However, we still find difficulties in establishing a diagnostic cut-off point for its evaluation and educational attention [31], perhaps because its dimension does not only affect people with Disorders, since there are multitudes of maladaptive behaviors in students in any educational situation [4].

In this way, and despite the great diversity present in the characteristics of people with ASD, many researchers have highlighted the existence of these behavioral difficulties in these people [8,17,25,31].

In short, adaptive behavior must be considered when evaluating these people and it is extremely important in the process of designing and developing care plans focused on them [13,30]. Likewise, adaptive behavior is not only relevant during the development period -the moment in which, in general, the diagnosis is carried out-, but attention will also be essential throughout their lives and in the different processes educational activities that take place.

Almost all the authors [3,20,26,28] point out three areas that constitute a factor essential content of adaptive behavior: (1) independent functioning or self-sufficiency (personal autonomy skills necessary to satisfy basic needs: food, hygiene, toilet training, etc.-; (2) interpersonal relationships (skills necessary to be an active member of society: displacement, communication, etc.); and (3) social responsibility (skills necessary to maintain responsible social relationships: respect for the rules that govern social interaction, etc.).

There is a fourth aspect on which, for decades, various authors have not been able to agree: the fact of including, or not, within the content of adaptive behavior the area of functional academic skills (reading and arithmetic). There are authors, such as Reschly (1990), who defend its inclusion and others who, such as Mercer (1973) point out that adaptive behavior is used to assess abilities other than school ones [28]. However,

there is currently a consensus regarding this issue and most of the scales include this fourth area in their content, even forming part of the current AAIDD definition of adaptive behavior [29]. That is why adaptive behavior is defined as the set of *conceptual, social and practical skills* learned by people to manage their daily lives [10,22,37,42].

Tamarit points out (2008): "*Problem behaviors [...] are behaviors to which people are not predestined but are the result of a difficulty in the abilities of these people for social interaction, communication and carrying out actions of self-regulation and regulation of the environment*" (p. 1). This relationship is essential to consider problematic behavior within the evaluation and care of adaptive behavior, having evolved enormously since the seventies [27]. For this reason, in recent years the idea has become widespread that an essential part of the care both educational and social of people with autism spectrum disorders is to carry out a functional assessment of their behavior [11].

Subjects and Methods

A quasi-experimental study is carried out with a non-probabilistic sampling of $n=209$ subjects from the Autonomous Community of Galicia, aged between 2-22 years, of which $n=111$ are diagnosed with ASD in Public Health Services of the Spanish State. And $n=98$ are neurotypical subjects without recognized developmental disorder or intellectual disability in the period between 2016 and 2021.

To count on their participation, their families are informed about the object of study and prior authorization is requested for the use of the data, giving them anonymous and confidential treatment. In addition, the study has the approval of the Bioethics Committee of the University of Santiago de Compostela. The selection criteria are the physical presence of the participating person and having the informed consent of the parent or legal guardian.

The instrument applied is the Inventory for Adaptive Behavior Planning [27], it is an instrument composed of a systematic record of relevant data about the person and two normative measurement instruments, one for adaptive behavior and the other for behavior problems. The ICAP is applicable to people of all ages and is intended to be used with people with intellectual disabilities, although it can be used with other types of populations that may differ from the previous category.

It uses a self-report format (or allows it to be completed by a professional), in which the 77 items include, in its version translated into Spanish. It is a quantitative tool that assesses:

(a) A record of the person's diagnoses, personal data and functional difficulties (mobility, vision, hearing and state of health).

(b) An adaptive behavior test that measures the level of the person in relation to the basic skills that allows him to function independently in his environment.

The test is structured in four scales: Social and communication skills (expressive and receptive language), personal life skills (independence in fulfilling immediate personal needs), community life skills (independence in activities such as using public transport, handling money, using the watch) and motor skills (fine and gross). These items must be answered on a 4-point Likert-type scale (0-Never/rarely does it; 3-Does it very well). For each scale, plus a general one that includes them, normative scores are established: age, percentiles and typical

scores, among others, as well as an Instructional Implications Profile in which two ages are obtained, among which is the content of the specific programs so that the evaluated person could be located (adjusting the level of difficulty).

(c) A test of conduct problems, focused on eight areas from which four normative indices of conduct problems are extracted: Internal, Asocial, External and General. For its evaluation, the degree of demand and need and the frequency of these behaviors are used. The response that these behaviors usually receive from significant people in the subject's environment is also recorded.

The ICAP was classified and in terms of the reliability of the ICAP, the research carried out, especially in samples of people with disabilities, demonstrated that it has adequate internal consistency, satisfactory test-retest reliability, and that the estimates made by independent evaluators are consistent [27]. Subsequent studies offered additional evidence of its reliability with people without disabilities ($\alpha=.86-.98$). Its validity and reliability have also recently been studied in Chile (Krause et al., 2016) [41] with excellent results.

In addition to the ICAP application, identifying information is requested about your residence situation, age, sex, weight, and height, mode of expression, supports, added difficulties and state of health. The scale is administered over two years. No subject was previously aware of this tool.

Data Analysis

The IBM SPSS 27 statistical package has been applied to the data obtained. Multivariate linear regression is used to try to relate the different independent variables with the dependent ones and to evaluate the influence of the diagnosis on the variables due to the fact of having ASD or not, using it as a dichotomous variable. Likewise, based on this variable, the link between the possible independent variables with the dimensions reproduced in the ICAP subscales is sought to establish interactions with each other.

First, the quantitative variables are summarized in their mean and Standard Deviation. The independent variables and the fact that they had ASD or not were verified by means of logistic regression, creating two statistical models: in the first, the personal variables are included using crude analyzes and, later, they are adjusted for all the other variables; in the second, the influence of the variables related to the ICAP in its three subscales is evaluated with the fact of being people with ASD or neurotypical, adjusting the potentially confounding personal variables. Those with $p<0.20$ that, in addition to the analysis, produced a change in the coefficient (*in odds ratio*) greater than 10% expressed in Odds Ratio (OR) with 95% confidence intervals, which would indicate an increase/decrease in the probability of being responsible for an increase in the visual analogue scale. For those ORs that represent values less than unity, the inverse IqOR was calculated, which interprets the increase in the probability of having ASD when going from P_{75} to P_{25} of the sample.

Results

The results obtained allow us to identify valid subjects with ASD (n=111), where 15.3% present secondary diagnoses. The male gender prevails (n=74, 66.7%) compared to the female gender (n=37, 33.3%). Table 1 shows the sociodemographic characteristics of the participants with and without ASD, as well

as the overall results of the subjects in the application of the ICAP

Table 1: Sociodemographic characteristics of the participants and results of the tests applied.

Features	TORCH (No. = 111)				neurotypical (No. = 98)			
	x	DT	min	Max	x	DT	min	Max
Age	9.11	4.14	2	twenty	11.43	5.28	3	22
Height	129.32	30.57	eleven	190	139.57	28.57	77	190
Weight	36.60	1.33	3	75	43.02	19.96	13	80
BMI	35.51	14.16	19.94	64.30	21.08	5.27	11.83	38.15
ICAP Results	x	DT	PE	P				
motor skills	59.99	8.65	56	61				
Social and communication skills	50.77	12.15	40	51				
personal life skills	54.89	11.49	47	55				
Community Living Skills	38.05	11.42	31	36				
adaptive behavior index	205.07	38.41	185	204				

Note: PE: Standard score; P: Percentile

The results obtained allow us to point out, in the group of subjects, great difficulties in the development of adaptive behavior skills with a great difference between social and communication skills, as well as community life with respect to personal and social life skills motor.

To analyze differences and dual interactions between two variables, a comparison of means is made assuming similar variances (Levene's test $>.05$). A value of $t=23.158$ ($p<.001$) is obtained, making it possible to conclude the presence of statistically significant differences between subjects of different ages with ASD (mean difference=9.108, with a CI of 95%).

Regarding the skills of the participating subjects, evaluated through the ICAP, the percentile values were taken into account for the subsequent calculations, although it is possible to indicate, taking into account the scales of the scale, that the cases were located in 12 years in motor skills (PE=500, Standard Error of Measurement=11), in 9 years and 1 month in social and communication skills (PE=497; ETM=4), in 11 years and 6 months in communication skills personal life (PE=505; ETM=4) and in 9 years and 4 months in community life skills (PE=494; ETM=3). Thus, the data seem to be close to the age of the subjects (9 years ± 4 SD).

In order to verify the risk factors that may be related to the development of adaptive behavioral skills, it has been observed that the presence or absence of ASD affects its development in terms of motor skills (OR=2.34, 95% CI=1.07-5.11), social and communication skills (OR=14.7, 95% CI=5.73-37.7), personal life skills (OR=3.93, 95% CI=1.73-8.92) and community life skills (OR=9.87, 95% CI=3.99-24.42). Likewise, the results show the protection factor of skills with respect to having ASD in the sense that this determines the presence based on its development or

not (OR=0.43; 0.07; 0.25 and 0.10); Their relationship is directly conditioned by age, since their values are significant and progress according to age (QR=2.27; 95% CI=1.30-3.96), which can indicate the important role that education has in its acquisition and development, which is verified in the results by increasing its margin of protection against the possession of TEA.

In the same way, it can be pointed out that the results indicate that the differences between genders accentuate the risk in women (OR=1.04; 0.41; 1.72 and 1.01) with respect to the male gender (OR=1.01; 0.36; 0.65 and 0.28) where we can observe differences in favor of the male gender in Personal Life Skills and Community Life Skills, above all obtaining protective factors rather than risk factors in all skills, as occurs in women.

It can be seen in Table 2 how the probability of exposure to personal risk factors in subjects with and without ASD, gender acts as a risk factor and in the opposite direction to that of adaptive behavior in all skills with respect to the feminine. Regarding age, adaptive behavior is becoming a development factor as a protection factor in all skills among children under 10 years of age (OR=2.27, 95% CI=1.30-3.96) and the elderly than 10 years (OR=0.51 (0.23-1.14; 0.08; 0.03-0.2); 0.32(0.13-0.76)). This indicates that skills scores increase with respect to people who do not have ASD, especially in motor, social and communication skills and personal life.

The results also indicate differences in terms of weight (p=.01) since people with ASD who are underweight indicate a protection relationship in relation to motor skills (0.51) and community life (0.12). From what is observed in the table, it can be observed that the demands and needs in subjects with ASD become more noticeable in terms of social and communication skills, as well as community life skills, which is why they should be prioritized in the care programs and in the proportion of care and educational support and assistance. These differences seem relevant in addition to seeking an independent and quality life, as well as coexistence among and with other people; hence, they have to be considered and taken into account for their development and self-determination in the development and learning priorities of these people.

Discussion

Human beings, from birth, have a series of needs that make them dependent on others in order to develop fully and adequately. That is why the help and support received is essential for all people [4]. Likewise, all people, due to their personal characteristics, present a series of educational needs. Not all of them have the same abilities, nor can they follow the same rhythms, nor do they have the same interests or motivations. They all live different experiences in different contexts, which

is why they need personal and own educational support and help to be able to access the opportunities that allow them to develop their abilities and potential [4,24]; This is what diversity and differences consist of as people.

In order to meet the needs of people to help them overcome these barriers, supports are used, defined by the AAIDD as "resources and strategies that aim to promote the development, education, interests and personal well-being of a person and that improve individual functioning" [4,24]. Through the correct use of these supports, the development of people with ASD will be facilitated, improving their quality of life. In this way, ASDs are presented in their diversity as a source of learning for everyone, understanding that their difficulties are the demand for help and support and not static and immovable characteristics. In this sense, Luque (2003) points out: "these students present educational needs not because of their disorder or diversity, but because of the need to pay attention to their difficulties and the resources they require" (p. 9).

The previously exposed results indicate that there is Risk or Protector Adaptive Behavior Skills depending on how they are approached from education caused by a limitation in the adaptive abilities of these people, which entails difficulties when carrying out a correct interaction. Social, establish significant and functional communication systems, control their emotions, influence others and the environment in an appropriate way [40]. Behavior problems exist and will always exist in educational environments [38], with the need for effective behavioral care being evident [35]. For this, it is necessary to make changes not only in the behavior of the children, but it is necessary to modify the context in which these behaviors are carried out [12].

Educational attention should not focus on changing the problem behavior but on modifying the context that turns out to be an obstacle to the child's development [9,39]. In this context, it is essential to consider both the social environment and the physical environment. [1] Point out a series of social needs presented by children in early childhood education with behavioral difficulties. Among them we find, for example, the need to receive explicit social reinforcement, so that the child feels motivated and thus promotes the development of behaviors and skills that we want them to integrate into their day to day. Another example would be socio-affective needs, since, on many occasions, they present difficulties when it comes to relating to their peers and they face abundant experiences of social failure, which can negatively influence their emotional well-being and their behavior. Development of self-esteem. Osorno (2015) exposes the need to eliminate barriers, whether physical, communicative, social or organizational, that makes it impossible for children with ASD to have a good understanding

Table 2: Crude and adjusted odds ratios for ASD, sex, age, and weight, and confidence interval for the diagnosis of ASD.

	Fitted*									
	Raw		Motor skills		Social and communication skills		Personal life skills		Community Living Skills	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Sex	2.67	1.52-4.68	1.04	0.48-2.28	0.41	0.17-0.95	1.72	0.76-3.90	1.01	0.43-2.36
Age	0.90	0.85-0.96	0.43	0.16-0.84	0.36	0.16-0.84	0.65	0.29-1.42	0.28	0.12-0.64
BMI (underweight vs. normal)	2.03	1.09-3.80	1.53	0.72-3.26	0.43	0.20-0.93	0.07	0.03-0.17	0.10	0.04-0.25
BMI (overweight vs. normal)	1.75	0.85-3.62	1.01	0.45-2.29	0.35	0.14-0.86	1.76	0.74-4.20	0.95	0.38-2.35

Note: *adjusted for the presence of ASD

of the environment in which they move. The author lists a set of adaptations that could facilitate the removal of these barriers and, consequently, reduce problem behaviors. The existence of certain biological bases for the explanation of the differences between men and women may be behind this gender divergence in the ASD casuistry.

More and more parents, educators and professionals feel the need to understand the behavioral problems presented by people with ASD since, in order to treat them in the most appropriate way possible, it is necessary to understand why they are being treated give these behaviors and what is the best way to modify them. In recent years there has been considerable progress in the assessment of adaptive behavior and in the creation of tools and procedures used to address behavioral disturbances. However, despite the fact that this development greatly facilitates the work of professionals in this field, it is essential to continue advancing in the investigation of these and other assessment and care techniques, in order to continue innovating and progressing in their use gets better.

Behavior problems are frequent in classrooms and educational contexts, consequently causing many people to be disabled in many aspects of their daily lives. That is why educators have the obligation to respond to these needs through personalized and quality education, which makes it easier for people to acquire functional strategies and skills that allow them to have as rich and independent a life as possible.

In this context, it is necessary to continue advancing towards the idea of Education for all with the same right to receive a quality education. For this, the school must be focused on the student himself/herself and adapted to their demands and needs. It is evident that educational action cannot be based simply on the transmission of knowledge of an instrumental nature, but that education must have as its ultimate objective the improvement of the Quality of Life of both individuals and their families, and the development of behaviors adaptive and self-determined by the students. To this end, we must offer them the opportunity to progressively take control of their lives, allowing them to decide on those aspects that affect them in one way or another, thus facilitating the development of the necessary skills to have an independent and autonomous life.

References

- Angulo MC, Fernández C, García FJ, Giménez AM, Ongallo CM, et al. Manual de atención al alumnado con necesidades específicas de apoyo educativo derivadas de trastornos graves de conducta. Junta de Andalucía, Consejería de Educación y Dirección General de Participación e Innovación Educativa. 2008.
- American Psychiatric Association. Diagnostic and statistical manual of mental disorders (5th ed.). 2013.
- Balthazar EE. Escalas de conducta adaptativa de Balthazar. BSAB I: Escalas de independencia funcional y BSAB II: Escalas de adaptación social. Consulting Psychologists Press. 1973.
- Baña M, Losada-Puente L. Autodeterminación y paradigma de apoyos: Atención a las personas con alteraciones del desarrollo intelectual e instrumentos de evaluación de las necesidades de apoyo. En M. Baña y L. Losada-Puente (Ed.). Autodeterminación y alteraciones del desarrollo intelectual. EAE. 2016.
- Baña, M, Losada-Puente L. The Adaptive Behaviour and The Students with TEA: Analysis and Proposals of Educational and School Support. Sch J Psychol & Behav Sci. 2023; 7.
- Bruininks RH, Gilman CJ, Anderson JL, Morreau LE. Adaptive living skills. Curriculum. Employment skills. DLM Teaching Resources. 1991.
- Bruininks RH, Hill BK, Weatherman RF, Woodcock RW. ICAP. Inventory for client and agency planning. Examiner's manual. DLM Teaching Resources. 1986.
- Canal R. Intervención en conductas problemáticas. En M.A. Verdugo (Presidencia). III Congreso "La atención a la diversidad en el sistema educativo". Salamanca, España. 2001.
- Carr EG. El apoyo conductual positivo: filosofía, métodos y resultados. Revista Siglo Cero. 1995; 29: 5-9.
- Carrillo M. Inteligencia, conducta adaptativa y calidad de vida. Interacciones explicativas de la discapacidad intelectual y la intervención optimizadora (tesis doctoral). Universitat Autònoma de Barcelona, España. 2012.
- Casey S, López J, Wacker D. Evaluación funcional del comportamiento en personas con discapacidades del desarrollo. Revista Latinoamericana de Psicología. 2004; 36: 269-287.
- Castillo A, Grau C. Conductas disruptivas en el alumnado con TEA: estudio de un caso. ENSAYOS, Revista de la Facultad de Educación de Albacete. 2016; 31.
- Cone JD. Intervention planning using adaptive behavior instruments. The Journal of Special Education. 1987; 21: 127-148.
- Echeita G. Inclusión y exclusión educativa. De nuevo "Voz y Quebranto". REICE. Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación. 2013; 11: 99-118.
- Grossman H. Clasificación en el retraso mental. American Association on Mental Retardation. 1983.
- Heber R. Manual sobre terminología y clasificación en el retraso mental (ed. rev.). American Association on Mental Deficiency. 1961.
- Klin A, Saulnier CA, Sparrow SS, Cicchetti DV, Volkmar FR, et al. Social and communication abilities and disabilities in higher functioning individuals with autism spectrum disorders: The Vineland and the ADOS. Journal of Autism and Developmental Disorders. 2007; 37: 748-759.
- Lee HJ, Park HR. An integrated literatura review on the adaptive behavior of individuals with Asperger síndrome. Remedial and Special Education. 2007; 28: 132-139.
- Leland H. Theoretical considerations of adaptive behavior. En W.A. Coulter y H.W. Morrow (Eds.): Adaptive behavior: Concepts and measurements. Grune & Stratton. 1978.
- Leland H. Escalas de conducta adaptativa. En J.L. Matson y J.A. Mulick (Eds.): Manual del retraso mental. Pergamon Press. 1991.
- Losada-Puente L, Baña M. Assessment of Adaptive Behavior in People with Autism Spectrum Disorders through the ICAP. Behav Sci. 2022; 12: 333.
- Luckasson R, Borthwick-Duffy SA, Buntix WHE, Coulter DL, Craig EM, et al. Retraso mental: Definición, Clasificación y sistemas de apoyos. 10ª Edición. American Association on Mental Retardation. 2002.
- Luckasson R, Coulter DL, Polloway EA, Reiss S, Schalock RL, et al. Retraso mental: Definición, Clasificación y sistemas de apoyos. American Association on Mental Retardation. 1992.
- Luque DJ. Trastornos del desarrollo, discapacidad y necesidades educativas especiales: Elementos psicoeducativos. OEI-Revista Iberoamericana de Educación. 2003; 1-15.

25. Mazefsky CA, Williams DL, Minshew NJ. Variability in adaptive behavior in autism: Evidence for the importance of family history. *Journal of Abnormal Child Psychology*. 2008; 36: 591-599.
26. Mercer JR. Labelling mentally retarded: Clinical and social system perspectives on mental retardation. Universidad de California. 1973.
27. Montero D. Evaluación de la Conducta Adaptativa en Personas con Discapacidades. *Adaptación y Validación del ICAP*. Mensajeros. 1999.
28. Montero D. La conducta adaptativa en el panorama científico y profesional actual. *Intervención Psicosocial*. 2006; 14: 277-293.
29. Montero D, Fernández-Pinto I. ABAS-II. Sistema de Evaluación de la Conducta Adaptativa. (Adaptación española). TEA Ediciones. 2013.
30. Morreau LE, Bruininks RH, Montero D. Inventario de destrezas adaptativas (CALS). Mensajeros. 2002.
31. Navas P, Verdugo MA, Arias B, Gómez LE. Futuro de la conducta adaptativa en el diagnóstico, clasificación y planificación de apoyos para las personas con DI: Buenas prácticas. En M.A. Verdugo (Presidencia). IX Jornadas Científicas Internacionales de Investigación sobre Personas con Discapacidad. Salamanca, España. 2015.
32. Nihira K. Factorial dimensions of adaptive behavior in adult retardates. *American Journal of Mental Deficiency*. 1969; 73: 868-878.
33. Nihira K, Leland H, Lambert N. Adaptive-Behavior Scale-Residential and Community: Examiner's Manual (2nd ed.). Pro-Ed. 1993.
34. Osorno I. Intervención conductual en niños con autismo a través del apoyo conductual positivo (Trabajo de fin de grado). Universidad de Valladolid, España. 2015.
35. Preciado J, Sugai G. L'estat actual i els avenços en el suport conductual positiu a nivel d'escola. *Suports*. 2009; 13: 4-9.
36. Reschly D. Conducta adaptativa. En A. Thomas y J. Grimes (Eds.): Buenas prácticas en psicología educativa. National Association of School Psychologists. 1990.
37. Schalock RL, Verdugo MA. El concepto de calidad de vida en los servicios y apoyos para personas con discapacidad intelectual. *Revista Siglo Cero*. 2007; 38: 21-36.
38. Sprague J, Horner R. School wide positive behavioral support. *Handbook of school violence and school safety: From research to practice*. S. R. Jimerson and M.J. Furlong, Erlbaum Associates, Inc. 2007.
39. Tamarit J. Análisis de Casos II: Intervención Psicopedagógica y Atención a la Diversidad. En J. Tamarit (Ed.). Los problemas de comportamiento en el aula. Equipo CEPRI. 1997.
40. Tamarit J. Conducta y autismo: análisis y propuestas de tratamiento. FEAPS. 2008.
41. Vera-Bachmann D, Gálvez-Nieto J, Trizano-Hermosilla Í, Álvarez-Espinoza A. Estudio Psicométrico del Inventario para la Planificación de Servicios y la Programación Individual (ICAP), en Población de Estudiantes Chilenos. *Revista Iberoamericana de Diagnóstico y Evaluación Psicológica*. 2020; 1: 119-129.
42. Wehemeyer ML, Buntix WHE, Lachapelle Y, Luckasson RA, Schalock RL, et al. El constructo de discapacidad intelectual y su relación con el funcionamiento humano. *Revista Siglo Cero*. 2008; 39: 5-17.