anales de psicología, 2015, vol. 31, nº 1 (enero), 137-144
http://dx.doi.org/10.6018/analesps.31.1.166491

ISSN edición impresa: 0212-9728. ISSN edición web (http://revistas.um.es/analesps): 1695-2294

Development of a support needs assessment scale for children and adolescents with intellectual disabilities

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Título: Desarrollo de una escala de evaluación de necesidades de apoyo para niños y adolescentes con discapacidad intelectual

Resumen: El artículo presentado está orientado al desarrollo de una escala de evaluación de necesidades apoyos para niños y adolescentes (5-16 años) con discapacidad intelectual. Esta herramienta es coherente con la concepción más reciente de discapacidad intelectual y se desarrolla en castellano a partir de una propuesta internacional iniciada desde la Asociación Americana de Discapacidades Intelectuales y del Desarrollo (AAIDD). El foco principal de este estudio es analizar las características psicométricas de la escala en el contexto español. El instrumento ha sido aplicado a una muestra piloto de 143 niños y adolescentes con discapacidad intelectual y analizado bajo los supuestos de la Teoría de Respuesta a los Ítems (TRI); concretamente, se han asumido los supuestos del Modelo de Escalas de Clasificación. Los resultados alcanzados muestran evidencias iniciales de la fiabilidad y validez de la escala, así como el adecuado ajuste de los datos al modelo propuesto.

Palabras clave: Discapacidad intelectual; apoyos; evaluación; teoría de respuesta a los ítems.

Abstract: This paper focuses on the development of a scale for assessing support needs of children and adolescents with intellectual disabilities. This tool adheres to the most recent conception of intellectual disabilities and has been translated into Spanish following the international proposal initiated by the American Association of Intellectual and Developmental Disabilities (AAIDD). The main focus of this research is to analyze the psychometric characteristics of this scale within the Spanish context. So far, this tool has been administered to a pilot sample of 143 people (both children and adolescents) with intellectual disabilities and has been analyzed according to the framework of Item Response Theory (IRT), specifically taking into account the assumptions of the Rating Scale Model (RSM). The results show preliminary evidence of the reliability and validity of the scale, as well as the adequate adjustment of the data to the proposed model.

Key words: Intellectual disability; supports; support needs; assessment; item response theory.

Introduction

Through the different definitions proposed by the American Association of Intellectual and Develpmental Disabilibities (AAIDD) on mental retardation (Grossman, 1973, 1983; Heber, 1959, 1961; Luckasson et al., 1992, 2002), currently referred to as intellectual disability (Schalock et al., 2010), society has been interested in improving the understanding of individuals with intellectual disabilities. The evolution of the concept of intellectual disability has meant substantial changes in the mode of understanding people with disabilities in the last decades, and has brought with it new and better approaches for the diagnosis, assessment and intervention (Verdugo & Schalock, 2010), as well as innovative proposals for provision of support services and public policies based on the new concept (Shogren, Bradley, Gomez, Yeager, & Schalock, 2011).

It is clear that people with intellectual disabilities face challenges in their development, show more difficulties in participating in daily life activities in their communities, and express, at the same time, characteristics of candor, gullibility or innocence in their behavior that makes them vulnerable to abuse and exploitation by others (Greenspan, 2012). However, the current conception of intellectual disabilities (Schalock et al., 2010), provides an evident contextual emphasis referring to the discrepancies between people's abilities or skills and environmental demands by proposing supports as a fundamental tool to decrease that discrepancy.

The supports paradigm in which the new concept of intellectual disability has been developed (Schalock et al., 2010) is closely related to the quality of life model proposed by Schalock and Verdugo (2002, 2007, 2012), where supports are proposed as an essential tool to improve individual performance, achieve personal results and increase the quality of life of persons with disabilities. In this sense, van Loon (2009) claims that successful participation in daily life activities, according to their own interests and preferences, is essential to have quality of life, and that supports are the essential bridge to achieve this goal.

In a manner consistent with the evolution of the concept of intellectual disability, over the past years the progress in the conception of support has also been very quick (Thompson et al., 2010) and has been reflected in the different models taken from the AAIDD. In 1992, Luckasson et al. included the concept of support in the ninth edition of the framework for the definition of intellectual disability, becoming one of the most relevant features in the new paradigm proposed. In 2002, Luckasson et al. refined the concept of support and gave increased centrality to the role it plays in the individual performance of people with disabilities, according to the evidence of the value of support in different research carried out during the past 10 years. From this definition, a greater implementation of the individual schedules of support has been derived.

Finally, in the last disability concept proposal by the AAIDD (Schalock et al., 2010), the importance of building support systems was highlighted which take into account different aspects, such as independent living, opportunities to

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participate in activities, the use of alternative and augmentative communication systems, the accessibility in the environment and, on the top of that, the strengths of people with intellectual disabilities to be able to train the skills needed to achieve success in daily life (Thompson et al., 2002). Schalock and Verdugo (2012) claim the current challenge of organizations for people with disabilities is to prepare and implement individualized support plans that improve the quality of life for these people. Assessing the individual support that each person needs to function independently in the community is of great importance which also has a relationship with their right to lead an independent life and with the highest degree of self-determination also reflected in the United Nations Convention (Navas, Gómez, Verdugo, & Schalock, 2012).

Within this context, the *Support Intensity Scale-SIS* (Thompson et al., 2004) is taken into account as the key instrument for support needs assessment for adults with intellectual disabilities. This assessment scale has been translated and adapted for Spain in Spanish (Verdugo, Arias, & Ibáñez, 2007) and Catalan (Giné et al., 2007). Due to the lack of proper tools, coupled with the wide impact of the *Support Intensity Scale-SIS* (Thompson et al., 2004) (applicable only to people with intellectual disabilities over 16 years of age), and their positive impact on the evaluation of the needs of support of people with disabilities in Spain (Giné et al. 2006; Verdugo, Arias, et al., 2007; Verdugo, Ibáñez, & Arias, 2007; Verdugo, Ibáñez, Arias, & Gómez, 2006; Verdugo, Arias, Ibáñez, & Schalock, 2010), the development of a support intensity assessment scale adapted for children and adolescents with intellectual disabilities becomes essential (Thompson et al., 2008).

The aim of the present article was to explore the preliminary features of the *Support Intensity Scale for Children* developed within the Spanish context, using the best psychometric approach of Item Response Theory and using a Rating Scale Model due to the response format used in the scale. We expect good results which will guide us in the construction of a valid tool which helps clarify the construct of support needs and assists us in improving the services and professional practices for people with intellectual disabilities.

Method

Instrument

The initial pool of items proposed by Thompson et al. (2008) in the pilot version of the *Support Intensity Scale-SIS for Children* provides representative activities in the daily life of children and adolescents. These items are expected to form a scale that evaluates the support needs of children and adolescents with intellectual disabilities, requiring adapting them to the specific characteristics of the different contexts and cultures. Specifically, these preliminary items collected information on 61 daily activities distributed in seven contexts considered to hold a major place in the daily life of any child (see table 1).

Table 1. *SIS for Children* domains (Thompson et al., 2008).

Scale domains	Number of Items
A. Home living activities	9
B. Community & neighborhood activities	8
C. School participation activities	9
D. School learning activites	9
E. Health and safety activities	8
F. Social activities	9
G. Advocacy activities	9

The support needs assessment in the activities proposed should take into account three measurement indexes (type of support, frequency of support and daily support time), each of them represented by a 5 point Likert scale (0-4) in which higher numeric values reflect a larger intensity for the needed support (see table 2).

Table 2. *SIS for Children* rating metric (Thompson et al., 2008).

Type of support	Frecuency of support	Daily time of support
0= None **1**= Monitoring **2**= Verbal/gestural prompting **3**= Partial physical assistance **4**= Full physical assistance	**0= Negligible**; the child's support needs are rarely if ever different than same-aged peers in regard to frequency. **1= Infrequently**; the child will occasionally need someone to provide extraordinary support to him/her that same-aged peers will not need, but on most occasions will not need any extra support. **2= Frequently**; in order for the child to participate in the activity, extra support will need to be provided for about half of the occurrences of the activity. **3= Very Frequently**; in most occurrences of the activity the child will need extra support that same-aged peers will not need; only occasionally will the child not require any extra support. **4= Always**; on every occasion that the child participates in the activity, the child will need extra support that peers of the same chronological age will not need.	**0**= None **1**= Less than 30 minutes **2**= 30 minutes to less than 2 hours **3**= 2 hours to less than 4 hours **4**= 4 hours or more

In addition, the *Support Intensity Scale for Children* contains 32 items relating to a series of exceptional needs, 18 medical conditions and 14 types of behavioral problems, which complete the needs assessment keeping the effect of these variables under control in the support needs level of the person assessed.

Process

In general terms, the development of the *Support Intensity Scale-SIS for Children* was made by taking into account the steps proposed by Tassé and Craig (1999) as necessary to effectively adapt a tool to any context different from the original. Thus, after the process of translation and adaptation to Spanish of the original items in the field Test (Thompson et al., 2008), carried out by Verdugo, Arias, and Guillén (Guillén, Verdugo, Arias, Navas, & Vicente, 2011) under the guidance of the International Test Commission (Hambleton, 1996), a pilot study was conducted to find out, in a preliminary way, the operation of the scale in the Spanish context.

The pilot sample was selected from incidentally participating organizations from different parts of Spain who voluntarily decided to collaborate on the research project presented in our study. The instrument was applied in 97% of cases to two informants, comprising 62 cases of the assessment carried out by a family member (in interview format) and a professional (in report format). In all cases, both interviewers and the people who filled the instrument out autonomously received a briefing given by practitioners of the Institute on Community Integration (University of Salamanca, Spain) to ensure its correct application.

Sample

Once we had a suitable items pool, it is important to carry out a pilot study in order to obtain some initial estimates about reliability and validity. It is necessary to reach a representative sample to be able to predict how the instrument will work in a certain context and to obtain preliminary information which indicates its strengths and weaknesses in this context, modifying those items with a problem before applying the instrument to a large number of people. In this regard, the size of the sample for the pilot studies must be between 100 and 300 participants (Verdugo, Gómez, et al. 2010).

Specifically, the present study used a sample of 143 children, both male and female, with intellectual disabilities, distributed along the continuum of age referred to in the Support Intensity Scale for Children (5-16 years old) and framed within different levels of intellectual functioning. Below the data on distribution of participants in each of the above mentioned variables is presented (see table 3).

Table 3. Sample Distribution. Frequencies and percentages

Variables	*N*	%
Gender		
Male	89	62.2
Female	54	37.8
Total	143	100.0
Age		
5-8 years old	18	12.6
9-12 years old	46	32.2
13-16 years old	79	55.2
Total	143	100.0
Intellectual Disability		
Mild	25	17.5
Moderate	77	53.8
Severe/Profound	41	28.7
Total	143	100.0

Children and adolescents who have been part of the sample are from different Autonomous Communities in Spain (Castilla-León, Madrid and Castilla La Mancha), as well as public and concerted schools both ordinary education and special education and, even associations away from the school environment, allowing us to check the operation of the instrument in different environments.

Data Analysis

In order to know about the psychometric properties of the *Support Intensity Scale-SIS for Children,* as well as its preliminary functioning in the Spanish context, we will use Item Response Theory (IRT).

IRT models assume that the items measure only one continuous latent variable and, furthermore, these models consider that the answers to items are mutually independent, so the only possible relationship between them is explained by its relationship with the latent variable. The advantages of the IRT models versus Classical Test Theory models are summarized by Prieto and Delgado (2003):

1. Joint measurement
2. Specific objectivity
3. Interval properties
4. Specificity of the standard error of measurement
5. Invariance of parameters in different samples
6. Estimation of the accuracy level of the items and the test
7. Estimation of the ability of persons evaluated regardless of the test
8. Testing individually

In our specific case, the items of the scale presented a Likert format, so we used the Rating Scale Model-RSM analysis (Andrich, 1978, 1988), considered an extension of the Rasch model for Likert scale. Our objectives for the analyses carried out followed the guidelines of the Item Response Theory analyzed by the following indicators:

- Adequacy of response categories
- Unidimensionality
- Estimate Reliability

- Global fit to the model from the scale, the dimensions and the items.

All analysis was conducted with the WINSTEPS program, v. 3.68.0 (Linacre, 2009).

Results

Response category suitability

According to Linacre (2002), the mode in which the variable of study is divided into categories to be analyzed affects the measurement of the qualities of the test. Therefore, in order to determine if the response categories were used in the way that was expected, a diagnosis of the answer categories was carried out.

The statistics for the use of categories (i.e., frequencies of categories and average measures) and the thresholds for each category were examined. To assess the response category suitability in relation to the measure variable, we must take into account a set of criteria:

1. At least ten observations for each category and regular or regular observation distribution.
2. Average measures advance monotonically with category.
3. Outfit mean-squares less than 2.0.

Likewise, we must also take into account the calibrated measure of the transition from the previous to the next category. This parameter indicates how difficult it is to watch a category, not how difficult it is to answer it correctly. It is expected that the Rasch-Andrich threshold is progressively greater as the value of the category increases.

Due to the complex response format of this scale (3 measurement index - type, frequency and daily support time, each valued on a 5 point Likert type scale - from 0 to 4), we analyzed the response categories effectiveness with regards to each the three indices measuring independently, obtaining the following results (see table 4):

Table 4. Response category suitability.

	Category Label	Observed Count	INFIT	OUTFIT	Structure Calibration	Category Measure
Type of Support	0	10	1.05	1.02	None	-2.68
	1	31	1.26	1.25	-1.62	-.92
	2	44	.61	.51	-.45	.38
	3	24	.92	.74	**1.08**	1.44
	4	32	.52	.56	**1.00**	2.78
Frequency of Support	0	12	1.04	1.05	None	-2.20
	1	21	.77	.69	-.97	-.76
	2	39	.69	.46	-.69	.27
	3	23	.55	.33	**.93**	1.24
	4	41	1.12	1.14	**.72**	2.54
Daily Support Time	0	10	1.24	1.03	None	-3.43
	1	59	.93	.92	-2.36	-.89
	2	28	.68	.69	.77	.51
	3	17	.85	.74	**1.06**	1.28
	4	26	.73	.69	**.53**	2.35

Obviously, the lower category (0, in our case) has no previous transition and therefore the measure is qualified as *none*. However, we can see that points of transition between categories 3 and 4 do not work as expected in any of the three measurement indices presented in the assessment. When this happens, it is convenient to collapse those categories of response when reflecting an unexpected operation, knowing the format of response of the scale setting when those categories of response are not sorted properly and are integrated (see Table 5).

Table 5. Collapsed response category suitability.

	Category Label	Observed Count	INFIT	OUTFIT	Structure Calibration	Category Measure
Type of Support	0	10	.94	.92	None	-2.68
	1	31	1.30	1.85	-1.24	.92
	2	44	.63	.49	-.15	.44
	3-4	53	.86	.85	1.40	1.91
Frequency of Support	0	12	.99	.99	None	-1.97
	1	21	.75	.57	-.66	-.52
	2	39	.76	.50	-.44	.34
	3-4	55	.95	.97	1.09	1.77
Daily Support Time	0	10	1.14	-.98	None	-3.19
	1	59	.95	-1.06	-2.08	-.65
	2	28	.67	.61	.84	.54
	3-4	42	.84	.80	1.14	1.83

It is apparent that, if the 3 and 4 answer categories are collapsed, a good fit of the categories of response to the model is achieved. In other words, analysis reveals that the categories of response 3 and 4 (for the three measurement indexes) are not effectively discriminated to meet the needs of children with intellectual disabilities support, but it does not hurt the general estimation of the construct of support needs either.

Unidimensionality

One of the assumptions underlying the Rasch models is unidimensionality. Unidimensionality is essential if we want data to be analyzed under the assumptions of the Rasch model. The lack of unidimensionality would reflect a poor fit of the data to this model and the benefits of its use would disappear.

Since we are faced with an initial pilot study (143 participants), and the scale has a large number of items (61 activities), data obtained independently in each of the subscales (8-9 items) is taken as evidence of unidimensionality while obtaining analysis better adjusted to the empirical sample of this study as well.

To check that the assumption of unidimensionality is not violated by our data, we performed an analysis of principal components in each of the dimensions of the scale. Examining the correlation matrix between the items based on the standardized residuals (the differences between the observed values and the values predicted by the model) will allow us to determine if there are other potential dimensions or not (see Figure 1).

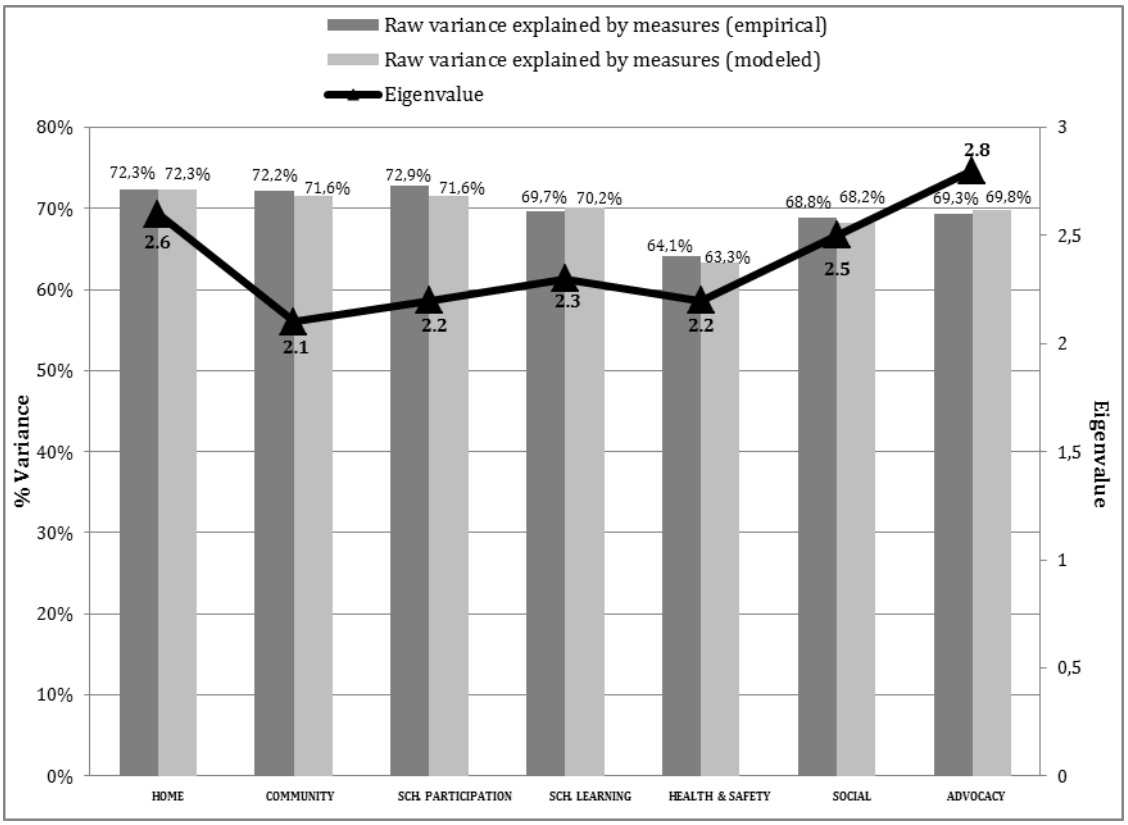

Figure 1. Variance explained by the dimensions of the scale measures

The first factor in the analysis corresponds to the Rasch Dimension. To consider that there is unidimensionality, the variance explained by measures must be equal to or higher than 60%, which occurs in all the dimensions of the scale. Besides, we can see that in all dimensions of the *Supports Intensity Scale for Children* (Thompson et al., 2008) the variance explained by empirical data is very similar to that expected by the model, which indicates that the estimate of the measure was successful.

The second dimension (or first contrast of residuals) indicates whether there are differences within the residuals large enough to suggest that there is more than one dimension. If the variance of the Rasch Dimension was low and at the same time was significant in the successive contrast, the structure could have multidimensionality. Usually, it is accepted that the second dimension must have at least 3 items (according to its own value, eigenvalue) so that a possible second dimension could be considered (Linacre, 2005). In our

data, the eigenvalue of the first contrast of the residuals was under 3 in every case. As a result, we can claim the structure of all subscales of the *Supports Intensity Scale* developed for children and adolescents with intellectual disabilities is one-dimensional.

Reliability

The table below (see table 6) provides different evidence for measures of reliability of the scale in relation to the support needs of children and adolescents with intellectual disabilities in the Spanish context.

Table 6. Domains and Scale Reliability.

Domains	Reliability	Separation
A. Home living activities	.96	5.02
B. Community & neighborhood activities	.95	4.37
C. School participation activities	.98	6.95
D. School learning activites	.88	2.71
E. Health & safety activities	.96	4.77
F. Social activities	.97	5.47
G. Advocacy activities	.98	7.20
Total	.98	6.71

On the one hand, the estimate reliability measures the degree to which each scale score differentiates people in the measured variable and is equivalent to Cronbach's Alpha. Reliability is determined by taking the reason for the 'true-score variances' and 'observed-score variance.' Values range from 0 to 1 with acceptable values of .80 or greater (Fox & Jones, 1998). The value obtained in our data is over .95 for each dimension in the scale which is even higher than what is considered acceptable reliability.

On the other hand, the estimation of separation rates measure the amplitude of the items in the evaluated variables. It is interpreted as additional evidence of the reliability of the scale and an estimated separation as the ratio between the set standard deviation of the item (i.e. the true standard deviation), and the root of the mean square error. The separation index provides a measure of the separation in units of standard error and should have a minimum value of 2 to be considered acceptable. In our study, the separation of the items of the scale index is higher than 2 in all dimensions, to get a value greater than 6 when the scale items are taken into account in general.

Global Fit

According to Prieto and Delgado (2003), the data fit to the model will be crucial, because without it, the parameters would lack theoretical significance. In this way, Bond and Fox (2001) claim that the fit of the items to the model will be proof of the validity of the test.

Specifically, global fit can be estimated from the statistical Infit and Outfit (Wilson, 2005). The Infit or internal fit statistic is sensitive to unexpected behavior of those items located next to the skill level of the subjects. The Outfit or external fit statistic is sensitive to unexpected behavior of those items that are far from the skill level of the subjects.

The Mean Square Residual (*MNSQ*) of Infit and Oufit statistics provide information on whether the responses occur according to the model. If so, the residuals will be small and their *MNSQ* would be close to 1 indicating a perfect fit. Values substantially less than 1 (<0.5) indicate determinism in the observed data, while values substantially higher than 1 (>1.5) indicate noise in the data; thus, the acceptable range of values is between 0.5 and 1.5.

In addition, to analyze the global fit we have two standardized statistics: *ZEMP* Infit and Outfit *ZEMP*. Empirical data always have some degree of misfit to the model and these statistics are in accordance with the sample. It is an empirical standardization based on the distribution really locally observed in the sample data that is calculated. In other words, *ZEMP* Infit and *ZEMP* Outfit values are divided between the standard deviation. The expectation of the model ranges between - 2 and 2.

To start with, we will expose the dimensions and scale fit to the model (table 7), then moving on to carry out a more exhaustive analysis of the items comprising it (table 8).

Table 7. Summary of dimensions and scale fit.

Domains	Infit		Outfit	
	MNSQ	*ZEMP*	*MNSQ*	*ZEMP*
A. Home living activities	1.04	.00	0.95	-.30
B. Community & neighborhood activities	1.00	.00	0.98	-.10
C. School participation activities	1.00	-.10	0.98	-.10
D. School learning activites	1.00	.00	1.06	.20
E. Health & safety activities	1.00	.00	1.00	.00
F. Social activities	1.01	.00	1.02	.00
G. Advocacy activities	1.00	.00	1.01	.00
Total	1.02	.00	1.00	-.10

Global fit is used to check the fit of the dimension and it shows the scale has good functioning in all cases. After that, a thorough analysis on each item was conducted to know with precision the fit of the items that make up the scale of the proposed model. The obtained results show that 6 of 61 items in the scale do not conform precisely to the expectations of the model. There are no more than two unfit items in any of the areas.

It should be noted that when the *MNSQ* (of the Infit or Outfit) of an item is between 1.5 and 2.0 it is unproductive for the construction of the measure, but does not distort or degrade the extent or the construct; only values higher than 2 indicate distortion or degradation of the measure (Linacre, 2008). For its part, although values higher than 2 in *ZEMP* are really nonessential, it is only considered unacceptable to keep an item when its value is greater than 3.

On the obtained data, values for *MNSQ* should not exceed 2 in any case or 3 for the *ZEMP* value which would make it unacceptable to keep the item on the scale since it would be providing more noise than useful information. With this in mind, we can say that there was no item which

is proving detrimental to the measured construct and thus needs to be eliminated.

Table 8. Summary of items unfit (no fit).

Unfit items	INFIT		OUTFIT	
	MNSQ	*ZEMP*	*MNSQ*	*ZEMP*
A. Home living activities. Item 6	**1.89**	1.7	**1.72**	1.0
C. School participation activities. Item 1	1.42	1.4	**1.55**	1.6
D. School learning activities. Item 1	.96	-.2	**1.74**	1.9
D. School learning activities. Item 8	1.08	**2.2**	1.31	1.5
E. Health and advocacy activities. Item 1	.70	-2.0	.68	**-2.1**
G. Advocacy activities. Item 1	**1.60**	1.8	**1.71**	2.0

Note: Item A6 = Sleeping and/or napping, Item C7 = Following classroom and school rules, Item D1 = Accessing grade level curriculum content, Item D8 = Accessing to health and physical education curricula, Item E8 = Avoiding health and safety hazards, Item G1 = Expressing preferences.

Discussion

New approaches to the study of intellectual disability have reflected the need of adopting systems of multidimensional classification and diagnosis which allow an intervention according to the particular needs of each individual. In this sense, it is necessary that support needs assessment, which provides the basis for developing individual support programs, is carried out through a competent and rigorous analysis based on data from the observation (Navas, Verdugo, & Gómez, 2008).

The aim of this work has been to understand the preliminary functioning of the *Support Intensity Scale for Children* (Thompson et al., 2008) in the Spanish context through the use of Item Response Theory (IRT) method. Specifically, the polytomic response format in the scale makes it necessary to use the Rating Scale Model-RSM (Andrich, 1978, 1988), considered an extension of the Rasch Model. In this sense, important information regarding the psychometric characteristics of the items and dimensions that make up the scale have been obtained. In general, our preliminary results have been positive and they show a proper data adjustment to the proposed model.

Regarding the adequacy of the response of the scale format, the highest values of the categories of response in each of the three indices of measurement are not sorted properly. However, discrimination against the answer 3 and 4 categories does not harm the estimate of support needs, obtaining positive results to collapse the relevant answer categories. From this perspective, the initial response format should be maintained until obtaining more accurate analysis to reveal the adequacy of the response format for each of the items of the scale.

In relation to the unidimensionality, positive results were achieved by performing a principal components analysis taking into account each of the seven areas of daily life evaluated independently – an essential requirement for a structure's unidimensionality general measurement of an assessment tool.

Besides, the instrument reliability and validity evidences (obtained from the data fit to the Rasch Model), indicate that any item that is negatively affecting the measurement of the construct of support needs allowing us to maintain all the items proposed in the original version on our scale.

Among the limitations of this study, we highlight the number of subjects in the pilot sample, as well as the lack of randomness in selecting the sample because these reasons do not allow us to draw definitive conclusions on how the scale works. Therefore, getting a larger number of participants to be able to do more detailed analysis taking into account each of the elements of the scale in a specific way is proposed. In this sense, statistically removing some response options in certain items could be determined as proposed in the *Support Intensity Scale-SIS* (Thompson et al., 2004) where it was considered some activities, by their actual nature, were not likely to be valued with the highest score. A larger sample is also necessary to carry out a confirmatory factor analysis that takes into account the general structure of the construct support needs.

The results will guide us to continue researching in this line of research to get an assessment scale of intensity of supports for children and adolescents with intellectual disabilities both validated and normed in the Spanish context. Setting an objective assessment on support needs required by children and adolescents with intellectual disabilities will contribute significantly to improving professional practices of evaluation and to develop individualized support programs that improve the quality of life of this population.

Acknowledgements: This article was written within the framework of the research project I+D PSI2009-10953 funded by the Spanish Ministry of Science and Innovation.

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(Article received: 21-1-2013; revision received: 6-5-2013; accepted: 1-4-2014)